

Class A-2 Response Action Outcome Statement
Former John J. Riley Tannery Site
RTN 3-25734

240 Salem Street
Woburn, Massachusetts
RTN 3-25734

Submitted to:
Massachusetts Department of Environmental Protection

January 27, 2011

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TETRA TECH, INC.



TETRA TECH

January 27, 2011

Massachusetts Department of Environmental Protection
Northeast Regional Office via eDEP
205B Lowell Street
Wilmington, MA 01887

**Re: Class A-2 Response Action Outcome Statement
Former John J. Riley Tannery Site
240 Salem Street
Woburn, Massachusetts
RTN 3-25734**

Dear Sir or Madam:

On behalf of Organix, LLC, Tetra Tech, Inc. has prepared this Class A-2 Response Action Outcome (RAO) Statement submittal to document the completion of necessary and required response actions under the Massachusetts Contingency Plan (MCP) and achievement of a level of "No Significant Risk" (NSR) for the above-referenced Disposal Site.

Following implementation of a Phase IV Remedy Implementation Plan (RIP), the findings of the Method 1 risk characterization indicate that the conditions for a Class A-2 RAO have been achieved. This RAO Statement is being submitted for the Disposal Site identified by Release Tracking Number (RTN) 3-25734 Disposal Site.

This submittal is appended to the appropriate transmittal form established by MassDEP (BWSC-104) and was submitted electronically via eDEP.

Please contact Ronald Myrick, Jr. at (508) 903-2000 if you have any questions regarding this submittal.

Very truly yours,

Ian S. Cannan, CHMM
Sr. Project Scientist

Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

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1.0 Introduction

On behalf of Organix, LLC (Organix), Tetra Tech, Inc. (Tetra Tech) has prepared this Class A-2 Response Action Outcome (RAO) Statement report for the Disposal Site located at 240 Salem Street in Woburn, Massachusetts (the subject property). The Disposal Site is identified by the Massachusetts Department of Environmental Protection (MassDEP) as Release Tracking Number (RTN) 3-25734 (the Site).

Response Actions under the Massachusetts Contingency Plan (MCP) were implemented at the Site due to the discovery of a previously-unknown release condition associated with the presence of tannery-related wastes and contaminated soil upon a hillside and impacted soils along a drainage swale and downstream deposition area. The contaminants of concern (COCs) associated with the tannery-related wastes and contaminated soils at the Site include metals (arsenic, cadmium, chromium, lead and mercury) and polycyclic aromatic hydrocarbons (PAHs), which were detected at concentrations in excess of their respective MCP Reportable Concentrations for soil category S-1 (RCS-1) standards.

This RAO Statement was prepared to summarize the MCP Response Actions completed at the Site and to provide the analysis to demonstrate the achievement of a Permanent Solution for the RTN 3-25734 Site. This report was prepared in accordance with the MCP under 310 CMR 40.0400, and is subject to the Licensed Site Professional (LSP) Statement of Limitations and Conditions included as Appendix A. This RAO Statement and the associated BWSC-104 transmittal form are submitted in electronic format via eDEP.

1.1 Relationship of the Person Performing Response Actions to the Site

As the current owner of the 240 Salem Street property, Organix, LLC has assumed responsibility for performing MCP Response Actions related to RTN 3-25734. The subject property is an approximately 3.62-acre parcel of land and depicted on the City of Woburn Assessor Map 37 as Block 5, Lot 7. Organix purchased the property in 1997 and developed an organic chemistry research and development facility upon a portion of the property. Organix did not own or operate and had no involvement in the property prior to its ownership in 1997. The tannery-related wastes and contaminated soils were present at the property prior to ownership by Organix. Organix's actions and operations have not caused or contributed to the release of oil and/or hazardous materials (OHM) related to RTN 3-25734. Therefore, Organix meets the definition of an "Eligible Person" under Part I, Title II, Chapter 21E, Section 2 of Massachusetts General Law.

1.2 Relationship of this RAO Statement to Other Related Disposal Sites

The geographical location of the Site is shown on Figure 1, the Site Locus Map. The limits of the RTN 3-25734 Site are shown in relation to the boundaries of the Organix property and other relevant property boundaries in Figure 2. The approximate geographical coordinates of the Site are as follows:

UTM Coordinates: 4706420 m north
324602 m east

The boundaries of the Site encompass a portion of the former John J. Riley (Riley) property where a former tannery operation facility was sited. In June 1994, the Maggiore Companies (a property developer) subdivided a portion of the Riley property, which was occupied by the primary tannery operation facility buildings and structures, into six lots. The subdivided lots were identified by the City of Woburn Tax Assessor as Lot numbers 11 through 16. In 2003, the Woburn Tax Assessors office revised the City's tax maps and divided the former Riley property into four lots. These properties are shown on the City of Woburn Tax Assessor Map Number 37 as Lots 3, 4, 7 and 8. The Site is located upon a portion of Lot 7, which is currently owned by Organix and encompasses approximately 3.62 acres of land. Lot 7 was formerly known as Lot 12 according to the pre-2003 City of Woburn Tax Assessor Map.

1.2.1 Wells G&H National Priority List Site

In 2003, as part of remedial investigations of the Wells G&H National Priorities List (NPL) site (east to northeast of the Site), the U.S. Environmental Protection Agency (EPA) conducted soil and sediment sampling to support an ecological risk assessment of the watershed. Part of the risk assessment included the collection of sediment samples from wetlands located downstream from the east-northeast portion of the Site. Analysis of these sediment samples documented the presence of elevated concentrations of metals in the sediment samples including arsenic and chromium. As a result of the finding, EPA requested access to the Organix property, which was located topographically upgradient from the sediment sample locations, to investigate potential sources of hazardous materials and collect samples from potential source materials.

According to the EPA report entitled *Removal Program Preliminary Assessment/Site Investigation Report for the John J Riley Site* dated August 11, 2005 (provided in the Phase II Report), "*possible tannery-related waste and high levels of chromium in surface soils have been identified in this particular area.*" The referenced "*particular area*" was an eroded section of a drainage swale bank with exposed tannery-related waste on a portion of the Organix property. The EPA report stated that "*chromium was detected at concentrations up to 86,000 mg/kg in the drainage swale bank.*" A subsequent EPA Site Investigation Closure Memorandum dated March 15, 2006 (provided in the Phase II Report) also stated that a "*Removal Action is appropriate at this time*" and the "*Removal Action will be limited in scope to addressing the direct contact threat and threat of migration posed by this area of exposed waste material.*"

MassDEP issued a Notice of Responsibility (NOR) dated March 28, 2006 to Organix based on information contained within the EPA report entitled *Removal Program Preliminary Assessment/Site Investigation Report for the John J Riley Site*. The NOR required Organix to submit a Release Notification Form (RNF) within 60 days of receiving the NOR. Based on the detection of chromium and lead at concentrations above the applicable MCP RCS-1 reportable concentrations as a result of EPA assessment activities and as required by the MassDEP NOR, a RNF documenting a 120-day release condition was submitted to MassDEP on May 26, 2006 by Organix. MassDEP subsequently assigned RTN 3-25734 to the Site.

1.2.2 RTNs 3-0482 and 3-13444

Concurrent with the redevelopment of the former Riley property in the mid 1990s, the Organix property (then known as Lot 12) was the subject of MCP Response Actions related to RTNs 3-0482 and 3-13444. These MCP Response Actions were undertaken by Wedel Corporation and The Maggiore Companies who were redeveloping the Riley property at that time. A LSP Evaluation Opinion Transmittal Form and supporting documentation were submitted to MassDEP on March 7, 1994 by 21E, Inc. for the six lots comprising the Riley property.

On September 29, 1995, MassDEP issued a Notice of Noncompliance (NON) and Notice of Audit Findings (NOAF) which identified certain violations regarding the LSP Evaluation Opinion dated March 7, 1994 and prepared by 21E, Inc. A report entitled "Summary of Activities – Lot 12, 228 Salem Street, Woburn, MA" dated September 11, 1996 was subsequently prepared by 21E, Inc. According to this document, tannery-related wastes and contaminated soils were found at various locations at Lot 12 during their investigations. These materials were sampled and evaluated by 21E, Inc. during the Response Actions completed in the 1990s under RTN 3-0482 and 3-13444 and were further evaluated in response to the NON and NOAF issued by MassDEP. Based on a subsequent evaluation by 21E, Inc. following the issuance of the NON and NOAF, additional soil excavation and removal activities were conducted. Following completion of MCP Response Actions for RTN 3-0482 and 3-13444, 21E, Inc. performed a Method 1 risk characterization for the Site and submitted a report dated September 11, 1996 to MassDEP. MassDEP subsequently issued a letter on October 17, 1996 stating that MassDEP was "*...in receipt of submittals which address the provisions and deadlines for compliance set forth in the Notice of Noncompliance. Therefore, the site is in compliance with the requirements of the January 4, 1996 Notice of Noncompliance.*"

As documented in the Phase IV Completion Statement, during Phase IV activities for RTN 3-25734, a thin lens of potentially-impacted soils/materials/ash (black to blue/gray) was observed on the southerly edge of the Downstream Area beneath the stormwater detention pond berm. Our observations of this lens of soils/materials/ash were consistent with the descriptions of some of the encountered materials within MCP submittals that were prepared for RTN 3-0482 by 21E, Inc. These materials were believed to have been sampled and evaluated by 21E, Inc. during the Response Actions completed in the 1990s under RTN 3-0482 and were further evaluated in response to the NOAF and NON issued by MassDEP. The presence of the lens of potentially-impacted soils/materials/ash beneath the detention pond berm is not consistent with the nature and depositional release pattern of RTN 3-25734 within the Downstream Area, and the presence of this thin lens of soils/materials/ash is believed to have been adequately addressed by RTN 3-0482. In addition, the lens of soils/materials/ash is located beneath between approximately 5 feet to 25 feet of overburden deposited materials that comprise the detention basin berm rendering these materials generally inaccessible under the current and anticipated future activities and uses of the Site. A polyethylene barrier was placed along the face of the detention pond prior to backfilling this area to act as a visual demarcation between the potentially-impacted soils/materials/ash that are believed to be associated with RTN 3-0482 and the RTN 3-25734 Disposal Site limit.

1.2.3 RTN 3-1063

The 205 Wildwood Avenue property is a listed Disposal Site by MassDEP under RTN 3-1063. MassDEP last performed a field compliance audit of RTN 3-1063 on November 18, 2008 and identified no violations of the Activity and Use Limitation (AUL) during the site visit. According to MassDEP record information, RTN 3-1063 is associated with the former lagoons of the Riley tannery operations. Based on a review of the RAO Statement and AUL that were filed for RTN 3-1063, residual tannery-related wastes and impacted soils remain at 205 Wildwood Avenue, and the limits of RTN 3-1063 and associated AUL extend to the property line between 240 Salem Street and the 205 Wildwood Avenue property. During the Phase IV activities for RTN 3-25734, a polyethylene barrier was placed along the face of the completed excavation at the property line to demarcate this boundary.

2.0 Disposal Site Description

The approximate horizontal extent of the RTN 3-25734 Disposal Site depicted on Figure 2 and Figure 3. The Site is located on a parcel of land that was once part of a large parcel of land formerly used as a leather products tannery (the former John J. Riley Tannery). Based on assessment activities and research as part of the Phase II Comprehensive Site Assessment (Phase II Report), solid/semi-solid wastes on the southwestern portion of the Site (the “Hillside Area”) appeared to be tannery waste from the former tannery operations at the Site. The nature of the dumped materials was described as interbedded layers of poorly sorted sand and bluish-gray, whitish-gray and orange/red colored sludge-like material, hair, leather scraps and solid waste including glass bottles and metal scrap. A maximum thickness of approximately 7.5 feet of contaminated soils/waste material was measured upon the hillside.

The presence of the contaminated soils/waste material upon the Hillside Area location immediately adjacent to a stormwater drainage swale appeared to have resulted in the limited relocation of contaminants due to erosion and downstream migration. This mechanism appeared to have resulted in and/or contributed to deposition of elevated concentrations some COCs on the northern portion of the Site (the “Downstream Area”). We also note that the Downstream Area may have also been subject to other deposition or discharges of tannery-related wastes from areas which were evaluated under other RTNs including RTN 3-0482 and RTN 3-13444.

The nature of the contamination within the drainage swale and on the northern downstream area of the Site was described as varying thicknesses of organic silt deposits containing elevated concentrations of COCs (impacted deposited soils). In general, the thickness of impacted deposited soils was observed to increase to the north, with the greatest thickness in the low-lying area approaching a culvert beneath the adjacent Massachusetts Bay Transit Authority (MBTA) railroad.

In the low-lying area of the Site that is easterly to southeasterly of the primary flow path of the drainage swale, a reduced thickness of impacted deposited soils was identified. It is believed that the primary mechanism for the occurrence of impacted deposited soils in this area was periodic heavy rain events that resulted in flooding conditions that breached the primary drainage swale

flow path approaching the railroad culvert, resulting in an expanded deposition area within the low-lying area on the northern portion of the Site.

The thickness of impacted deposited soils in the Downstream Area ranged from negligible to several feet with a typical pattern of increased concentrations of COCs with depth. The impacted deposited soils were easily distinguishable from the underlying native sand and gravel soils, and the concentrations of COCs were observed to decrease rapidly within the underlying native soils.

According to the risk assessment presented in the Phase II Report, COCs-impacted soils/materials were present at the Site (Hillside and Downstream Areas) which could have contributed to a potential condition of “Significant Risk” of harm to human health.

3.0 Summary of Response Actions

A RNF documenting a 120-day release condition was submitted to MassDEP on May 26, 2006 by Organix. The following sections summarize the MCP Response Actions that have been completed in response to RTN 3-25734 at the Site.

3.1 Preliminary Response Actions

During investigations related to the Wells G&H NPL Site, the United States Environmental Protection Agency (EPA) identified “possible tannery-related waste” upon an eroded bank of the Drainage Swale proximate to the Hillside Area. An EPA Site Investigation Closure Memorandum dated March 15, 2006 (provided in the Phase II Report) stated that “*a Removal Action is appropriate at this time*” and the “*removal action will be limited in scope to addressing the direct contact threat and threat of migration posed by this area of exposed waste material.*” On June 29, 2006, EPA entered into an Administrative Settlement Agreement and Order on Consent (ASAOC) for Removal Action with Organix related to the conditions identified by EPA under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, 42 U.S.C. §§ 9604, 9606(a), 9607 and 9622.

A Release Abatement Measure (RAM) Plan dated July 5, 2006 was submitted to MassDEP and implemented at the Site in accordance with 310 CMR 40.0440. The RAM was prepared to present proposed implementation of the EPA-required Removal Action, as described in an EPA letter entitled *Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities* dated March 29, 2006. The RAM included: a preliminary soil sampling event; clearing of the proposed RAM area; excavation of contaminated soil/waste materials; a post-excavation assessment of soil conditions; and implementation of temporary slope stabilization measures. A total of approximately 26 tons of contaminated soil/waste materials that presented a potential downstream migration concern were excavated and transported off-site for disposal at the Turnkey Landfill, a Resource Conservation and Recovery Act (RCRA) Subtitle D facility in Rochester, New Hampshire, under a MCP Bill of Lading (BOL) document. In addition, hay bales and geotextile fabric were placed upon the hillside following removal of the contaminated soil/waste materials from adjacent to the drainage swale to temporarily stabilize the hillside slope.

A Completion of Work Report dated October 30, 2006 was prepared and submitted to EPA following completion of the Removal Action/RAM. A letter dated November 15, 2006 from Mr. Frank Gardner of the EPA acknowledged receipt of the Completion of Work Report and stated that, “*The provisions of the ASAOC have been met, and the Respondent has no further obligations under this ASAOC.*” The RAM had achieved the remedial goals of mitigating the direct contact threat and threat of migration posed by the limited area of exposed contaminated soils/waste material along the drainage swale. A RAM Completion Report was submitted to MassDEP on November 15, 2006.

3.2 Phase I – Initial Site Investigation and Tier Classification

On March 15, 2007, a Phase I – Initial Site Investigation (Phase I Report) and Tier Classification was submitted to MassDEP for the Site in accordance with the MCP under 310 CMR 40.0480 and 40.0500. The Phase I Report included an assessment of Site conditions based on post-RAM confirmatory sampling, an August 14, 2006 sampling program, and soil analytical data provided by EPA. Also, an existing groundwater monitoring well (RR-3) was identified and sampled at the Site. The findings of the review of the data gathered during the Phase I investigations concluded that the requirements for a RAO could not be met, and additional Comprehensive Response Actions were necessary at the Site. Tier Classification of the Site was conducted, and the Numerical Ranking System (NRS) resulted in a score of 342 (none of the Tier I inclusionary criteria were met). As such, the Site was classified a Tier II Disposal Site under the MCP.

3.3 Phase II – Comprehensive Site Assessment

On March 19, 2009, a Phase II Report – Comprehensive Site Assessment (Phase II Report) was submitted to MassDEP to present the findings of Comprehensive Site Assessment activities at the Site in accordance with 310 CMR 40.0835. In addition to the data presented in the Phase I Report, the Phase II Report included a review of data gathered during additional Site investigation activities including the sampling of soil borings, excavation of test pits and groundwater sampling from May 2008 through February 2009. The data presented in the Phase II Report were used to evaluate risks posed by the Site via a combined MCP Method 1 and Method 3 risk characterization. The results of the risk characterization concluded that a condition of “No Significant Risk” could not be achieved for the Site at that time. The outcome of the Phase II Report was that further Comprehensive Remedial Actions were necessary at the Site to achieve a RAO, and a Phase III evaluation under the MCP was necessary to select an appropriate remedial action alternative for the Site.

3.4 Phase III – Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives

On March 19, 2009, a Phase III – Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives (Phase III) was submitted to MassDEP pursuant to 310 CMR 40.0850. The findings of the Phase III identified a feasible remedial alternative involving a

combination of soil excavation and off-site disposal and, if necessary, on-site consolidation with the option for the implementation of an AUL on a portion of the Site, if necessary.

3.5 Comprehensive Remedial Actions

On March 16, 2010, a Phase IV – Remedy Implementation Plan (Phase IV RIP) was submitted to MassDEP under 310 CMR 40.0874, which detailed the Remedial Action Plan identified in the Phase III. From July 8, 2010 through September 24, 2010 the Comprehensive Remedial Actions, as detailed in the Phase IV RIP, were implemented and completed at the Site. These remedial actions included clearing of proposed work areas and subsequent excavation and off-site disposal of COCs-impacted soil/waste material from the Hillside Area, the Drainage Swale and the Downstream Area. A total of approximately 3,110 tons of contaminated soil/waste material was excavated, transported and disposed at the New England Waste Services of Vermont, Inc. / Waste USA Landfill, Inc. facility in Coventry, Vermont (Coventry Landfill), a RCRA Subtitle D facility under a MCP BOL document. Following completion of excavation and off-site removal activities at the Site, confirmatory soil and groundwater samples were collected and analyzed to evaluate post-remedial Site conditions as described below. Following receipt of satisfactory confirmatory sampling results, the Site was restored including stabilization of the Drainage Swale using geotextile fabric and rip-rap and backfilling, grading and seeding of the Hillside Area and Downstream area and other areas disturbed by construction activities. A Phase IV Final Inspection Report and Completion Statement was submitted to MassDEP on January 5, 2011.

4.0 Confirmatory Soil and Groundwater Sampling

During the implementation of the Phase IV RIP, Tetra Tech personnel collected confirmatory soil samples for laboratory analysis. Tetra Tech surveyed and staked out 10-foot by 10-foot grids over the completed excavation areas. A composite soil sample was collected from approximately 400 square-foot intervals comprised of approximately 4 discrete grab samples collected from individual 10-foot by 10-foot grid cells. Confirmatory sampling was organized by excavation area and included 20 samples from the Hillside Area, 12 samples from the Drainage Swale and 15 samples from the Downstream Area. The locations of the composite confirmatory soil samples collected at the Site are shown on Figure 3. Samples were submitted to Spectrum Analytical, Inc. of Agawam, Massachusetts and analyzed for RCRA 8 metals and PAHs. We also note that previous investigations at the Site, that were summarized and detailed in the Phase II Report, included an evaluation of the speciation of chromium in soils at the Site. Based on our evaluation of chromium speciation for the Site and historic assessment activities at the Site and nearby properties, we determined that the chromium present at the Site is almost exclusively trivalent chromium (Cr^{+3}). As such, detected total chromium concentrations were evaluated as Cr^{+3} . The confirmatory soil sampling data for the Hillside Area, the Downstream Area and the Drainage Swale are summarized in Tables 1, 2 and 3 respectively, and laboratory certificates of analysis are provided in Appendix B.

Hillside Area: Laboratory analysis of confirmatory soil samples collected from the Hillside Area detected some metals (arsenic, barium, chromium, lead and mercury) frequently at

concentrations above the laboratory analytical method detection limits but below the applicable MCP Method 1 risk standards. Cadmium and silver were also detected infrequently at low concentrations below their respective applicable MCP Method 1 risk standards. Also, PAHs were detected at low frequency and at concentrations below their respective applicable MCP Method 1 risk standards.

Downstream Area: Laboratory analysis of confirmatory soil samples collected from the Downstream Area also detected metals (arsenic, barium, chromium, lead and mercury) frequently at concentrations above the laboratory analytical method detection limits but below the applicable MCP Method 1 risk standards. Cadmium was also detected less frequently and at concentrations below the applicable MCP Method 1 risk standards. Also, PAHs were detected at low frequency and at concentrations below their respective applicable MCP Method 1 risk standards.

Drainage Swale: Laboratory analysis of confirmatory soil samples collected from the Drainage Swale also detected metals (arsenic, barium, chromium, lead and mercury) frequently at concentrations above the laboratory analytical method detection limits but below the applicable MCP Method 1 risk standards. Cadmium was also detected less frequently and at concentrations below the applicable MCP Method 1 risk standards. Also, PAHs were detected at low frequency and at concentrations below their respective applicable MCP Method 1 risk standards.

Confirmatory Groundwater Sampling

On September 16, 2010, Tetra Tech gauged and sampled the three monitoring wells at the Site (MW-1, MW-2 and MW-3) as depicted on Figure 2. Gauging of MW-1 revealed that the well was dry, and therefore, no groundwater sample was collected from this monitoring well. The depth to water was measured at the two other monitoring wells MW-2 (6.4' below the well casing) and MW-3 (8.11' below the well casing). Based on the surveyed elevations and the depth to water measured in the wells during this and prior groundwater gauging events, it appears that groundwater flows in a northerly to northeasterly direction at the Site, which is consistent with the potentiometric maps presented in the Phase II Report. Following gauging, the monitoring wells were then purged using a peristaltic pump according to a low-flow sampling protocol. During purging, water quality parameters including temperature, conductivity, dissolved oxygen, pH and oxidation/reduction potential were monitored using a portable water quality probe (YSI 600XL). Water samples were collected following a minimum of 3 consecutive stable readings of the water quality parameters. Samples were collected and submitted to Spectrum Analytical, Inc. of Agawam, Massachusetts for dissolved RCRA 8 metals (field filtered) and PAHs by EPA Method 8270.

Most targeted metals were not detected above the laboratory analytical method reporting limit or the applicable MCP Method 1 risk standards. Low concentrations of barium were detected in MW-2 (14.2 µg/L) and MW-3 (49.2 µg/L) but below the applicable MCP Method 1 risk standards. The laboratory analysis did not detect PAHs above the laboratory analytical method reporting limit. These results are consistent with the findings of the Phase I Report and Phase II Report that groundwater has not been adversely impacted by a release of OHM attributable to the

Site. The confirmatory groundwater analytical data are summarized in Table 5, and laboratory certificates of analysis are provided in Appendix B.

5.0 Evaluation of Data Usability and Representativeness

In accordance with the MCP (310 CMR 40.1056(1)(j) and 310 CMR 40.1056(2)(k), a representativeness evaluation and data usability assessment (REDUA) of the data used to support this Class A-2 RAO Statement was performed. This REDUA was performed in accordance with the MassDEP published guidelines in Policy #WSC-07-350, “*MCP Representativeness Evaluations and Data Usability Assessments*” dated September 19, 2007. The documentation for the REDUA is provided in Appendix C. The soil and groundwater data collected during the applicable investigations at the Site were collected and analyzed in accordance with the current MassDEP published Quality Assurance and Quality Control (QA/QC) Guidelines for the Acquisition and Reporting of Analytical Data. The results of our evaluation of the data used to support this Class A-2 RAO Statement indicate that the data are usable and adequately represent the existing Site conditions. Based on the findings of our evaluation, we conclude that the data set reviewed satisfies the broad QA/QC requirements of 310 CMR 40.0017 and 310 CMR 40.0191(2)(c) regarding scientific defensibility, precision, accuracy, and reporting of analytical data and the reported results are deemed suitable for their intended use in support of rendering a waste site cleanup opinion under the MCP for this Site.

6.0 Method 1 Risk Characterization

We have conducted this Method 1 Risk Characterization for the Site. This risk characterization was conducted in conformance with the requirements of the MCP under 310 CMR 40.0900 and applicable MassDEP guidance documentation. This risk characterization presents an evaluation of the risks posed by the presence of residual COCs attributable to RTN 3-25734 (metals and PAHs) at the Site.

6.1 Method Selection

In keeping with the limited complexity of the conditions identified at the Site, a Method 1 risk characterization was selected as appropriate for the evaluation of risk at the Site. A Method 1 risk characterization allows for a relatively comprehensive, rapid evaluation of risk by comparing calculated exposure point concentrations (EPCs) to standards published by MassDEP. The MCP Method 1 standards incorporate health protective assumptions for both contaminant transport and exposure, resulting in an overall conservative analysis of risk. A Method 1 risk characterization is applicable under 310 CMR 40.0971 considering the following:

- The presence of OHM attributable to RTN 3-25734 at the Site is limited to soil. Both pre-remedial and post-remedial laboratory analysis of groundwater at the Site has not detected MCP reportable concentrations of OHM in groundwater. Although barium was detected above laboratory analytical method reporting limits, it was not detected at concentrations above the MCP RCGW-1 standards. Therefore, the data support the

conclusion that groundwater has not been adversely impacted by the release attributable to RTN 3-25734.

- Although OHM known to bioaccumulate are present at residual concentrations in some areas of the Site elevated concentrations, these OHM are currently located at low accessibility locations and/or at depths greater than 2 feet below the ground surface (bgs). A Method 3 Stage I Screening Assessment was performed as part of the Phase II Report. This risk characterization had previously concluded (prior to remedial actions) that a condition of “No Significant Risk” of harm to the environment exists for the Site conditions evaluated at that time. Since remedial actions have further reduced the concentrations of OHM at the Site, the findings of this assessment remain valid, and a condition of “No Significant Risk” of harm to the environment remains at the Site. Therefore, it was not necessary to perform a Method 3 Stage I Screening Assessment for the Site following implementation of the Phase IV RIP.

6.2 Receptor Information

We have identified potential receptors in accordance with 310 CMR 40.0920 in order to provide a conservative estimate of the exposure to OHM which a potential receptor may receive within the Site over a period of time.

6.2.1 Identification of Potential Human Receptors

Human receptors who are likely to be present at the Site or in the surrounding environment, and who as a result may be exposed to OHM from the Site include:

Maintenance Worker: Adult individuals performing routine maintenance activities at the Site (landscape maintenance, utility maintenance, maintenance of fencing, etc.) may be present occasionally (low frequency) at the Site for various low to high intensity activities. These workers may be exposed to OHM via dermal contact, dermal absorption, incidental ingestion, and/or inhalation of air or particulate.

Commercial/Industrial Worker: Adult individuals at the property for commercial/industrial activities and uses may access the Site from time to time for passive recreational or leisure activities such as walking and picnicking. It is anticipated that these persons may be present at a low frequency and for low intensity uses. These persons may be exposed to OHM via incidental contact/ingestion.

Construction/Utility Worker: Adult individuals performing construction activities or repair/replacement of existing utilities (sewer utility) may access the Site occasionally. These persons may be present at a low frequency but for potentially high intensity activities. These workers may be exposed to OHM via dermal contact, dermal absorption, incidental ingestion, and/or inhalation of air or particulate.

Trespasser: Adult or adolescent individuals may access the property through breaches in the perimeter fencing surrounding much of the Site or may access the Site from the Organix parking lot. It is anticipated that these persons may be present at a low frequency for low intensity uses. These persons may be exposed to OHM via incidental contact and/or ingestion.

Hypothetical Future Lifelong Resident: Although not a current or anticipated future use, adult or child lifelong residents may occupy the Site in the future should the Site be reconfigured for residential use. These persons would be present at the Site for unrestricted activities including but not limited to: use of the site as a residence, cultivation of fruits and vegetables destined for human consumption and the cultivation of ornamental plants, excavation of soil, recreational activities, and/or leisure activities. These persons may be exposed to OHM via unrestricted exposure routes.

6.2.2 Identification of Potential Environmental Receptors

There are no sensitive environmental habitat receptors located at the Site including Areas of Critical Environmental Concern, surface water, or wetlands. Potential environmental receptors (small animals and plants) are located at the Site including the Hillside Area and Downstream Area. Also, there are sensitive environmental receptors located downstream from the Site including wetlands on the property to the east beyond the MBTA railroad right-of-way followed by a surface water body (the Aberjona River). Since the completion of remedial actions at the Site to remove OHM and stabilize Site conditions, the primary mechanism of contaminant transport has been mitigated, and the potential for significant exposure to or migration of OHM-impacted soils to environmental receptors is considered mitigated.

A Method 3 Stage I Screening Assessment was performed as part of the Phase II Report. This risk characterization had previously concluded (prior to remedial actions) that a condition of “No Significant Risk” of harm to the environment exists for the Site conditions evaluated. Based on the Stage I Screening Assessment, a Stage II Environmental Risk Characterization was not necessary and was not conducted for this Site. Considering these factors, and considering that remedial actions have substantially improved Site conditions and further reduced potential impacts to the environment at the Site, we conclude that a separate post-remedial evaluation of exposure to residual OHM by environmental receptors is not warranted.

6.2.3 Identification of Site Activities and Uses

The Site is currently largely undeveloped. Existing drainage and sewerage utilities transect portions of the Site as shown on Figure 3. The Site is located upon a portion of the Organix property which the City of Woburn has zoned I-P (Industrial Park) for industrial use. Organix currently uses the property for organic chemistry research and development activities. It is anticipated that the majority of the Site will remain undeveloped with limited utilities present for the foreseeable future. However, it is foreseeable that a portion of the Site (particularly the Hillside Area) may be redeveloped in the future to expand parking or other facets of the existing Organix facility. Although not a foreseeable future activity or use, we have also included the

unrestricted activities and uses of the Site (such as residential use) for the evaluation of the need for an AUL at the Site.

6.2.4 Identification of Exposure Points and EPCs

In accordance with 310 CMR 40.0926, an EPC was identified for COCs in each medium at each exposure point at the Site. The following summarizes the justification for the identified EPCs at each exposure point identified at the Site.

Hillside Area. The EPCs at the Hillside Area were estimated as the arithmetic average concentrations for COCs as reported for confirmatory soil samples collected within the limits of the Site upon the Hillside Area as shown on Figure 3. The data and summary statistics for this Exposure Point are provided in Table 1. Our review of the data set indicates that it does meet the strict data criteria established in 310 CMR 40.0926(b)(1), and the use of the arithmetic average concentration of COCs is considered suitable for this risk characterization. The arithmetic average concentrations was calculated using one-half of the laboratory analytical method reporting limit for compounds not detected at this Exposure Point. The EPCs calculated for the Hillside Area Exposure Point are used to assess potential risk of harm related to current and anticipated future activities and uses by maintenance workers, commercial/industrial workers, construction/utility workers, and trespassers.

Downstream Area. The EPCs at the Downstream Area were estimated as the arithmetic average concentration for COCs as reported for confirmatory soil samples collected within the limits of the Site within the Downstream Area as shown on Figure 3. The data and summary statistics for this Exposure Point are provided in Table 2. Our review of the data set indicates that it does meet the strict data criteria established in 310 CMR 40.0926(b)(1), and the use of the arithmetic average concentration of COCs is considered suitable for this risk characterization. The arithmetic average concentrations were calculated using one-half of the laboratory analytical method reporting limit for compounds not detected at this Exposure Point. The EPCs calculated for the Downstream Area Exposure Point are used to assess potential risk of harm related to current and anticipated future activities and uses by maintenance workers, commercial/industrial workers, construction/utility workers, and trespassers.

Drainage Swale. The EPCs at the Drainage Swale were estimated as the arithmetic average concentration for COCs as reported for confirmatory soil samples collected within the limits of the Site within the Drainage Swale as shown on Figure 3. The data and summary statistics for this Exposure Point are provided in Table 3. Our review of the data set indicates that it does meet the strict data criteria established in 310 CMR 40.0926(b)(1), and the use of the arithmetic average concentration of COCs is considered suitable for this risk characterization. The arithmetic average concentrations were calculated using one-half of the laboratory analytical method reporting limit for compounds not detected at this Exposure Point. The EPCs calculated for the Drainage Swale Exposure Point are used to assess potential risk of harm related to current and anticipated future activities and uses by maintenance workers, commercial/industrial workers, construction/utility workers, and trespassers.

Site-Wide Data. The EPCs for the Site-Wide Data set were estimated as the arithmetic average concentration for COCs as reported for samples collected across the Site assuming future reconfiguration of the Site. The data and summary statistics for this Exposure Point are provided in Table 4. Our review of the data set indicates that it does meet the strict data criteria established in 310 CMR 40.0926(b)(1), and the use of the arithmetic average concentration of COCs is considered suitable for this risk characterization. The arithmetic average concentrations were calculated using one-half of the laboratory analytical method reporting limit for compounds not detected at this Exposure Point. The EPCs calculated for the Site-Wide Exposure Point are used to assess the potential risk of harm related to hypothetical future unrestricted activities and uses by future lifelong residents, commercial maintenance workers, commercial/industrial workers, construction/utility workers, and trespassers.

6.3 Identification of Soil and Groundwater Categories

Categories of groundwater and soil have been established by MassDEP for use in risk characterization evaluations. In accordance with 310 CMR 40.0930, we have identified the soil and groundwater categories applicable to the Site.

6.3.1 Identification of Applicable Groundwater Categories

Groundwater at the Site is categorized as GW-3 since all groundwater is considered a potential source of discharge to surface water. Groundwater is also characterized as GW-1 since the Site is located within a current Interim Wellhead Protection Area (IWPA). However, the IWPA is for two former water supply wells (Wells G & H) that have been inactive since 1979. Groundwater at the Site for current and anticipated future activities and uses is not characterized as GW-2 since there are no existing or planned occupied buildings located within 30 feet of the limits of the Site. However, the Site-Wide Exposure Point is compared to GW-2 standards to assess hypothetical future unrestricted activities and uses which could involve construction of buildings at the Site.

6.3.2 Identification of Applicable Soil Categories

Soils at the Site may be classified as any of the three soil categories presented in the MCP (S-1, S-2 or S-3). In general, the S-1 soil category represents the greatest exposure potential, followed by S-2 and finally S-3, which represents the least exposure potential (low frequency, low intensity and low accessibility).

Hillside Area soils impacted by OHM are located at least 6-inches below the ground surface (bgs) and are covered by grasses and other vegetative cover. These soils may be accessible to maintenance workers, commercial/industrial workers or trespassers who may be present at a low frequency for low intensity uses (i.e. landscape maintenance, passive recreation/leisure, walking, etc.). Also, the Hillside Area soils may occasionally be accessible to construction/utility workers performing repair of existing utilities or new construction in this area (low frequency and high

intensity use). Soils within the Hillside Area are categorized S-2/GW-1, S-2/GW-3, S-3/GW-1 and S-3/GW-3.

Downstream Area soils impacted by OHM are located beneath approximately 2 to 4 feet of non-impacted fill soils and are covered by grasses and other vegetative cover. These soils may be accessible to maintenance workers, commercial/industrial workers or trespassers who may be present at a low frequency for low intensity uses (i.e. landscape maintenance, passive recreation/leisure, walking, etc.). Also, the Downstream Area soils may occasionally be accessible to construction/utility workers performing repair of existing utilities or new construction in this area (low frequency and high intensity use). Soils within the Downstream Area are categorized S-2/GW-1, S-2/GW-3, S-3/GW-1 and S-3/GW-3.

Drainage Swale soils impacted by OHM are covered by a nonwoven polypropylene geotextile fabric and at least 1 foot of stone rip-rap cover. These soils are considered potentially accessible to maintenance workers, commercial/industrial workers or trespassers who may be present at a low frequency for low intensity uses (i.e. landscape maintenance, passive recreation/leisure, walking, etc.). Also, the Drainage Swale soils may occasionally be accessible to construction/utility workers performing repair of existing utilities or new construction in this area (low frequency and high intensity use). Soils within the Drainage Swale are categorized S-3/GW-1 and S-3/GW-3.

The hypothetical future site-wide soils are considered accessible to unrestricted receptors for unrestricted activities and uses. Soils in this hypothetical activity and use scenario are categorized as S-1/GW-1, S-1/GW-2 and S-1/GW-3.

6.4 Risk Characterization Conclusions

Under the MCP Method 1 risk characterization, a condition of “No Significant Risk” (NSR) of harm to human health, public welfare and the environment shall exist if each of the EPCs is equal to or less than their applicable MCP Method 1 standards, and there are no risks to public safety. This section presents a comparison of the risk conditions with the conditions identified at the Site.

6.4.1 Risks of Harm to Health, Public Welfare and the Environment

Under the MCP a condition of NSR to human health, public welfare and the environment exists if EPCs are equal to or less than their applicable MCP Method 1 standards for each COC.

Hillside Area. The EPCs calculated for the Hillside Area are each below the applicable MCP Method 1 S-2/GW-1, S-2/GW-3, S-3/GW-1 and S-3/GW-3 standards. Also, none of the EPCs calculated for the Hillside Area exceed the MCP Upper Concentration Limits (UCLs). Therefore, a condition of NSR to human health, public welfare and the environment exists for this Exposure Point.

Downstream Area. The EPCs calculated for the Downstream Area are each below the applicable MCP Method 1 S-2/GW-1, S-2/GW-3, S-3/GW-1 and S-3/GW-3 standards. Also, none of the EPCs calculated for the Downstream Area exceed the MCP UCLs. Therefore, a condition of NSR to human health, public welfare and the environment exists for this Exposure Point.

Drainage Swale. The EPCs calculated for the Drainage Swale are each below the applicable MCP Method 1 S-3/GW-1 and S-3/GW-3 standards. Also, none of the EPCs calculated for the Drainage Swale exceed the MCP UCLs. Therefore, a condition of NSR to human health, public welfare and the environment exists for this Exposure Point.

Site-Wide Data. The EPCs calculated for the hypothetical future Site-Wide data set are each below the applicable MCP Method 1 S-1/GW-1, S-1/GW-2, and S-1/GW-3 standards. Also, none of the EPCs calculated for the hypothetical future Site-Wide data set exceed the MCP UCLs. Therefore, a condition of NSR to human health, public welfare and the environment exists for this Exposure Point. Also, because the Site-Wide EPCs are below the Method 1 S-1 standards, an AUL is not necessary to achieve or maintain a condition of NSR at the Site.

6.4.2 Risks of Harm to Public Safety

Threats to public safety include physical conditions and chemical agents that may cause bodily harm or injury (e.g. burns or fractures) as opposed to illness. There are no open pits, lagoons, drums, dangerous structures, or other apparent threats to public safety, and no danger of fire or explosion exists based on the conditions evaluated at the Site. Although contaminated soils/waste material (Hillside Area) and impacted deposited soils (Downstream Area and Drainage Swale) were identified in near surface soils at the Site, laboratory analysis indicated that these materials were not a characteristic hazardous waste and did not present a risk to public safety at the time. Furthermore, contaminated soil/waste materials and impacted deposited soils contributing to excess risk to human health were excavated and removed from the Site during remedial actions under the Phase IV RIP. Therefore, no risk to public safety was identified at the Site.

7.0 Feasibility of Achieving or Approaching Background

Excavation and off-site disposal of contaminated soil/waste materials and impacted deposited soils from the Site were implemented under the Phase IV RIP. To evaluate achievement of background, the results of laboratory analysis of confirmatory soil samples were compared to a representative background data set. Since the Site is located in an undeveloped area with a history of human use, we have used the MassDEP identified background levels in natural soil from MassDEP Technical Update “*Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil* (May 23, 2002) in our evaluation. This comparison is summarized in Tables 1, 2, 3 and 4. Confirmatory sampling at the limit of the excavation indicate the residual concentrations of some of the Site COCs have been reduced to background including: PAHs, arsenic, cadmium, and selenium. However, concentrations of barium, chromium, lead, mercury and silver have not been reduced to background. Therefore, we have evaluated the feasibility of continuing remedial actions beyond NSR to achieve or approach background as presented below.

Since the remedial alternative implemented at the Site was capable of achieving a Permanent Solution, an evaluation under 310 CMR 40.0860 of the feasibility of reducing the concentrations of OHM at the Site to levels that achieve or approach background was evaluated. The feasibility of achieving or approaching background was evaluated in accordance with the MCP and MassDEP Guidance Document “*Conducting Feasibility Evaluations under the MCP*” (Policy # WSC-04-160) dated July 16, 2004. In accordance with Section 9.3.3.4 of Policy # WSC-04-160, a remedial alternative shall be considered not feasible to achieve or approach background conditions if the additional costs to achieve or approach background are greater than 20 percent of the cost to remediate to NSR. The costs to remediate to NSR are estimated at approximately \$520,000 and the costs to remediate to achieve or approach background (via continued excavation and off-site disposal of residually contaminated soils) are estimated at approximately \$800,000, as documented within the Phase III. The additional estimated cost to remediate beyond NSR to approach or achieve background (\$280,000) is greater than 20 percent of the cost to remediate to NSR (\$104,000); therefore, the additional costs to remediate to achieve or approach background are substantial and disproportionate to the incremental benefit to human health and the environment.

8.0 Response Action Outcome Statement

On behalf of Organix, LLC, Tetra Tech has prepared this Class A-2 RAO Statement submittal to document the completion of necessary and required response actions under the MCP and achievement of a level of NSR for the Site. The former contaminated soil/waste materials associated with RTN 3-25734 were attributed to historical tannery operations. The contaminated soil/waste materials and the impacted deposited soil/waste materials resulting from erosion of the Hillside Area that contributed most significantly to risks to human health at the Site have been removed and properly disposed of at RCRA Subtitle D landfills in Rochester, New Hampshire (2006 RAM) and Coventry, Vermont (2010 Phase IV RIP). Therefore, the source of the OHM released at the Site has been eliminated.

Based on the confirmatory data set for soil following implementation of the Phase IV RIP, residual concentrations of PAHs, arsenic, cadmium, and selenium have been reduced to background or near background. However, concentrations of barium, chromium, lead, mercury and silver in soil have not been reduced to background. A Method 1 risk characterization was conducted to support this RAO Statement. The findings of a Method 1 risk characterization have determined that residual concentrations of OHM at the Site represent a condition of NSR to human health, public welfare and the environment. No risks to public safety were identified at the Site. An evaluation of the feasibility to continue remedial actions beyond NSR to approach or achieve background has concluded that achievement of background is not feasible at the Site.

The findings of the Method 1 risk characterization indicate that the conditions for a Class A-2 RAO have been achieved because a level of NSR exists for anticipated current and future activities and uses; remedial actions were conducted to achieve NSR; the concentration of OHM at the Site do not exceed MCP UCLs for soil or groundwater; and further remedial actions are not required to achieve or maintain a level of NSR. This RAO Statement is being submitted for

the entire RTN 3-25734 Disposal Site. The location and boundaries of the Site for which this RAO applies are shown in Figure 2 and Figure 3.

The results of Site investigations conclude that no further MCP Response Actions are necessary to achieve and/or maintain a level of NSR at the Site. It is our opinion that the assessment activities conducted to support this RAO are: of an appropriate scope, detail and level of effort to characterize potential risks of harm to health, safety, public welfare and the environment; are consistent with the Response Action Performance Standards; are commensurate with the nature and extent of the release and limited complexity of Site conditions; demonstrate that the requirements for a Class A-2 RAO have been achieved; and conform with the requirements and procedures for conducting response actions under the MCP. A Permanent Solution has been achieved for the conditions evaluated, and the implementation of an AUL is not necessary.

An RAO has been achieved, and this RAO Statement is being submitted within the deadlines established under 310 CMR 40.0000. Since an RAO has been achieved following Tier Classification of the Site, no MCP Compliance Fee was applicable.

In compliance with the MCP, public involvement activities have been completed in accordance with 310 CMR 40.1403(3)(f). In addition, in accordance with 310 CMR 40.1406(3) the MBTA was notified of the submittal of this Class A-2 RAO Statement since the limits of the Site include a small portion of the railroad right-of-way (up to the MBTA culvert) at the northeastern portion of the Site. The documentation of public involvement activities are provided in Appendix D.

Table 1 Soil Analytical Data - Hillside Area (mg/kg)

Location:	Hillside-01	Hillside-02	Hillside-03	Hillside-04	Hillside-05	Hillside-06	Hillside-07	Hillside-08	Hillside-09	Hillside-10	Hillside-11	Hillside-12	Hillside-13	Hillside-14	Hillside-15
Sample Name:	Spectrum														
Laboratory I.D.:	SB15912-01	SB15912-02	SB15912-03	SB15912-04	SB15912-05	SB15912-06	SB15912-07	SB15912-08	SB15912-09	SB15912-10	SB15912-11	SB15912-12	SB15912-13	SB15912-14	SB15912-15
Sample Date:	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010
Consultant:	Tetra Tech														
Acenaphthene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Acenaphthylene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Anthracene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Benzo(a)anthracene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.242
Benzo(a)pyrene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.193
Benzo(b)fluoranthene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.148
Benzo(g,h,i)perylene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Benzo(k)fluoranthene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.220
Chrysene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.224
Dibenzo(a,h)anthracene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Fluoranthene	<.134	<.137	<.138	0.166	0.158	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.615
Fluorene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Indeno(1,2,3-cd)pyrene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Methylnaphthalene, 2-	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Naphthalene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134
Phenanthrene	<.134	<.137	<.138	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.555
Pyrene	<.134	<.137	<.138	0.151	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	0.493
Arsenic, Total	9.51	12.1	9.50	10.3	13.3	10.3	10.9	10.4	9.75	9.65	11.3	10.5	13.6	14.1	16.3
Barium, Total	26.0	27.2	20.2	26.2	23.3	22.6	21.0	34.1	33.9	25.9	17.6	23.1	29.4	27.4	31.5
Cadmium, Total	<0.505	<0.506	<0.492	0.479	<0.482	<0.494	<0.502	0.463	0.612	0.520	0.487	<0.456	<0.498	<0.466	0.479
Chromium, Total (as Cr ³⁺)	196	33.3	363	278	33.4	288	299	41.1	137	94.7	18.1	20.4	41.4	60.2	34.3
Lead, Total	12.9	7.71	13.0	17.4	35.4	15.1	16.6	7.28	34.3	27.4	9.98	9.55	8.05	9.02	35.0
Mercury, Total	1.500	0.0882	0.5590	0.4290	0.1080	0.9620	0.4100	0.0924	0.2410	0.1480	<0.0300	0.0324	0.0945	0.0817	0.1530
Selenium, Total	<1.51	<1.52	<1.48	<1.37	<1.45	<1.48	<1.51	<1.35	<1.37	<1.32	<1.26	<1.37	<1.49	<1.40	<1.37
Silver, Total	<1.51	<1.52	<1.48	<1.37	<1.45	<1.48	<1.51	1.45	<1.37	<1.32	<1.26	<1.37	<1.49	<1.40	<1.37

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection lim

Soil Analytical Data - Hillside Area (mg/kg)						Soil Analytical Data Summary Statistics - Hillside Area (mg/kg)									
Location:															
Sample Name:	Hillside-16	Hill Side-17	Hill Side-18	Hill Side-19	Hill Side-20	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Exposure Point Concentration	Method 1 Standard S-2/GW-1	Method 1 Standard S-2/GW-3	Method 1 Standard S-3/GW-1	Method 1 Standard S-3/GW-3	Background Level Natural Soil
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum										
Laboratory I.D.:	SB15912-16	SB16389-01	SB16389-02	SB16389-03	SB16389-04										
Sample Date:	7/29/2010	8/9/2010	8/9/2010	8/9/2010	8/9/2010										
Consultant:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech										
Acenaphthene	<.133	<.134	<.129	<.136	<.135	ND	20	<.138	<.270	ND	4	3,000	4	5,000	0.5
Acenaphthylene	<.133	<.134	<.129	<.136	<.135	ND	20	<.138	<.270	ND	1	10	1	10	0.5
Anthracene	<.133	<.134	<.129	0.255	<.135	1	20	0.255	0.255	0.076	3,000	3,000	5,000	5,000	1
Benzo(a)anthracene	<.133	<.134	0.189	0.863	0.476	4	20	0.189	0.863	0.142	40	40	300	300	2
Benzo(a)pyrene	<.133	<.134	0.189	0.869	0.507	4	20	0.189	0.869	0.141	4	4	30	30	2
Benzo(b)fluoranthene	<.133	<.134	0.201	1.050	0.599	4	20	0.148	1.050	0.153	40	40	300	300	2
Benzo(g,h,i)perylene	<.133	<.134	<.129	0.320	0.205	2	20	0.205	0.320	0.086	3,000	3,000	5,000	5,000	1
Benzo(k)fluoranthene	<.133	<.134	0.148	0.583	0.444	4	20	0.148	0.583	0.123	400	400	3,000	3,000	1
Chrysene	<.133	<.134	0.213	0.844	0.550	4	20	0.213	0.844	0.145	400	400	3,000	3,000	2
Dibenzo(a,h)anthracene	<.133	<.134	<.129	<.136	<.135	ND	20	<.138	<.270	ND	4	4	30	30	0.5
Fluoranthene	<.133	0.153	0.427	1.960	1.120	7	20	0.153	1.960	0.273	3,000	3,000	5,000	5,000	4
Fluorene	<.133	<.134	<.129	<.136	<.135	ND	20	<.270	<.270	ND	3,000	3,000	5,000	5,000	1
Indeno(1,2,3-cd)pyrene	<.133	<.134	<.129	0.359	0.221	2	20	0.221	0.359	0.089	40	40	300	300	1
Methylnaphthalene, 2	<.133	<.134	<.129	<.136	<.135	ND	20	<.138	<.270	ND	0.7	500	0.7	500	0.5
Naphthalene	<.133	<.134	<.129	<.136	<.135	ND	20	<.138	<.270	ND	4	1,000	4	3,000	0.5
Phenanthrene	<.133	<.134	0.296	1.050	0.652	4	20	0.296	1.050	0.181	10	1,000	10	3,000	3
Pyrene	<.133	<.134	0.372	1.640	0.968	5	20	0.151	1.640	0.231	3,000	3,000	5,000	5,000	4
Arsenic, Total	11.6	9.76	10.6	8.33	9.80	20	20	8.33	16.3	11.1	20	20	20	20	20
Barium, Total	25.7	88.3	106	446	351	20	20	17.6	446	70.3	3,000	3,000	5,000	5,000	50
Cadmium, Total	0.508	<0.488	<0.490	0.551	0.703	9	20	0.463	0.703	0.375	30	30	30	30	2
Chromium, Total (as Cr ³⁺)	68.1	110	246	931	722	20	20	18.1	931	201	3,000	3,000	5,000	5,000	30
Lead, Total	12.3	17.5	56.4	54.7	81.5	20	20	7.28	81.5	24.1	300	300	300	300	100
Mercury, Total	0.2120	0.2120	0.9940	0.6030	0.5380	19	20	0.0324	1.500	0.3737	30	30	30	30	0.3
Selenium, Total	<1.37	<1.46	<1.47	<1.41	<1.45	ND	20	<1.26	<1.52	ND	800	800	800	800	0.5
Silver, Total	<1.37	<1.46	<1.47	<1.41	<1.45	1	20	1.45	1.45	0.749	200	200	200	200	0.6

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection lim
 EPC Calculated as the arithmetic average concentration using 1/2 the reportable detection limit for compounds not detected
 EPCs not calculated for compounds not detected and the maximum reportable detection limit is below Method 1 Standard

Table 2 Soil Analytical Data - Downstream Area (mg/kg)

Location:	Downsteam -01	Downsteam -02	Downsteam -03	Down Stream-4	Down Stream-5	Down Stream-6	Downstream-7	Down Stream-8	Down Stream-9	Downstream-10	Downstream-11	Downstream-12	Downstream-13
Sample Name:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory:	SB16045-01	SB16045-02	SB16045-03	SB16706-04	SB16784-04	SB16784-05	SB17077-01	SB16784-07	SB16784-08	SB16930-01	SB16930-02	SB17478-01	SB16930-04
Laboratory I.D.:	7/30/2010	7/30/2010	7/30/2010	8/16/2010	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010	30-Aug-10	8/18/2010
Sample Date:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech					
Consultant:													
Acenaphthene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	0.190	<.171	<.181	<.18
Acenaphthylene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18
Anthracene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	0.359	<.171	<.181	<.18
Benzo(a)anthracene	<.143	<.137	0.175	<.171	<.149	<.171	<.158	0.290	<.147	1.110	0.401	<.181	0.236
Benzo(a)pyrene	<.143	<.137	0.175	<.171	<.149	<.171	<.158	0.300	<.147	1.020	0.451	<.181	0.254
Benzo(b)fluoranthene	<.143	<.137	0.179	<.171	<.149	<.171	<.158	0.363	<.147	1.040	0.554	<.181	0.320
Benzo(g,h,i)perylene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	0.464	0.230	<.181	<.18
Benzo(k)fluoranthene	<.143	<.137	0.176	<.171	<.149	<.171	<.158	0.267	<.147	0.923	0.372	<.181	0.230
Chrysene	<.143	<.137	0.209	<.171	<.149	<.171	<.158	0.336	<.147	1.070	0.484	<.181	0.259
Dibenzo(a,h)anthracene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18
Fluoranthene	0.216	0.232	0.374	<.171	<.149	<.171	<.158	0.686	<.147	2.360	0.883	<.181	0.473
Fluorene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	0.217	<.171	<.181	<.18
Indeno(1,2,3-cd)pyrene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	0.167	<.147	0.517	0.262	<.181	<.18
Methylnaphthalene, 2-	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18
Naphthalene	<.143	<.137	<.132	<.171	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18
Phenanthrene	<.143	<.137	0.188	<.171	<.149	<.171	<.158	0.350	<.147	1.910	0.415	<.181	0.211
Pyrene	0.164	0.185	0.325	<.171	<.149	<.171	<.158	0.544	<.147	1.990	0.694	<.181	0.398
Arsenic, Total	2.84	1.56	3.28	4.47	1.76	4.57	5.42	13.4	5.77	9.01	9.64	7.15	11.7
Barium, Total	74.0	104	67.9	60.1	19.0	54.1	37.7	317	60.8	390	284	91.8	174
Cadmium, Total	0.700	0.592	0.709	<0.609	<0.523	<0.617	<0.599	<0.591	<0.510	0.975	0.895	<0.648	0.672
Chromium, Total (as Cr ³⁺)	128	273	213	209	35.1	108	259	2,180	607	1,810	1,800	358	1,770
Lead, Total	27.8	26.8	27.4	16.9	6.29	13.5	15.8	89.6	29.0	93.7	84.1	39.1	123
Mercury, Total	0.0616	0.0729	0.0885	0.1430	0.0471	0.0992	0.4320	1.330	0.4670	0.4160	1.330	0.5890	3.820
Selenium, Total	<1.53	<1.47	<1.58	<1.83	<1.57	<1.85	<1.80	<1.77	<1.53	<1.71	<1.66	<1.94	<1.83
Silver, Total	<1.53	<1.47	<1.58	<1.83	<1.57	<1.85	<1.80	<1.77	<1.53	<1.71	<1.66	<1.94	<1.83

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit

Table 2		Soil Analytical Data - Downstream Area (mg/kg)		Soil Analytical Data Summary Statistics - Downstream Area (mg/kg)										
Location:														
Sample Name:	Downstream-14	Downstream-15												
Laboratory:	Spectrum	Spectrum												
Laboratory I.D.:	SB16930-05	SB16930-06												
Sample Date:	8/18/2010	8/18/2010												
Consultant:	Tetra Tech	Tetra Tech												
			Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Exposure Point Concentration	Method 1 Standard S-2/GW-1	Method 1 Standard S-2/GW-3	Method 1 Standard S-3/GW-1	Method 1 Standard S-3/GW-3	Background Level Natural Soil		
Acenaphthene	<.161	<.149	1	15	0.190	0.190	0.087	4	3,000	4	5,000	0.5		
Acenaphthylene	<.161	<.149	ND	15	<.132	<.181	ND	1	10	1	10	0.5		
Anthracene	<.161	<.149	1	15	0.359	0.359	0.098	3,000	3,000	5,000	5,000	1		
Benzo(a)anthracene	<.161	<.149	5	15	0.175	1.110	0.200	40	40	300	300	2		
Benzo(a)pyrene	<.161	<.149	5	15	0.175	1.020	0.199	4	4	30	30	2		
Benzo(b)fluoranthene	<.161	<.149	5	15	0.179	1.040	0.216	40	40	300	300	2		
Benzo(g,h,i)perylene	<.161	<.149	2	15	0.230	0.464	0.114	3,000	3,000	5,000	5,000	1		
Benzo(k)fluoranthene	<.161	<.149	5	15	0.176	0.923	0.183	400	400	3,000	3,000	1		
Chrysene	<.161	<.149	5	15	0.209	1.070	0.209	400	400	3,000	3,000	2		
Dibenzo(a,h)anthracene	<.161	<.149	ND	15	<.132	<.181	ND	4	4	30	30	0.5		
Fluoranthene	<.161	0.175	8	15	0.175	2.360	0.398	3,000	3,000	5,000	5,000	4		
Fluorene	<.161	<.149	1	15	0.217	0.217	0.088	3,000	3,000	5,000	5,000	1		
Indeno(1,2,3-cd)pyrene	<.161	<.149	3	15	0.167	0.517	0.126	40	40	300	300	1		
Methylnaphthalene, 2-	<.161	<.149	ND	15	<.132	<.181	ND	0.7	500	0.7	500	0.5		
Naphthalene	<.161	<.149	ND	15	<.132	<.181	ND	4	1,000	4	3,000	0.5		
Phenanthrene	<.161	<.149	5	15	0.188	1.910	0.257	10	1,000	10	3,000	3		
Pyrene	<.161	0.157	8	15	0.157	1.990	0.335	3,000	3,000	5,000	5,000	4		
Arsenic, Total	6.33	3.87	15	15	1.56	13.4	6.05	20	20	20	20	20		
Barium, Total	79.5	34.8	15	15	19.0	390	123	3,000	3,000	5,000	5,000	50		
Cadmium, Total	<0.577	<0.492	6	15	0.592	0.975	0.475	30	30	30	30	2		
Chromium, Total (as Cr ³⁺)	393	75.3	15	15	35.1	2,180	681	3,000	3,000	5,000	5,000	30		
Lead, Total	18.4	9.89	15	15	6.29	123	41.4	300	300	300	300	100		
Mercury, Total	0.1850	0.0517	15	15	0.0471	3.820	0.6089	30	30	30	30	0.3		
Selenium, Total	<1.73	<1.48	ND	15	<1.47	<1.94	ND	800	800	800	800	0.5		
Silver, Total	<1.73	<1.48	ND	15	<1.47	<1.94	ND	200	200	200	200	0.6		

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
 EPC Calculated as the arithmetic average concentration using 1/2 the reportable detection limit for compounds not detected
 EPCs not calculated for compounds not detected and the maximum reportable detection limit is below Method 1 Standard

Table 3 Soil Analytical Data - Drainage Swale (mg/kg)

Location:	Soil Analytical Data - Drainage Swale (mg/kg)												MBTA Culvert
Sample Name:	Swale-01	Swale-02	Swale-03	Swale-04	Swale-05	Swale-06	Swale-07	Swale-08	Swale-09	Swale-10	Swale-11	MBTA Culvert	
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	
Laboratory I.D.:	SB16389-05	SB16513-01	SB16513-02	SB16513-03	SB16577-01	SB16706-01	SB16706-02	SB16706-03	SB16784-01	SB16784-02	SB16784-03	SB17704-01	
Sample Date:	8/6/2010	8/10/2010	8/10/2010	8/10/2010	8/12/2010	8/13/2010	8/13/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	2-Sep-10	
Consultant:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	
Acenaphthene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Acenaphthylene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Anthracene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Benzo(a)anthracene	0.246	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.412	<.137	0.162	<.152	
Benzo(a)pyrene	0.296	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.429	0.139	0.166	<.152	
Benzo(b)fluoranthene	0.331	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.409	0.163	0.224	<.152	
Benzo(g,h,i)perylene	0.149	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.294	<.137	<.139	<.152	
Benzo(k)fluoranthene	0.360	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.353	0.156	0.142	<.152	
Chrysene	0.319	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.454	0.185	0.202	<.152	
Dibenzo(a,h)anthracene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Fluoranthene	0.661	<.144	<.138	<.131	<.141	<.165	<.161	0.282	1.060	0.307	0.373	<.152	
Fluorene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Indeno(1,2,3-cd)pyrene	0.155	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.288	<.137	<.139	<.152	
Methylnaphthalene, 2-	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Naphthalene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.152	
Phenanthrene	0.278	<.144	<.138	<.131	<.141	<.165	<.161	0.177	0.658	<.137	0.180	<.152	
Pyrene	0.519	<.144	<.138	<.131	<.141	<.165	<.161	0.226	0.871	0.231	0.281	<.152	
Arsenic, Total	10.8	6.00	5.05	7.30	6.57	6.05	2.54	6.48	6.31	6.29	7.04	2.82	
Barium, Total	38.4	31.4	20.4	24.0	43.8	33.4	11.0	66.8	155	65.5	76.7	20.3	
Cadmium, Total	0.583	0.528	<0.518	<0.469	0.511	<0.637	<0.604	<0.534	0.825	0.637	0.598	<0.566	
Chromium, Total (as Cr ⁺⁺⁺)	1,130	121	24.0	45.5	235	229	21.0	833	123	180	397	27.6	
Lead, Total	45.1	19.3	6.76	6.97	19.4	2.56	19.4	23.4	52.9	38.2	49.4	4.76	
Mercury, Total	1.010	0.1010	<0.0281	<0.0278	0.0900	0.1830	<0.0359	0.2730	0.1280	0.0755	0.0827	0.0907	
Selenium, Total	<1.67	<1.57	<1.55	<1.41	<1.53	<1.91	<1.81	<1.60	<1.37	<1.43	<1.53	<1.70	
Silver, Total	<1.67	<1.57	<1.55	<1.41	<1.53	<1.91	<1.81	<1.60	<1.37	<1.43	<1.53	<1.70	

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit

Table 3 Soil Analytical Data Summary Statistics - Drainage Swale (mg/kg)

Location: Sample Name: Laboratory: Laboratory I.D.: Sample Date: Consultant:	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Exposure Point Concentration	Method 1 Standard S-3/GW-1	Method 1 Standard S-3/GW-3	Background Level Natural Soil
Acenaphthene	ND	12	<.131	<.165	ND	4	5,000	0.5
Acenaphthylene	ND	12	<.131	<.165	ND	1	10	0.5
Anthracene	ND	12	<.131	<.165	ND	5,000	5,000	1
Benzo(a)anthracene	3	12	0.162	0.412	0.123	300	300	2
Benzo(a)pyrene	4	12	0.139	0.429	0.135	30	30	2
Benzo(b)fluoranthene	4	12	0.163	0.409	0.143	300	300	2
Benzo(g,h,i)perylene	2	12	0.149	0.294	0.097	5,000	5,000	1
Benzo(k)fluoranthene	4	12	0.142	0.360	0.133	3,000	3,000	1
Chrysene	4	12	0.185	0.454	0.146	3,000	3,000	2
Dibenzo(a,h)anthracene	ND	12	<.131	<.165	ND	30	30	0.5
Fluoranthene	5	12	0.282	1.060	0.267	5,000	5,000	4
Fluorene	ND	12	<.131	<.165	ND	5,000	5,000	1
Indeno(1,2,3-cd)pyrene	2	12	0.155	0.288	0.097	300	300	1
Methylnaphthalene, 2-	ND	12	<.131	<.165	ND	0.7	500	0.5
Naphthalene	ND	12	<.131	<.165	ND	4	3,000	0.5
Phenanthrene	4	12	0.177	0.658	0.156	10	3,000	3
Pyrene	5	12	0.226	0.871	0.220	5,000	5,000	4
Arsenic, Total	12	12	2.54	10.8	6.10	20	20	20
Barium, Total	12	12	11.0	155	48.9	5,000	5,000	50
Cadmium, Total	6	12	0.511	0.825	0.446	30	30	2
Chromium, Total (as Cr ³⁺)	12	12	21.0	1,130	281	5,000	5,000	30
Lead, Total	12	12	2.56	52.9	24.0	300	300	100
Mercury, Total	9	12	0.0755	1.010	0.1733	30	30	0.3
Selenium, Total	ND	12	<1.37	<1.91	ND	800	800	0.5
Silver, Total	ND	12	<1.37	<1.91	ND	200	200	0.6

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
EPC Calculated as the arithmetic average concentration using 1/2 the reportable detection limit for compounds not detected
EPCs not calculated for compounds not detected and the maximum reportable detection limit is below Method 1 Standard

Table 4 Soil Analytical Data - Site-Wide Future Activities/Uses (mg/kg)

Location:	Swale-01	Swale-02	Swale-03	Swale-04	Swale-05	Swale-06	Swale-07	Swale-08	Swale-09	Swale-10	Swale-11	Hillside-01	Hillside-02	Hillside-03
Sample Name:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory:	SB16389-05	SB16513-01	SB16513-02	SB16513-03	SB16577-01	SB16706-01	SB16706-02	SB16706-03	SB16784-01	SB16784-02	SB16784-03	SB15912-01	SB15912-02	SB15912-03
Laboratory I.D.:	8/6/2010	8/10/2010	8/10/2010	8/10/2010	8/12/2010	8/13/2010	8/13/2010	8/16/2010	8/17/2010	8/17/2010	8/17/2010	7/29/2010	7/29/2010	7/29/2010
Sample Date:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech
Consultant:														
Acenaphthene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Acenaphthylene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Anthracene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Benzo(a)anthracene	0.246	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.412	<.137	0.162	<.134	<.137	<.138
Benzo(a)pyrene	0.296	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.429	0.139	0.166	<.134	<.137	<.138
Benzo(b)fluoranthene	0.331	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.409	0.163	0.224	<.134	<.137	<.138
Benzo(g,h,i)perylene	0.149	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.294	<.137	<.139	<.134	<.137	<.138
Benzo(k)fluoranthene	0.360	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.353	0.156	0.142	<.134	<.137	<.138
Chrysene	0.319	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.454	0.185	0.202	<.134	<.137	<.138
Dibenzo(a,h)anthracene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Fluoranthene	0.661	<.144	<.138	<.131	<.141	<.165	<.161	0.282	1.060	0.307	0.373	<.134	<.137	<.138
Fluorene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Indeno(1,2,3-cd)pyrene	0.155	<.144	<.138	<.131	<.141	<.165	<.161	<.14	0.288	<.137	<.139	<.134	<.137	<.138
Methylnaphthalene, 2-	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Naphthalene	<.146	<.144	<.138	<.131	<.141	<.165	<.161	<.14	<.136	<.137	<.139	<.134	<.137	<.138
Phenanthrene	0.278	<.144	<.138	<.131	<.141	<.165	<.161	0.177	0.658	<.137	0.180	<.134	<.137	<.138
Pyrene	0.519	<.144	<.138	<.131	<.141	<.165	<.161	0.226	0.871	0.231	0.281	<.134	<.137	<.138
Arsenic, Total	10.8	6.00	5.05	7.30	6.57	6.05	2.54	6.48	6.31	6.29	7.04	9.51	12.1	9.50
Barium, Total	38.4	31.4	20.4	24.0	43.8	33.4	11.0	66.8	155	65.5	76.7	26.0	27.2	20.2
Cadmium, Total	0.583	0.528	<0.518	<0.469	0.511	<0.637	<0.604	<0.534	0.825	0.637	0.598	<0.505	<0.506	<0.492
Chromium, Total (as Cr ³⁺)	1,130	121	24.0	45.5	235	229	21.0	833	123	180	397	196	33.3	363
Lead, Total	45.1	19.3	6.76	6.97	19.4	19.4	2.56	23.4	52.9	38.2	49.4	12.9	7.71	13.0
Mercury, Total	1.010	0.1010	<0.0281	<0.0278	0.0900	0.1830	<0.0359	0.2730	0.1280	0.0755	0.0827	1.500	0.0882	0.5590
Selenium, Total	<1.67	<1.57	<1.55	<1.41	<1.53	<1.91	<1.81	<1.60	<1.37	<1.43	<1.53	<1.51	<1.52	<1.48
Silver, Total	<1.67	<1.57	<1.55	<1.41	<1.53	<1.91	<1.81	<1.60	<1.37	<1.43	<1.53	<1.51	<1.52	<1.48

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
Bolded concentrations exceed MCP Method 1 Standard

Table 4 Soil Analytical Data - Site-Wide Future Activities/Uses (mg/kg)

Location:	Soil Analytical Data - Site-Wide Future Activities/Uses (mg/kg)													
Sample Name:	Hillside-04	Hillside-05	Hillside-06	Hillside-07	Hillside-08	Hillside-09	Hillside-10	Hillside-11	Hillside-12	Hillside-13	Hillside-14	Hillside-15		
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory I.D.:	SB15912-04	SB15912-05	SB15912-06	SB15912-07	SB15912-08	SB15912-09	SB15912-10	SB15912-11	SB15912-12	SB15912-13	SB15912-14	SB15912-15		
Sample Date:	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010	7/29/2010
Consultant:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech
Acenaphthene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Acenaphthylene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Anthracene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Benzo(a)anthracene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.242
Benzo(a)pyrene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.193
Benzo(b)fluoranthene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.148
Benzo(g,h,i)perylene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Benzo(k)fluoranthene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.220
Chrysene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.224
Dibenzo(a,h)anthracene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Fluoranthene	0.166	0.158	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.615
Fluorene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Indeno(1,2,3-cd)pyrene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Methylnaphthalene, 2-	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Naphthalene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	<.134
Phenanthrene	<.136	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.555
Pyrene	0.151	<.133	<.135	<.137	<.132	<.131	<.127	<.134	<.13	<.131	<.13	<.134	<.13	0.493
Arsenic, Total	10.3	13.3	10.3	10.9	10.4	9.75	9.65	11.3	10.5	13.6	14.1	16.3		
Barium, Total	26.2	23.3	22.6	21.0	34.1	33.9	25.9	17.6	23.1	29.4	27.4	31.5		
Cadmium, Total	0.479	<0.482	<0.494	<0.502	0.463	0.612	0.520	0.487	<0.456	0.479	<0.498	<0.466	0.479	
Chromium, Total (as Cr ³⁺)	278	33.4	288	299	41.1	137	94.7	18.1	20.4	41.4	60.2	34.3		
Lead, Total	17.4	35.4	15.1	16.6	7.28	34.3	27.4	9.98	9.55	8.05	9.02	35.0		
Mercury, Total	0.4290	0.1080	0.9620	0.4100	0.0924	0.2410	0.1480	<0.0300	0.0324	0.0945	0.0817	0.1530		
Selenium, Total	<1.37	<1.45	<1.48	<1.51	<1.35	<1.37	<1.32	<1.26	<1.37	<1.49	<1.40	<1.37		
Silver, Total	<1.37	<1.45	<1.48	<1.51	1.45	<1.37	<1.32	<1.26	<1.37	<1.49	<1.40	<1.37		

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
Bolded concentrations exceed MCP Method 1 Standard

Table 4 Soil Analytical Data - Site-Wide Future Activities/Uses (mg/kg)

Location:	Hillside-16	Hill Side-17	Hill Side-18	Hill Side-19	Hill Side-20	Downsteam -01	Downsteam -02	Downsteam -03	Down Stream-4
Sample Name:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory:	SB15912-16	SB16389-01	SB16389-02	SB16389-03	SB16389-04	SB16045-01	SB16045-02	SB16045-03	SB16706-04
Laboratory I.D.:	7/29/2010	8/9/2010	8/9/2010	8/9/2010	8/9/2010	7/30/2010	7/30/2010	7/30/2010	8/16/2010
Sample Date:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech
Consultant:									
Acenaphthene	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Acenaphthylene	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Anthracene	<.133	<.134	<.129	0.255	<.135	<.143	<.137	<.132	<.171
Benzo(a)anthracene	<.133	<.134	0.189	0.863	0.476	<.143	<.137	0.175	<.171
Benzo(a)pyrene	<.133	<.134	0.189	0.869	0.507	<.143	<.137	0.175	<.171
Benzo(b)fluoranthene	<.133	<.134	0.201	1.050	0.599	<.143	<.137	0.179	<.171
Benzo(g,h,i)perylene	<.133	<.134	<.129	0.320	0.205	<.143	<.137	<.132	<.171
Benzo(k)fluoranthene	<.133	<.134	0.148	0.583	0.444	<.143	<.137	0.176	<.171
Chrysene	<.133	<.134	0.213	0.844	0.550	<.143	<.137	0.209	<.171
Dibenzo(a,h)anthracene	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Fluoranthene	<.133	0.153	0.427	1.960	1.120	0.216	0.232	0.374	<.171
Fluorene	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Indeno(1,2,3-cd)pyrene	<.133	<.134	<.129	0.359	0.221	<.143	<.137	<.132	<.171
Methylnaphthalene, 2-	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Naphthalene	<.133	<.134	<.129	<.136	<.135	<.143	<.137	<.132	<.171
Phenanthrene	<.133	<.134	0.296	1.050	0.652	<.143	<.137	0.188	<.171
Pyrene	<.133	<.134	0.372	1.640	0.968	0.164	0.185	0.325	<.171
Arsenic, Total	11.6	9.76	10.6	8.33	9.80	2.84	1.56	3.28	4.47
Barium, Total	25.7	88.3	106	446	351	74.0	104	67.9	60.1
Cadmium, Total	0.508	<0.488	<0.490	0.551	0.703	0.700	0.592	0.709	<0.609
Chromium, Total (as Cr ³⁺)	68.1	110	246	931	722	128	273	213	209
Lead, Total	12.3	17.5	56.4	54.7	81.5	27.8	26.8	27.4	16.9
Mercury, Total	0.2120	0.2120	0.9940	0.6030	0.5380	0.0616	0.0729	0.0885	0.1430
Selenium, Total	<1.37	<1.46	<1.47	<1.41	<1.45	<1.53	<1.47	<1.58	<1.83
Silver, Total	<1.37	<1.46	<1.47	<1.41	<1.45	<1.53	<1.47	<1.58	<1.83

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
Bolded concentrations exceed MCP Method 1 Standard

Table 4 Soil Analytical Data - Site-Wide Future Activities/Uses (mg/kg)

Location:	Down Stream-5	Down Stream-6	Downstream-7	Down Stream-8	Down Stream-9	Downstream-10	Downstream-11	Downstream-12	Downstream-13	Downstream-14	Downstream-15	MBTA Culvert
Sample Name:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory:	SB16784-04	SB16784-05	SB17077-01	SB16784-07	SB16784-08	SB16930-01	SB16930-02	SB17478-01	SB16930-04	SB16930-05	SB16930-06	SB17704-01
Laboratory I.D.:	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010	30-Aug-10	8/18/2010	8/18/2010	8/18/2010	2-Sep-10
Sample Date:	8/17/2010	8/17/2010	8/20/2010	8/17/2010	8/17/2010	8/18/2010	8/18/2010	30-Aug-10	8/18/2010	8/18/2010	8/18/2010	2-Sep-10
Consultant:	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech	Tetra Tech
Acenaphthene	<.149	<.171	<.158	<.165	<.147	0.190	<.171	<.181	<.18	<.161	<.149	<.152
Acenaphthylene	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18	<.161	<.149	<.152
Anthracene	<.149	<.171	<.158	<.165	<.147	0.359	<.171	<.181	<.18	<.161	<.149	<.152
Benzo(a)anthracene	<.149	<.171	<.158	0.290	<.147	1.110	0.401	<.181	0.236	<.161	<.149	<.152
Benzo(a)pyrene	<.149	<.171	<.158	0.300	<.147	1.020	0.451	<.181	0.254	<.161	<.149	<.152
Benzo(b)fluoranthene	<.149	<.171	<.158	0.363	<.147	1.040	0.554	<.181	0.320	<.161	<.149	<.152
Benzo(g,h,i)perylene	<.149	<.171	<.158	<.165	<.147	0.464	0.230	<.181	<.18	<.161	<.149	<.152
Benzo(k)fluoranthene	<.149	<.171	<.158	0.267	<.147	0.923	0.372	<.181	0.230	<.161	<.149	<.152
Chrysene	<.149	<.171	<.158	0.336	<.147	1.070	0.484	<.181	0.259	<.161	<.149	<.152
Dibenzo(a,h)anthracene	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18	<.161	<.149	<.152
Fluoranthene	<.149	<.171	<.158	0.686	<.147	2.360	0.883	<.181	0.473	<.161	0.175	<.152
Fluorene	<.149	<.171	<.158	<.165	<.147	0.217	<.171	<.181	<.18	<.161	<.149	<.152
Indeno(1,2,3-cd)pyrene	<.149	<.171	<.158	0.167	<.147	0.517	0.262	<.181	<.18	<.161	<.149	<.152
Methylnaphthalene, 2-	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18	<.161	<.149	<.152
Naphthalene	<.149	<.171	<.158	<.165	<.147	<.149	<.171	<.181	<.18	<.161	<.149	<.152
Phenanthrene	<.149	<.171	<.158	0.350	<.147	1.910	0.415	<.181	0.211	<.161	<.149	<.152
Pyrene	<.149	<.171	<.158	0.544	<.147	1.990	0.694	<.181	0.398	<.161	0.157	<.152
Arsenic, Total	1.76	4.57	5.42	13.4	5.77	9.01	9.64	7.15	11.7	6.33	3.87	2.82
Barium, Total	19.0	54.1	37.7	317	60.8	390	284	91.8	174	79.5	34.8	20.3
Cadmium, Total	<0.523	<0.617	<0.599	<0.591	<0.510	0.975	0.895	<0.648	0.672	<0.577	<0.492	<0.566
Chromium, Total (as Cr ³⁺)	35.1	108	259	2,180	607	1,810	1,800	358	1,770	393	75.3	27.6
Lead, Total	6.29	13.5	15.8	89.6	29.0	93.7	84.1	39.1	123	18.4	9.89	4.76
Mercury, Total	0.0471	0.0992	0.4320	1.330	0.4670	0.4160	1.330	0.5890	3.820	0.1850	0.0517	0.0907
Selenium, Total	<1.57	<1.85	<1.80	<1.77	<1.53	<1.71	<1.66	<1.94	<1.83	<1.73	<1.48	<1.70
Silver, Total	<1.57	<1.85	<1.80	<1.77	<1.53	<1.71	<1.66	<1.94	<1.83	<1.73	<1.48	<1.70

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit
Bolded concentrations exceed MCP Method 1 Standard

Table 4 Soil Analytical Data Summary Statistics - Site-Wide Future Activities/Uses (mg/kg)

Location: Sample Name: Laboratory: Laboratory I.D.: Sample Date: Consultant:	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Exposure Point Concentration	Method 1 Standard S-1/GW-1	Method 1 Standard S-1/GW-2	Method 1 Standard S-1/GW-3	Background Level Natural Soil
Acenaphthene	1	47	0.190	0.190	0.074	4	1,000	1,000	0.5
Acenaphthylene	ND	47	<.127	<.181	ND	1	600	10	0.5
Anthracene	2	47	0.255	0.359	0.082	1,000	1,000	1,000	1
Benzo(a)anthracene	12	47	0.162	1.110	0.155	7	7	7	2
Benzo(a)pyrene	13	47	0.139	1.020	0.158	2	2	2	2
Benzo(b)fluoranthene	13	47	0.148	1.050	0.171	7	7	7	2
Benzo(g,h,i)perylene	6	47	0.149	0.464	0.098	1,000	1,000	1,000	1
Benzo(k)fluoranthene	13	47	0.142	0.923	0.145	70	70	70	1
Chrysene	13	47	0.185	1.070	0.166	70	70	70	2
Dibenzo(a,h)anthracene	ND	47	<.127	<.181	ND	0.7	0.7	0.7	0.5
Fluoranthene	20	47	0.153	2.360	0.311	1,000	1,000	1,000	4
Fluorene	1	47	0.217	0.217	0.075	1,000	1,000	1,000	1
Indeno(1,2,3-cd)pyrene	7	47	0.155	0.517	0.103	7	7	7	1
Methylnaphthalene, 2-	ND	47	<.127	<.181	ND	0.7	80	300	0.5
Naphthalene	ND	47	<.127	<.181	ND	4	40	500	0.5
Phenanthrene	13	47	0.177	1.910	0.199	10	500	500	3
Pyrene	18	47	0.151	1.990	0.262	1,000	1,000	1,000	4
Arsenic, Total	47	47	1.56	16.3	8.20	20	20	20	20
Barium, Total	47	47	11.0	446	81.7	1,000	1,000	1,000	50
Cadmium, Total	21	47	0.463	0.975	0.425	2	2	2	2
Chromium, Total (as Cr ³⁺)	47	47	18.1	2,180	374	1,000	1,000	1,000	30
Lead, Total	47	47	2.56	123	29.6	300	300	300	100
Mercury, Total	43	47	0.0324	3.820	0.3976	20	20	20	0.3
Selenium, Total	ND	47	<1.26	<1.94	ND	400	400	400	0.5
Silver, Total	1	47	1.45	1.45	0.791	100	100	100	0.6

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit

Bolded concentrations exceed MCP Method 1 Standard

EPC Calculated as the arithmetic average concentration using 1/2 the reportable detection limit for compounds not detected

EPCs not calculated for compounds not detected and the maximum reportable detection limit is below Method 1 Standard

Table 5				
Groundwater Analytical Data (µg/L)				
Location:	B-210/MW-2	B-220/MW-3		
Sample Name:	MW-2	MW-3		
Depth to Water:	6.4'	8.11'	2007	2007
Laboratory:	Spectrum	Spectrum	Method 1	Method 1
Laboratory I.D.:	SB18355-02	SB18355-01	Standard	Standard
Sample Date:	16-Sep-10	16-Sep-10	GW-1	GW-3
Consultant:	Tetra Tech	Tetra Tech		
Acenaphthene	<5.32	<5.26	20	6,000
Acenaphthylene	<5.32	<5.26	30	40
Anthracene	<5.32	<5.26	60	30
Benzo(a)anthracene	<5.32	<5.26	1	1,000
Benzo(a)pyrene	<5.32	<5.26	0.2	500
Benzo(b)fluoranthene	<5.32	<5.26	1	400
Benzo(g,h,i)perylene	<5.32	<5.26	50	20
Benzo(k)fluoranthene	<5.32	<5.26	1	100
Chrysene	<5.32	<5.26	2	70
Dibenzo(a,h)anthracene	<5.32	<5.26	0.5	40
Fluoranthene	<5.32	<5.26	90	200
Fluorene	<5.32	<5.26	30	40
Indeno(1,2,3-cd)pyrene	<5.32	<5.26	0.5	100
Methylnaphthalene, 1-	<5.32	<5.26	NA	NA
Methylnaphthalene, 2-	<5.32	<5.26	10	20,000
Naphthalene	<5.32	<5.26	140	20,000
Phenanthrene	<5.32	<5.26	40	10,000
Pyrene	<5.32	<5.26	80	20
Arsenic, Dissolved	<4.0	<4.0	10	900
Barium, Dissolved	14.2	49.2	2,000	50,000
Cadmium, Dissolved	<2.5	<2.5	5	4
Chromium, Dissolved	<5.0	<5.0	100	300
Lead, Dissolved	<7.5	<7.5	15	10
Mercury, Dissolved	<0.20	<0.20	2	20
Selenium, Dissolved	<15.0	<15.0	50	100
Silver, Dissolved	<5.0	<5.0	100	7

Notes: < or ND indicates compound not detected above laboratory analytical method reportable detection limit



NOTE: DISTANCE RADII MEASURED FROM THE APPROXIMATE CENTER OF SITE PROPERTY.

Project No. #12700673



Information obtained from
 USGS Map of Boston North & Lexington, Massachusetts
 Quadrangle dated 1995
 USGS Map of Reading and Wilmington, Massachusetts
 Quadrangle dated 1997

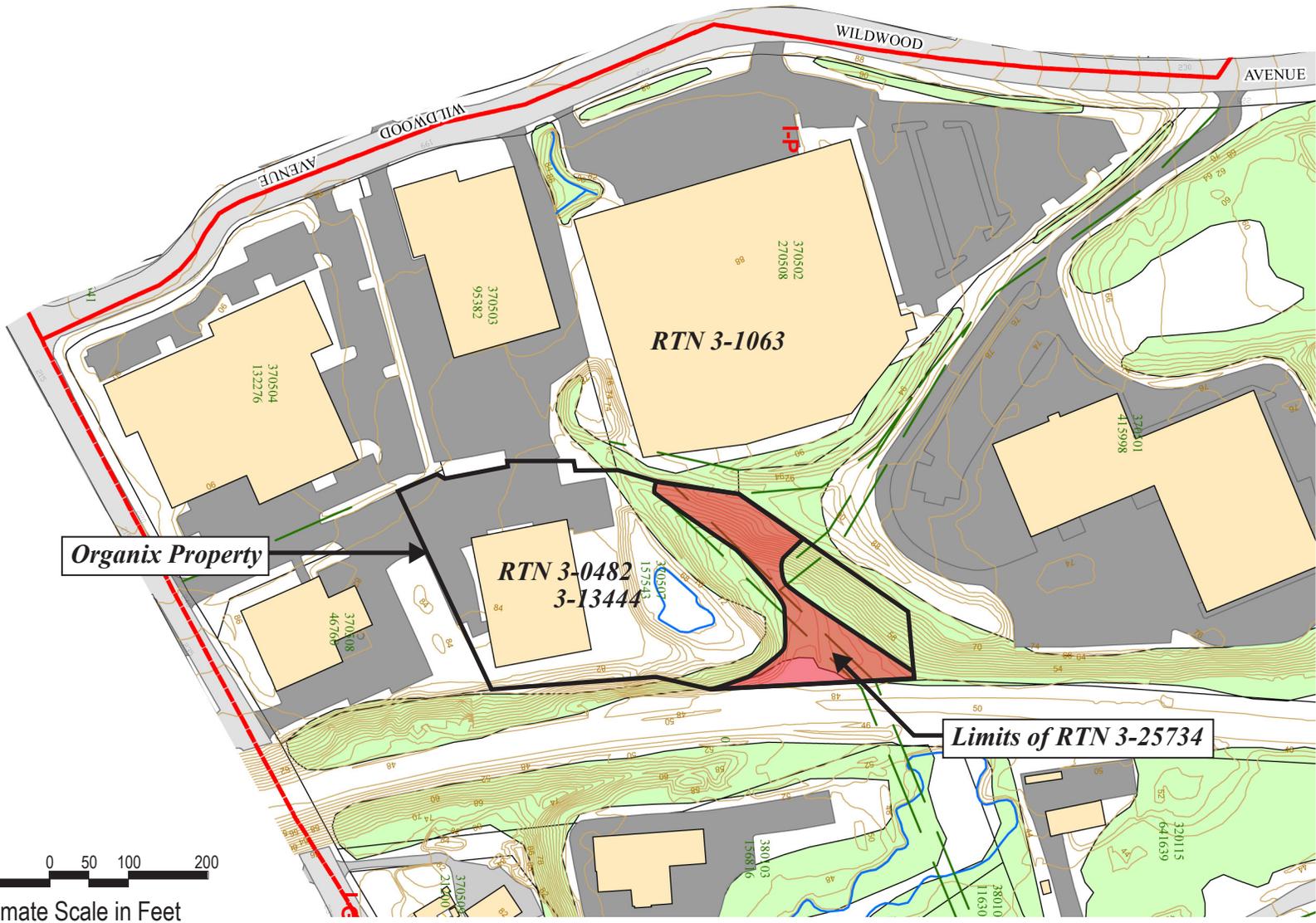
Organix LLC.
 240 Salem Street
 Woburn, Massachusetts

Site Locus Plan

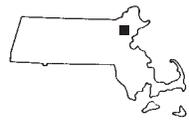
Figure
 1

Legend

-  Beco_Easements
-  Buildings
-  City_Boundary
-  Easements
-  drainage
-  PorchDecks
-  Contours
-  ParkingLots
-  Driveways
-  EdgeofPvmt
-  Paper_Streets
-  Parcels
-  Treed Area
-  roadsnew
-  Zoning Lines
-  Local100yrFloodPlain
- R-1** Zoning Text
- 120101 Map/Block/Lot
- 5,500 SF Acreage
- 100.00' Dimensions




TETRATECH
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 508.903.2000
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Base Map: Tax Map 37 of
 Woburn, MA

Former John J. Riley Site
 240 Salem Street
 Woburn, Massachusetts
 RTN 3-25734
**Disposal Site
 and Surrounding Area**

Appendix A

LSP Statement of Limitations and Conditions

Statement of Limitations and Conditions

Attachment to Opinion of Massachusetts Licensed Site Professional

Tetra Tech Rizzo, Inc.

Name of Licensed Site Professional:	Ronald E. Myrick, Jr., P.E., L.S.P.
LSP Registration Number:	2715
Date of Opinion:	January 27, 2011
Client to Whom Opinion was Rendered:	Organix, LLC
Date of Agreement between Tetra Tech Rizzo and Client pursuant to which Opinion was Rendered:	June 10, 2010
Response Tracking No./Site No.:	3-25734

This Statement of Limitations and Conditions is an integral part of, and is incorporated by reference into, the Opinion of Massachusetts Licensed Site Professional referenced above.

Limitations

1. Purpose of Opinion

- A. This Opinion is being provided in compliance with the requirements set forth in the Massachusetts Contingency Plan (“MCP”), 310 CMR 40.0000 et seq. Specifically, the LSP has prepared this Opinion at the request of the Client identified above as part of a Class A-2 Response Action Outcome Statement Submittal. This stated purpose has been a significant factor in determining the scope and level of services required to render this Opinion.
- B. Should the purpose for which this Opinion is to be used change, this Opinion shall no longer be valid.

2. General

- A. This Opinion was prepared for the sole and exclusive use of the Client, subject to the provisions of the MCP. No other party is entitled to rely in any way on the conclusions, observations, specifications, or data contained herein without the express written consent of Tetra Tech Rizzo, Inc. and the LSP who rendered this opinion. Any use of this Opinion by anyone other than Client, or any use of this Opinion by Client or others for any purpose other than the stated purpose set forth above, without the LSP's review and the written authorization of Tetra Tech Rizzo, Inc. and the LSP, shall be at the user's sole

risk, and neither Tetra Tech Rizzo, Inc. nor the LSP shall have any liability or responsibility therefor.

- B. This Opinion was prepared pursuant to an Agreement between Tetra Tech Rizzo, Inc. and the Client referenced above which defines the scope of work and sets out agreements regarding waivers of consequential damages, limitations on liability, and other important conditions and restrictions pursuant to which the Opinion is rendered. All uses of the Opinion are subject to and deemed acceptance of the conditions and restrictions contained in such Agreement. A copy of the Agreement or relevant excerpts from the Agreement will be made available upon requests to any authorized person seeking to use the Opinion.

3. Scope of Services

The observations and conclusions described in this Opinion are based solely on the Services provided pursuant to the Agreement with the Client and any approved additional services authorized by Client. Without limitation of any other applicable limitations or conditions, neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable for the existence of any condition, the discovery of which would have required the performance of services not authorized under the Agreement. To the best of the knowledge and belief of Tetra Tech Rizzo, Inc. and the LSP who signed this Opinion, no inquiry of an attorney-at-law having being made, no laws, regulations, orders, permits or approvals are applicable to the response actions to which this opinion relates except, if and to the extent applicable, M.G.L. c. 21A, Sections 19-19J, 309 CMR, M.G.L. c. 21 E and 310 CMR 40.0000. Accordingly, this opinion is not intended to and does not address compliance with any other laws, regulation, orders, permits or approvals.

4. Changed Circumstances

The passage of time may result in changes in technology, economic conditions or regulatory standards, manifestations of latent conditions, or the occurrence of future events which would render this Opinion inaccurate or otherwise inapplicable. Neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable or responsible for the consequences of any such changed circumstances or conditions on the accuracy of this Opinion. In addition, under no circumstances shall the Client nor any other person or entity rely on the information or conclusions contained in this Opinion after six months from its date of submission without the express written consent of Tetra Tech Rizzo, Inc. and the LSP. Reliance on the Opinion after such period of time shall be at the user's sole risk.

- 5. Should Tetra Tech Rizzo, Inc. or the LSP be required or requested to review or authorize others to use this Opinion after its date of submission, Tetra Tech Rizzo, Inc. shall be entitled to additional compensation at then existing rates or such other terms as may be agreed upon between Tetra Tech Rizzo, Inc. and the Client. Nothing herein contained shall be deemed to require Tetra Tech Rizzo, Inc. or the LSP to undertake any such review or authorize others to use this Opinion.

6. The conclusions stated in this Opinion are based upon:

- Visual inspection of existing physical conditions;
- Review and interpretation of site history and site usage information which was made available or obtained within the scope of work authorized by the Client;
- Information provided by the Client;
- Information and/or analyses for designated substances or parameters provided by an independent testing service or laboratory on a limited number of samples; and
- A limited number of subsurface explorations made on dates indicated in documentation supporting this Opinion;

upon which the LSP has relied and presumed accurate, and upon which the LSP is entitled to reasonably rely. The LSP was not authorized and did not attempt to independently verify the accuracy or completeness of information or materials received from the Client and/or from laboratories and other third parties during the performance of its services. Neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable for any condition, information, or conclusion, the discovery of which required information not available to the LSP or for independent investigation of information provided to the LSP by the Client and/or independent third parties.

7. This Opinion is rendered for the limited purpose stated above, and is not and should not be deemed to be an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made by this opinion, and any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. Without limiting the generality of the foregoing, no warranty or guarantee is made that all contamination at a site or sources or contamination has been detected or identified, that any action or recommended action will achieve all of its objectives, or that this Opinion or any action as to which this Opinion relates will be upheld by any audit conducted by the DEP or any other party.

P:\55410\127-55410-10001\Docs\Reports\Response Action Outcome\Appendix\Appendix.A_LSP_Limitations-2011-01-27.doc

Appendix B
Supporting Laboratory Certificates of Analysis

Report Date:
02-Aug-10 15:38



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB15912-01	Hillside-01	Soil	29-Jul-10 11:40	29-Jul-10 17:09
SB15912-02	Hillside-02	Soil	29-Jul-10 11:50	29-Jul-10 17:09
SB15912-03	Hillside-03	Soil	29-Jul-10 12:00	29-Jul-10 17:09
SB15912-04	Hillside-04	Soil	29-Jul-10 12:10	29-Jul-10 17:09
SB15912-05	Hillside-05	Soil	29-Jul-10 12:20	29-Jul-10 17:09
SB15912-06	Hillside-06	Soil	29-Jul-10 12:30	29-Jul-10 17:09
SB15912-07	Hillside-07	Soil	29-Jul-10 12:40	29-Jul-10 17:09
SB15912-08	Hillside-08	Soil	29-Jul-10 12:50	29-Jul-10 17:09
SB15912-09	Hillside-09	Soil	29-Jul-10 13:00	29-Jul-10 17:09
SB15912-10	Hillside-10	Soil	29-Jul-10 13:10	29-Jul-10 17:09
SB15912-11	Hillside-11	Soil	29-Jul-10 13:20	29-Jul-10 17:09
SB15912-12	Hillside-12	Soil	29-Jul-10 13:30	29-Jul-10 17:09
SB15912-13	Hillside-13	Soil	29-Jul-10 13:40	29-Jul-10 17:09
SB15912-14	Hillside-14	Soil	29-Jul-10 13:50	29-Jul-10 17:09
SB15912-15	Hillside-15	Soil	29-Jul-10 14:00	29-Jul-10 17:09
SB15912-16	Hillside-16	Soil	29-Jul-10 14:10	29-Jul-10 17:09
SB15912-17	Dup-1	Soil	29-Jul-10 00:01	29-Jul-10 17:09
SB15912-18	Dup-2	Soil	29-Jul-10 00:02	29-Jul-10 17:09

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

A handwritten signature in black ink, appearing to read "H. Tayeh", is written over a light-colored rectangular background.

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Handwritten initials "CN" inside a hand-drawn circle.

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 29 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 12.0 degrees Celsius. The samples were transported on ice to the laboratory facility and the temperature was recorded at 1.9 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1016140-DUP1 *Source: SB15912-03*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Chromium

SW846 8270C/D

Duplicates:

1016151-DUP1 *Source: SB15912-15*

Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.

- Benzo (a) anthracene
- Benzo (a) pyrene
- Benzo (b) fluoranthene
- Benzo (k) fluoranthene
- Chrysene
- Fluoranthene
- Phenanthrene
- Pyrene

Sample IdentificationHillside-01
SB15912-01Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 11:40Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	134	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	92			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	87			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.51	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	9.51		mg/kg dry	1.51	1	"	"	"	"	"	"
7440-39-3	Barium	26.0		mg/kg dry	1.01	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.505	1	"	"	"	"	"	"
7440-47-3	Chromium	196		mg/kg dry	1.01	1	"	"	"	"	"	"
7439-97-6	Mercury	1.50		mg/kg dry	0.278	10	SW846 7471A	"	02-Aug-10	JLC	1016141	
7439-92-1	Lead	12.9		mg/kg dry	1.51	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.51	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	95.6			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-02
SB15912-02Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 11:50Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	137	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	88			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	86			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.52	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	12.1		mg/kg dry	1.52	1	"	"	"	"	"	"
7440-39-3	Barium	27.2		mg/kg dry	1.01	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.506	1	"	"	"	"	"	"
7440-47-3	Chromium	33.3		mg/kg dry	1.01	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0882		mg/kg dry	0.0295	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	7.71		mg/kg dry	1.52	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.52	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	96.9			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

Hillside-03
SB15912-03

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
29-Jul-10 12:00

Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	138	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	91			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	89			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.48	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	9.50		mg/kg dry	1.48	1	"	"	"	"	"	"
7440-39-3	Barium	20.2		mg/kg dry	0.984	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.492	1	"	"	"	"	"	"
7440-47-3	Chromium	363		mg/kg dry	0.984	1	"	"	"	"	"	"
7439-97-6	Mercury	0.559		mg/kg dry	0.0283	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	13.0		mg/kg dry	1.48	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.48	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	95.3			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample IdentificationHillside-04
SB15912-04Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 12:10Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	136	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
206-44-0	Fluoranthene	166		µg/kg dry	136	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
129-00-0	Pyrene	151		µg/kg dry	136	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	96			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	91			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	10.3		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	26.2		mg/kg dry	0.912	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.479		mg/kg dry	0.456	1	"	"	"	"	"	"
7440-47-3	Chromium	278		mg/kg dry	0.912	1	"	"	"	"	"	"
7439-97-6	Mercury	0.429		mg/kg dry	0.0292	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	17.4		mg/kg dry	1.37	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	94.9		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-05
SB15912-05Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 12:20Received
29-Jul-10

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	133	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
206-44-0	Fluoranthene	158		µg/kg dry	133	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	92			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	89			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.45	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	13.3		mg/kg dry	1.45	1	"	"	"	"	"	"
7440-39-3	Barium	23.3		mg/kg dry	0.964	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.482	1	"	"	"	"	"	"
7440-47-3	Chromium	33.4		mg/kg dry	0.964	1	"	"	"	"	"	"
7439-97-6	Mercury	0.108		mg/kg dry	0.0298	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	35.4		mg/kg dry	1.45	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.45	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	97.2		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-06
SB15912-06Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 12:30Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	135	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	135	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	87			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	85			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.48	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	10.3		mg/kg dry	1.48	1	"	"	"	"	"	"
7440-39-3	Barium	22.6		mg/kg dry	0.988	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.494	1	"	"	"	"	"	"
7440-47-3	Chromium	288		mg/kg dry	0.988	1	"	"	"	"	"	"
7439-97-6	Mercury	0.962		mg/kg dry	0.0289	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	15.1		mg/kg dry	1.48	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.48	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	94.9			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-07
SB15912-07Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 12:40Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	137	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	91			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	86			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.51	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	10.9		mg/kg dry	1.51	1	"	"	"	"	"	"
7440-39-3	Barium	21.0		mg/kg dry	1.00	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.502	1	"	"	"	"	"	"
7440-47-3	Chromium	299		mg/kg dry	1.00	1	"	"	"	"	"	"
7439-97-6	Mercury	0.410		mg/kg dry	0.0284	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	16.6		mg/kg dry	1.51	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.51	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	95.5			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-08
SB15912-08Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 12:50Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	132	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	132	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	114			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	106			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	1.45		mg/kg dry	1.35	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	10.4		mg/kg dry	1.35	1	"	"	"	"	"	"
7440-39-3	Barium	34.1		mg/kg dry	0.900	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.463		mg/kg dry	0.450	1	"	"	"	"	"	"
7440-47-3	Chromium	41.1		mg/kg dry	0.900	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0924		mg/kg dry	0.0277	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	7.28		mg/kg dry	1.35	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.35	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		97.2		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-09
SB15912-09Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 13:00Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	131	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	62			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	59			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	9.75		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	33.9		mg/kg dry	0.913	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.612		mg/kg dry	0.457	1	"	"	"	"	"	"
7440-47-3	Chromium	137		mg/kg dry	0.913	1	"	"	"	"	"	"
7439-97-6	Mercury	0.241		mg/kg dry	0.0281	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	34.3		mg/kg dry	1.37	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	98.5			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

Hillside-10
SB15912-10

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
29-Jul-10 13:10

Received
29-Jul-10

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	127	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	127	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	127	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	81			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	79			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.32	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	9.65		mg/kg dry	1.32	1	"	"	"	"	"	"
7440-39-3	Barium	25.9		mg/kg dry	0.881	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.520		mg/kg dry	0.440	1	"	"	"	"	"	"
7440-47-3	Chromium	94.7		mg/kg dry	0.881	1	"	"	"	"	"	"
7439-97-6	Mercury	0.148		mg/kg dry	0.0286	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	27.4		mg/kg dry	1.32	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.32	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	98.5			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-11
SB15912-11Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 13:20Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	134	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	97			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	92			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.26	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	11.3		mg/kg dry	1.26	1	"	"	"	"	"	"
7440-39-3	Barium	17.6		mg/kg dry	0.840	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.487		mg/kg dry	0.420	1	"	"	"	"	"	"
7440-47-3	Chromium	18.1		mg/kg dry	0.840	1	"	"	"	"	"	"
7439-97-6	Mercury	BRL		mg/kg dry	0.0300	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	9.98		mg/kg dry	1.26	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.26	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	99.2			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-12
SB15912-12Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 13:30Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	130	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	106			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	94			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	10.5		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	23.1		mg/kg dry	0.911	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.456	1	"	"	"	"	"	"
7440-47-3	Chromium	20.4		mg/kg dry	0.911	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0324		mg/kg dry	0.0297	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	9.55		mg/kg dry	1.37	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	98.8		%			1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-13
SB15912-13Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 13:40Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	131	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	131	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	96			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	87			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.49	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	13.6		mg/kg dry	1.49	1	"	"	"	"	"	"
7440-39-3	Barium	29.4		mg/kg dry	0.996	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.498	1	"	"	"	"	"	"
7440-47-3	Chromium	41.4		mg/kg dry	0.996	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0945		mg/kg dry	0.0274	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	8.05		mg/kg dry	1.49	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.49	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	97.4		%			1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationHillside-14
SB15912-14Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 13:50Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	130	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	130	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	108			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	100			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.40	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	14.1		mg/kg dry	1.40	1	"	"	"	"	"	"
7440-39-3	Barium	27.4		mg/kg dry	0.932	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.466	1	"	"	"	"	"	"
7440-47-3	Chromium	60.2		mg/kg dry	0.932	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0817		mg/kg dry	0.0303	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	9.02		mg/kg dry	1.40	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.40	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	97.3			%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

Hillside-15
SB15912-15

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
29-Jul-10 14:00

Received
29-Jul-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	134	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	242		µg/kg dry	134	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	193		µg/kg dry	134	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	148		µg/kg dry	134	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	220		µg/kg dry	134	1	"	"	"	"	"	"
218-01-9	Chrysene	224		µg/kg dry	134	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
206-44-0	Fluoranthene	615		µg/kg dry	134	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
85-01-8	Phenanthrene	555		µg/kg dry	134	1	"	"	"	"	"	"
129-00-0	Pyrene	493		µg/kg dry	134	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	105			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	91			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	16.3		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	31.5		mg/kg dry	0.912	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.479		mg/kg dry	0.456	1	"	"	"	"	"	"
7440-47-3	Chromium	34.3		mg/kg dry	0.912	1	"	"	"	"	"	"
7439-97-6	Mercury	0.153		mg/kg dry	0.0291	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	35.0		mg/kg dry	1.37	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		96.3		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample IdentificationHillside-16
SB15912-16Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
29-Jul-10 14:10Received
29-Jul-10

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	133	1	SW846 8270C/D	30-Jul-10	30-Jul-10	ML	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	133	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	102			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	88			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	11.6		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	25.7		mg/kg dry	0.915	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.508		mg/kg dry	0.457	1	"	"	"	"	"	"
7440-47-3	Chromium	68.1		mg/kg dry	0.915	1	"	"	"	"	"	"
7439-97-6	Mercury	0.212		mg/kg dry	0.0273	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	12.3		mg/kg dry	1.37	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	97.5		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 19 of 29

Sample Identification

Dup-1
SB15912-17

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
29-Jul-10 00:01

Received
29-Jul-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	137	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
206-44-0	Fluoranthene	217		µg/kg dry	137	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
85-01-8	Phenanthrene	141		µg/kg dry	137	1	"	"	"	"	"	"
129-00-0	Pyrene	177		µg/kg dry	137	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	86			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	80			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.52	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	13.6		mg/kg dry	1.52	1	"	"	"	"	"	"
7440-39-3	Barium	23.4		mg/kg dry	1.02	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.508	1	"	"	"	"	"	"
7440-47-3	Chromium	57.3		mg/kg dry	1.02	1	"	"	"	"	"	"
7439-97-6	Mercury	0.345		mg/kg dry	0.0307	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	35.2		mg/kg dry	1.52	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.52	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		96.3		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Dup-2
SB15912-18

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
29-Jul-10 00:02

Received
29-Jul-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	129	1	SW846 8270C/D	30-Jul-10	30-Jul-10	MSL	1016151	
208-96-8	Acenaphthylene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	129	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	81			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	80			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	1.56		mg/kg dry	1.43	1	SW846 6010B	29-Jul-10	30-Jul-10	LR	1016140	
7440-38-2	Arsenic	9.92		mg/kg dry	1.43	1	"	"	"	"	"	"
7440-39-3	Barium	39.5		mg/kg dry	0.953	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.558		mg/kg dry	0.477	1	"	"	"	"	"	"
7440-47-3	Chromium	90.2		mg/kg dry	0.953	1	"	"	"	"	"	"
7439-97-6	Mercury	0.297		mg/kg dry	0.0271	1	SW846 7471A	"	30-Jul-10	HB	1016141	
7439-92-1	Lead	40.5		mg/kg dry	1.43	1	SW846 6010B	"	30-Jul-10	LR	1016140	
7782-49-2	Selenium	BRL		mg/kg dry	1.43	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		98.0		%		1	SM2540 G Mod.	29-Jul-10	29-Jul-10	BD	1016138	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016151 - SW846 3545A										
<u>Blank (1016151-BLK1)</u>				<u>Prepared & Analyzed: 30-Jul-10</u>						
Acenaphthene	BRL		µg/kg wet	66.5						
Acenaphthylene	BRL		µg/kg wet	66.5						
Anthracene	BRL		µg/kg wet	66.5						
Benzo (a) anthracene	BRL		µg/kg wet	66.5						
Benzo (a) pyrene	BRL		µg/kg wet	66.5						
Benzo (b) fluoranthene	BRL		µg/kg wet	66.5						
Benzo (g,h,i) perylene	BRL		µg/kg wet	66.5						
Benzo (k) fluoranthene	BRL		µg/kg wet	66.5						
Chrysene	BRL		µg/kg wet	66.5						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	66.5						
Fluoranthene	BRL		µg/kg wet	66.5						
Fluorene	BRL		µg/kg wet	66.5						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	66.5						
1-Methylnaphthalene	BRL		µg/kg wet	66.5						
2-Methylnaphthalene	BRL		µg/kg wet	66.5						
Naphthalene	BRL		µg/kg wet	66.5						
Phenanthrene	BRL		µg/kg wet	66.5						
Pyrene	BRL		µg/kg wet	66.5						
<i>Surrogate: 2-Fluorobiphenyl</i>	3620		µg/kg wet		3330		108	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3430		µg/kg wet		3330		103	30-130		
<u>LCS (1016151-BS1)</u>				<u>Prepared & Analyzed: 30-Jul-10</u>						
Acenaphthene	3290		µg/kg wet	66.5	3330		99	40-140		
Acenaphthylene	3090		µg/kg wet	66.5	3330		93	40-140		
Anthracene	3050		µg/kg wet	66.5	3330		92	40-140		
Benzo (a) anthracene	2860		µg/kg wet	66.5	3330		86	40-140		
Benzo (a) pyrene	3130		µg/kg wet	66.5	3330		94	40-140		
Benzo (b) fluoranthene	2860		µg/kg wet	66.5	3330		86	40-140		
Benzo (g,h,i) perylene	2910		µg/kg wet	66.5	3330		87	40-140		
Benzo (k) fluoranthene	3520		µg/kg wet	66.5	3330		106	40-140		
Chrysene	3070		µg/kg wet	66.5	3330		92	40-140		
Dibenzo (a,h) anthracene	3100		µg/kg wet	66.5	3330		93	40-140		
Fluoranthene	3190		µg/kg wet	66.5	3330		96	40-140		
Fluorene	3650		µg/kg wet	66.5	3330		110	40-140		
Indeno (1,2,3-cd) pyrene	3110		µg/kg wet	66.5	3330		93	40-140		
1-Methylnaphthalene	3040		µg/kg wet	66.5	3330		91	40-140		
2-Methylnaphthalene	2680		µg/kg wet	66.5	3330		80	40-140		
Naphthalene	2810		µg/kg wet	66.5	3330		84	40-140		
Phenanthrene	2860		µg/kg wet	66.5	3330		86	40-140		
Pyrene	2810		µg/kg wet	66.5	3330		84	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	3570		µg/kg wet		3330		107	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3070		µg/kg wet		3330		92	30-130		
<u>Duplicate (1016151-DUP1)</u>				<u>Source: SB15912-15</u>		<u>Prepared & Analyzed: 30-Jul-10</u>				
Acenaphthene	BRL		µg/kg dry	133		75.2				50
Acenaphthylene	BRL		µg/kg dry	133		BRL				50
Anthracene	BRL		µg/kg dry	133		129				50
Benzo (a) anthracene	102	J,QM4	µg/kg dry	133		242			82	50
Benzo (a) pyrene	88.2	J,QM4	µg/kg dry	133		193			75	50
Benzo (b) fluoranthene	81.6	J,QM4	µg/kg dry	133		148			58	50
Benzo (g,h,i) perylene	BRL		µg/kg dry	133		96.7				50
Benzo (k) fluoranthene	90.9	J,QM4	µg/kg dry	133		220			83	50
Chrysene	108	J,QM4	µg/kg dry	133		224			70	50

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016151 - SW846 3545A										
<u>Duplicate (1016151-DUP1)</u>			<u>Source: SB15912-15</u>			<u>Prepared & Analyzed: 30-Jul-10</u>				
Dibenzo (a,h) anthracene	BRL		µg/kg dry	133		BRL				50
Fluoranthene	206	QM4	µg/kg dry	133		615			100	50
Fluorene	BRL		µg/kg dry	133		71.2				50
Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	133		103				50
1-Methylnaphthalene	BRL		µg/kg dry	133		BRL				50
2-Methylnaphthalene	BRL		µg/kg dry	133		BRL				50
Naphthalene	BRL		µg/kg dry	133		BRL				50
Phenanthrene	116	J,QM4	µg/kg dry	133		555			131	50
Pyrene	171	QM4	µg/kg dry	133		493			97	50
<i>Surrogate: 2-Fluorobiphenyl</i>	3470		µg/kg dry		3340		104	30-130		
<i>Surrogate: Terphenyl-dl4</i>	2960		µg/kg dry		3340		89	30-130		
<u>Matrix Spike (1016151-MS1)</u>			<u>Source: SB15912-15</u>			<u>Prepared & Analyzed: 30-Jul-10</u>				
Acenaphthene	2680		µg/kg dry	65.0	3260	75.2	80	40-140		
Acenaphthylene	2530		µg/kg dry	65.0	3260	BRL	78	40-140		
Anthracene	2420		µg/kg dry	65.0	3260	129	70	40-140		
Benzo (a) anthracene	2360		µg/kg dry	65.0	3260	242	65	40-140		
Benzo (a) pyrene	2680		µg/kg dry	65.0	3260	193	76	40-140		
Benzo (b) fluoranthene	2740		µg/kg dry	65.0	3260	148	80	40-140		
Benzo (g,h,i) perylene	1580		µg/kg dry	65.0	3260	96.7	45	40-140		
Benzo (k) fluoranthene	2840		µg/kg dry	65.0	3260	220	80	40-140		
Chrysene	2560		µg/kg dry	65.0	3260	224	72	30-130		
Dibenzo (a,h) anthracene	1710		µg/kg dry	65.0	3260	BRL	52	30-130		
Fluoranthene	2640		µg/kg dry	65.0	3260	615	62	40-140		
Fluorene	2930		µg/kg dry	65.0	3260	71.2	88	40-140		
Indeno (1,2,3-cd) pyrene	1720		µg/kg dry	65.0	3260	103	50	40-140		
1-Methylnaphthalene	2480		µg/kg dry	65.0	3260	BRL	76	40-140		
2-Methylnaphthalene	2270		µg/kg dry	65.0	3260	BRL	70	40-140		
Naphthalene	2290		µg/kg dry	65.0	3260	BRL	70	40-140		
Phenanthrene	2360		µg/kg dry	65.0	3260	555	55	40-140		
Pyrene	2390		µg/kg dry	65.0	3260	493	58	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	2850		µg/kg dry		3260		87	30-130		
<i>Surrogate: Terphenyl-dl4</i>	2410		µg/kg dry		3260		74	30-130		
<u>Matrix Spike Dup (1016151-MSD1)</u>			<u>Source: SB15912-15</u>			<u>Prepared & Analyzed: 30-Jul-10</u>				
Acenaphthene	2200		µg/kg dry	54.6	2740	75.2	78	40-140	3	30
Acenaphthylene	2080		µg/kg dry	54.6	2740	BRL	76	40-140	2	30
Anthracene	2090		µg/kg dry	54.6	2740	129	72	40-140	2	30
Benzo (a) anthracene	2050		µg/kg dry	54.6	2740	242	66	40-140	2	30
Benzo (a) pyrene	2210		µg/kg dry	54.6	2740	193	74	40-140	4	30
Benzo (b) fluoranthene	2150		µg/kg dry	54.6	2740	148	73	40-140	9	30
Benzo (g,h,i) perylene	1320		µg/kg dry	54.6	2740	96.7	45	40-140	1	30
Benzo (k) fluoranthene	2640		µg/kg dry	54.6	2740	220	88	40-140	10	30
Chrysene	2170		µg/kg dry	54.6	2740	224	71	30-130	0.5	30
Dibenzo (a,h) anthracene	1410		µg/kg dry	54.6	2740	BRL	52	30-130	1	30
Fluoranthene	2260		µg/kg dry	54.6	2740	615	60	40-140	4	30
Fluorene	2420		µg/kg dry	54.6	2740	71.2	86	40-140	2	30
Indeno (1,2,3-cd) pyrene	1400		µg/kg dry	54.6	2740	103	47	40-140	5	30
1-Methylnaphthalene	2040		µg/kg dry	54.6	2740	BRL	75	40-140	2	30
2-Methylnaphthalene	2040		µg/kg dry	54.6	2740	BRL	74	40-140	7	30
Naphthalene	1890		µg/kg dry	54.6	2740	BRL	69	40-140	2	30
Phenanthrene	2030		µg/kg dry	54.6	2740	555	54	40-140	3	30
Pyrene	2070		µg/kg dry	54.6	2740	493	58	40-140	1	30

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016151 - SW846 3545A										
<u>Matrix Spike Dup (1016151-MSD1)</u>			<u>Source: SB15912-15</u>			<u>Prepared & Analyzed: 30-Jul-10</u>				
<i>Surrogate: 2-Fluorobiphenyl</i>	2390		µg/kg dry		2740		87	30-130		
<i>Surrogate: Terphenyl-d14</i>	2090		µg/kg dry		2740		76	30-130		

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016140 - SW846 3050B										
<u>Blank (1016140-BLK1)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Lead	BRL		mg/kg wet	1.29						
Selenium	BRL		mg/kg wet	1.29						
Cadmium	BRL		mg/kg wet	0.429						
Chromium	BRL		mg/kg wet	0.858						
Silver	BRL		mg/kg wet	1.29						
Arsenic	BRL		mg/kg wet	1.29						
Barium	BRL		mg/kg wet	0.858						
<u>Duplicate (1016140-DUP1)</u>					<u>Source: SB15912-03 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Selenium	0.607	J	mg/kg dry	1.49		0.546			10	20
Lead	13.4		mg/kg dry	1.49		13.0			3	20
Arsenic	9.90		mg/kg dry	1.49		9.50			4	20
Chromium	290	QR6	mg/kg dry	0.994		363			22	20
Silver	0.800	J	mg/kg dry	1.49		0.694			14	20
Cadmium	0.368	J	mg/kg dry	0.497		0.315			16	20
Barium	19.6		mg/kg dry	0.994		20.2			3	20
<u>Matrix Spike (1016140-MS1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Lead	139		mg/kg dry	1.49	124	35.0	83	75-125		
Selenium	114		mg/kg dry	1.49	124	0.730	91	75-125		
Silver	111		mg/kg dry	1.49	124	0.721	88	75-125		
Chromium	152		mg/kg dry	0.994	124	34.3	95	75-125		
Arsenic	121		mg/kg dry	1.49	124	16.3	84	75-125		
Cadmium	111		mg/kg dry	0.497	124	0.479	89	75-125		
Barium	142		mg/kg dry	0.994	124	31.5	89	75-125		
<u>Matrix Spike Dup (1016140-MSD1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Lead	140		mg/kg dry	1.47	123	35.0	85	75-125	0.8	20
Selenium	111		mg/kg dry	1.47	123	0.730	90	75-125	3	20
Cadmium	108		mg/kg dry	0.490	123	0.479	88	75-125	3	20
Chromium	153		mg/kg dry	0.980	123	34.3	97	75-125	0.7	20
Silver	109		mg/kg dry	1.47	123	0.721	88	75-125	1	20
Arsenic	119		mg/kg dry	1.47	123	16.3	84	75-125	1	20
Barium	139		mg/kg dry	0.980	123	31.5	88	75-125	2	20
<u>Post Spike (1016140-PS1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Selenium	108		mg/kg dry	1.33	111	0.730	97	80-120		
Lead	136		mg/kg dry	1.33	111	35.0	91	80-120		
Arsenic	115		mg/kg dry	1.33	111	16.3	89	80-120		
Chromium	147		mg/kg dry	0.886	111	34.3	102	80-120		
Silver	104		mg/kg dry	1.33	111	0.721	93	80-120		
Cadmium	104		mg/kg dry	0.443	111	0.479	94	80-120		
Barium	128		mg/kg dry	0.886	111	31.5	87	80-120		
<u>Reference (1016140-SRM1)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Lead	67.4		mg/kg wet	1.50	73.5		92	81.3-118.8		
Selenium	100		mg/kg wet	1.50	102		98	80-120		
Silver	22.8		mg/kg wet	1.50	23.0		99	66.3-133.7		
Chromium	51.6		mg/kg wet	1.00	53.6		96	80.3-119		
Arsenic	67.8		mg/kg wet	1.50	70.4		96	82.6-117.4		
Cadmium	33.9		mg/kg wet	0.500	36.2		93	82.9-116.9		
Barium	131		mg/kg wet	1.00	137		96	79.2-120.8		
<u>Reference (1016140-SRM2)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Lead	68.8		mg/kg wet	1.50	72.1		95	81.3-118.8		
Selenium	99.9		mg/kg wet	1.50	100		100	80-120		
Cadmium	34.3		mg/kg wet	0.500	35.5		97	82.9-116.9		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016140 - SW846 3050B										
<u>Reference (1016140-SRM2)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Arsenic	68.2		mg/kg wet	1.50	69.1		99	82.6-117.4		
Silver	23.8		mg/kg wet	1.50	22.6		106	66.3-133.7		
Chromium	52.2		mg/kg wet	1.00	52.6		99	80.3-119		
Barium	128		mg/kg wet	1.00	135		95	79.2-120.8		
Batch 1016141 - EPA200/SW7000 Series										
<u>Blank (1016141-BLK1)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	BRL		mg/kg wet	0.0289						
<u>Duplicate (1016141-DUP1)</u>					<u>Source: SB15912-03 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	0.661		mg/kg dry	0.0300		0.559			17	20
<u>Matrix Spike (1016141-MS1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	0.582		mg/kg dry	0.0285	0.396	0.153	108	75-125		
<u>Matrix Spike Dup (1016141-MSD1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	0.579		mg/kg dry	0.0286	0.397	0.153	107	75-125	0.4	20
<u>Post Spike (1016141-PS1)</u>					<u>Source: SB15912-15 Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	0.605		mg/kg dry	0.0289	0.402	0.153	113	80-120		
<u>Reference (1016141-SRM1)</u>					<u>Prepared: 29-Jul-10 Analyzed: 30-Jul-10</u>					
Mercury	6.98		mg/kg wet	0.600	6.64		105	71.5-128.1		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016138 - General Preparation										
<u>Duplicate (1016138-DUP1)</u>			<u>Source: SB15912-15</u>			<u>Prepared & Analyzed: 29-Jul-10</u>				
% Solids	96.6		%			96.3			0.3	200

Notes and Definitions

QM4	Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor
Kimberly Wisk
Nicole Leja

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001		
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:		
This form provides certifications for the following data set:			SB15912-01 through SB15912-18		
Matrices: Soil					
CAM Protocol					
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>					
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				Yes ✓ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes ✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes ✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>					
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>					
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/2/2010					



CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed 24-Hour
- All TATs subject to laboratory approval
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed

✓ SB 15912 e

Report To: Tetra Tech Rizzo
1 Grant St
Frammingham, MA
01701

Project Mgr.: Ron Myrick

Telephone #: 508 903 2000

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 127-55416-10001

Site Name: Organix

Location: Weburn State: MA

Sampler(s): MST

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9= _____ 10= _____ 11= _____

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

Containers:

Analyses:

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	PCRA 8 TOTAL	PAH 8 TO	Cr total ICP
SS912-01	Hillside-01	7/29/10	1140	G	SO	1				X	X	X
-02	-02		1150									
-03	-03		1200									
-04	-04		1210									
-05	-05		1220									
-06	-06		1230									
-07	-07		1240									
-08	-08		1250									
-09	-09		1300									
-10	-10		1310									

EDD Format TTR MS Excel

E-mail to Ron.Myrick@tetratech.com

Relinquished by: [Signature] Date: 7-29-10 Time: 131

Received by: [Signature] Date: 7/29/10 Time: 1709

Condition upon receipt Iced Ambient °C 12.0



SPECTRUM ANALYTICAL, INC.
Framingham
HANDBL TH0909000

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: 24-Hour
- All TAT's subject to Laboratory approval
- Min. 24-hour notification needed for rushes
- Samples disposed of after 60 days unless otherwise instructed

15912

Report To: Tetra Tech Rizzo

1 Grant St
Framingham, MA

Project Mgr.: Ron Myrick

Telephone #: 508 903 8000

P.O. No. _____

Project No. 127-55410-10001

Site Name: Organix

Location: Woburn

State: MA

1= $\text{Na}_2\text{S}_2\text{O}_5$, 2= HCl , 3= H_2SO_4 , 4= HNO_3 , 5= NaOH , 6=Ascorbic Acid, 7= CH_3OH
8= NaHSO_4 , 9=_____, 10=_____, 11=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sediment A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Containers:

- # of VOA Vials _____
- # of Amber Glass _____
- # of Clear Glass _____
- # of Plastic _____

Analyses:

- PORA & TOTAL
- PAH 8270
- Cr total / IC

Q/VQC Reporting Notes:

- Provide MA DEP MCP CAM Report
- Provide CT DEP RCP Report
- Q/VQC Reporting Level: Standard No QC
- Other _____
- State specific reporting standards: MA MCP 5-1

Lab Id	Sample Id	Date	Time	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Requisitioned by:	Received by:	Date	Time
SR2-11	Hillside-11	7/29/10	1330		CSO	1						7-29-10	131
-12	-12		1340									7/29/10	1709
-13	-13		1350										
-14	-14		1400										
-15	-15		1410										
-16	DUP-1		0001										
-17	DUP-2		0002										
-18	MS/MSD-15		1400										

EDD Format: TRE MS Excel
E-mail to: Ron.myrick@tetratech.com

Condition upon receipt: Lead Ambient 12.0

Requisitioned by: [Signature]
Received by: [Signature]

Date: 7-29-10 Time: 131
Date: 7/29/10 Time: 1709

Report Date:
03-Aug-10 17:30



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16045-01	Downsteam -01	Soil	30-Jul-10 14:00	02-Aug-10 13:15
SB16045-02	Downsteam -02	Soil	30-Jul-10 14:10	02-Aug-10 13:15
SB16045-03	Downsteam -03	Soil	30-Jul-10 14:20	02-Aug-10 13:15
SB16045-04	Access Road SP	Soil	30-Jul-10 14:30	02-Aug-10 13:15

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 1.5 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 1.1 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 7471A

Duplicates:

1016369-DUP1 *Source: SB16045-03*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Mercury

Sample Identification

Downsteam -01
SB16045-01

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
30-Jul-10 14:00

Received
02-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	143	1	SW846 8270C/D	03-Aug-10	03-Aug-10	MSL	1016401	
208-96-8	Acenaphthylene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
206-44-0	Fluoranthene	216		µg/kg dry	143	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	143	1	"	"	"	"	"	"
129-00-0	Pyrene	164		µg/kg dry	143	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	87			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	82			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.53	1	SW846 6010B	02-Aug-10	03-Aug-10	JB	1016368	
7440-38-2	Arsenic	2.84		mg/kg dry	1.53	1	"	"	03-Aug-10	"	"	"
7440-39-3	Barium	74.0		mg/kg dry	1.02	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.700		mg/kg dry	0.511	1	"	"	"	"	"	"
7440-47-3	Chromium	128		mg/kg dry	1.02	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0616		mg/kg dry	0.0320	1	SW846 7471A	"	03-Aug-10	HB	1016369	
7439-92-1	Lead	27.8		mg/kg dry	1.53	1	SW846 6010B	"	03-Aug-10	LR	1016368	
7782-49-2	Selenium	BRL		mg/kg dry	1.53	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		91.9		%		1	SM2540 G Mod.	02-Aug-10	02-Aug-10	BD	1016349	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downsteam -02
SB16045-02

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
30-Jul-10 14:10

Received
02-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	137	1	SW846 8270C/D	03-Aug-10	03-Aug-10	MSL	1016401	
208-96-8	Acenaphthylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
206-44-0	Fluoranthene	232		µg/kg dry	137	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
129-00-0	Pyrene	185		µg/kg dry	137	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	77			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	73			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.47	1	SW846 6010B	02-Aug-10	03-Aug-10	JB	1016368	
7440-38-2	Arsenic	1.56		mg/kg dry	1.47	1	"	"	03-Aug-10	"	"	"
7440-39-3	Barium	104		mg/kg dry	0.979	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.592		mg/kg dry	0.489	1	"	"	"	"	"	"
7440-47-3	Chromium	273		mg/kg dry	0.979	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0729		mg/kg dry	0.0314	1	SW846 7471A	"	03-Aug-10	HB	1016369	
7439-92-1	Lead	26.8		mg/kg dry	1.47	1	SW846 6010B	"	03-Aug-10	LR	1016368	
7782-49-2	Selenium	BRL		mg/kg dry	1.47	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	93.5		%		1	SM2540 G Mod.	02-Aug-10	02-Aug-10	BD	1016349	

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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downsteam -03

SB16045-03

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
30-Jul-10 14:20

Received
02-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	132	1	SW846 8270C/D	03-Aug-10	03-Aug-10	MSL	1016401	
208-96-8	Acenaphthylene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	175		µg/kg dry	132	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	175		µg/kg dry	132	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	179		µg/kg dry	132	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	176		µg/kg dry	132	1	"	"	"	"	"	"
218-01-9	Chrysene	209		µg/kg dry	132	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
206-44-0	Fluoranthene	374		µg/kg dry	132	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	132	1	"	"	"	"	"	"
85-01-8	Phenanthrene	188		µg/kg dry	132	1	"	"	"	"	"	"
129-00-0	Pyrene	325		µg/kg dry	132	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	92			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	88			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.58	1	SW846 6010B	02-Aug-10	03-Aug-10	JB	1016368	
7440-38-2	Arsenic	3.28		mg/kg dry	1.58	1	"	"	03-Aug-10	"	"	
7440-39-3	Barium	67.9		mg/kg dry	1.05	1	"	"	"	"	"	
7440-43-9	Cadmium	0.709		mg/kg dry	0.525	1	"	"	"	"	"	
7440-47-3	Chromium	213		mg/kg dry	1.05	1	"	"	"	"	"	
7439-97-6	Mercury	0.0885		mg/kg dry	0.0306	1	SW846 7471A	"	03-Aug-10	HB	1016369	
7439-92-1	Lead	27.4		mg/kg dry	1.58	1	SW846 6010B	"	03-Aug-10	LR	1016368	
7782-49-2	Selenium	BRL		mg/kg dry	1.58	1	"	"	"	"	"	

General Chemistry Parameters

% Solids		94.4		%		1	SM2540 G Mod.	02-Aug-10	02-Aug-10	BD	1016349	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Access Road SP

SB16045-04

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
30-Jul-10 14:30

Received
02-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods												
7440-47-3	Chromium	1,290		mg/kg dry	1.17	1	SW846 6010B	02-Aug-10	03-Aug-10	LR	1016368	
General Chemistry Parameters												
	% Solids	83.2		%		1	SM2540 G Mod.	02-Aug-10	02-Aug-10	BD	1016349	

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016401 - SW846 3545A										
<u>Blank (1016401-BLK1)</u>					<u>Prepared & Analyzed: 03-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1390		µg/kg wet		1670		83	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1370		µg/kg wet		1670		82	30-130		
<u>LCS (1016401-BS1)</u>					<u>Prepared & Analyzed: 03-Aug-10</u>					
Acenaphthene	1380		µg/kg wet	33.2	1670		83	40-140		
Acenaphthylene	1480		µg/kg wet	33.2	1670		89	40-140		
Anthracene	1370		µg/kg wet	33.2	1670		82	40-140		
Benzo (a) anthracene	1290		µg/kg wet	33.2	1670		77	40-140		
Benzo (a) pyrene	1410		µg/kg wet	33.2	1670		85	40-140		
Benzo (b) fluoranthene	1360		µg/kg wet	33.2	1670		82	40-140		
Benzo (g,h,i) perylene	1260		µg/kg wet	33.2	1670		75	40-140		
Benzo (k) fluoranthene	1400		µg/kg wet	33.2	1670		84	40-140		
Chrysene	1380		µg/kg wet	33.2	1670		83	40-140		
Dibenzo (a,h) anthracene	1370		µg/kg wet	33.2	1670		82	40-140		
Fluoranthene	1370		µg/kg wet	33.2	1670		82	40-140		
Fluorene	1690		µg/kg wet	33.2	1670		101	40-140		
Indeno (1,2,3-cd) pyrene	1320		µg/kg wet	33.2	1670		79	40-140		
1-Methylnaphthalene	1310		µg/kg wet	33.2	1670		78	40-140		
2-Methylnaphthalene	1380		µg/kg wet	33.2	1670		83	40-140		
Naphthalene	1310		µg/kg wet	33.2	1670		78	40-140		
Phenanthrene	1300		µg/kg wet	33.2	1670		78	40-140		
Pyrene	1330		µg/kg wet	33.2	1670		80	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1560		µg/kg wet		1670		94	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1440		µg/kg wet		1670		87	30-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016368 - SW846 3050B										
<u>Blank (1016368-BLK1)</u>					<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>					
Lead	BRL		mg/kg wet	1.28						
Selenium	BRL		mg/kg wet	1.28						
Silver	BRL		mg/kg wet	1.28						
Cadmium	BRL		mg/kg wet	0.427						
Arsenic	BRL		mg/kg wet	1.28						
Chromium	BRL		mg/kg wet	0.854						
Barium	BRL		mg/kg wet	0.854						
<u>Duplicate (1016368-DUP1)</u>				<u>Source: SB16045-03</u>		<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>				
Lead	29.3		mg/kg dry	1.47		27.4			7	20
Selenium	0.329	J	mg/kg dry	1.47		BRL				20
Cadmium	0.736		mg/kg dry	0.491		0.709			4	20
Arsenic	2.77		mg/kg dry	1.47		3.28			17	20
Chromium	225		mg/kg dry	0.982		213			6	20
Silver	1.49		mg/kg dry	1.47		1.36			9	20
Barium	72.5		mg/kg dry	0.982		67.9			7	20
<u>Reference (1016368-SRM1)</u>					<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>					
Selenium	99.8		mg/kg wet	1.50	102		98	80-120		
Lead	67.6		mg/kg wet	1.50	73.2		92	81.3-118.8		
Arsenic	65.4		mg/kg wet	1.50	70.2		93	82.6-117.4		
Cadmium	33.5		mg/kg wet	0.500	36.1		93	82.9-116.9		
Chromium	48.3		mg/kg wet	1.00	53.4		90	80.3-119		
Silver	20.8		mg/kg wet	1.50	22.9		91	66.3-133.7		
Barium	118		mg/kg wet	1.00	137		87	79.2-120.8		
<u>Reference (1016368-SRM2)</u>					<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>					
Selenium	102		mg/kg wet	1.50	100		102	80-120		
Lead	68.3		mg/kg wet	1.50	72.0		95	81.3-118.8		
Silver	21.7		mg/kg wet	1.50	22.6		96	66.3-133.7		
Chromium	50.2		mg/kg wet	1.00	52.5		96	80.3-119		
Cadmium	34.1		mg/kg wet	0.500	35.5		96	82.9-116.9		
Arsenic	67.8		mg/kg wet	1.50	69.0		98	82.6-117.4		
Barium	123		mg/kg wet	1.00	135		91	79.2-120.8		
Batch 1016369 - EPA 200 Series										
<u>Blank (1016369-BLK1)</u>					<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0279						
<u>Duplicate (1016369-DUP1)</u>				<u>Source: SB16045-03</u>		<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>				
Mercury	0.0625	QR6	mg/kg dry	0.0309		0.0885			34	20
<u>Reference (1016369-SRM1)</u>					<u>Prepared: 02-Aug-10 Analyzed: 03-Aug-10</u>					
Mercury	6.29		mg/kg wet	0.600	6.42		98	71.5-128.1		

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor
Nicole Leja

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB16045-01 through SB16045-04			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
Affirmative responses to questions A through F are required for "Presumptive Certainty" status						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
Responses to questions G, H and I below are required for "Presumptive Certainty" status						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes	✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
All negative responses are addressed in a case narrative on the cover page of this report.						
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/3/2010						



CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: 24 Hr - 8/31/10
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

✓ SB160452

Report To: TETA TECH R1220
1 GRAV ST
FRAMINGHAM MA 01701

Invoice To: SAME

Project No.: 127-55410-10001

Site Name: ORGANIX

Project Mgr.: RON MYRICK
 Telephone #: 508-9032363

P.O. No.: _____ RQN: 6837

Location: WOBURN State: MA

Sampler(s): REM

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9= _____ 10= _____ 11= _____

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
 X1= _____ X2= _____ X3= _____

Containers:

Analyses:

- Provide MA DEP MCP CAM Report
- Provide CT DPH RCP Report

QA/QC Reporting Level

- Standard No QC
- Other _____

State specific reporting standards:

MA-NCP-1

G=Grab C=Composite

Lab Id.	Sample Id.	Date	Time	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	RCR 8 6010B	PAH 8270	Ce Total ICP
16045-01	DOWNSTREAM-01	7/30/10	200	C	SO	1				X	X	
16045-02	DOWNSTREAM-02	↓	210	↓	↓	↓				X	X	
16045-03	DOWNSTREAM-03	↓	220	↓	↓	↓				X	X	
16045-04	ACCESS ROAD SP	↓	230	↓	↓	↓						X

EDD Format: TTR MS EXCEL
 E-mail to: RON.MYRICK@TETAANAL.COM

Relinquished by: [Signature]
 Received by: [Signature]

Date: 8/2/10
8/9/10 Time: 11:05
13:15

Condition upon receipt: Ice Ambient °C 1.5

Report Date:
10-Aug-10 17:18



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16389-01	Hill Side-17	Soil	09-Aug-10 10:30	09-Aug-10 16:05
SB16389-02	Hill Side-18	Soil	09-Aug-10 10:15	09-Aug-10 16:05
SB16389-03	Hill Side-19	Soil	09-Aug-10 11:00	09-Aug-10 16:05
SB16389-04	Hill Side-20	Soil	09-Aug-10 11:30	09-Aug-10 16:05
SB16389-05	Swale-01	Soil	06-Aug-10 12:00	09-Aug-10 16:05

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 13 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 5.8 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 2.6 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Spikes:

1016929-MS1 *Source: SB16389-03*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Chromium

1016929-MSD1 *Source: SB16389-03*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Barium
Chromium

Duplicates:

1016929-DUP1 *Source: SB16389-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Silver

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Barium
Chromium

SW846 7471A

Duplicates:

1016930-DUP1 *Source: SB16389-01*

SW846 7471A

Duplicates:

1016930-DUP1 *Source: SB16389-01*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Mercury

Samples:

SB16389-02 *Hill Side-18*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Mercury

SB16389-03 *Hill Side-19*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Mercury

SW846 8270C/D

Samples:

S007367-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Benzo (g,h,i) perylene (-28.6%)

This affected the following samples:

- Hill Side-17
- Hill Side-18
- Hill Side-19
- Hill Side-20
- Swale-01

Sample Identification

Hill Side-17

SB16389-01

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
09-Aug-10 10:30

Received
09-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	134	1	SW846 8270C/D	10-Aug-10	10-Aug-10	MSL	1016947	
208-96-8	Acenaphthylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
206-44-0	Fluoranthene	153		µg/kg dry	134	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	134	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	102			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	87			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.46	1	SW846 6010B	09-Aug-10	10-Aug-10	TBG	1016929	
7440-38-2	Arsenic	9.76		mg/kg dry	1.46	1	"	"	"	"	"	"
7440-39-3	Barium	88.3		mg/kg dry	0.976	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.488	1	"	"	"	"	"	"
7440-47-3	Chromium	110		mg/kg dry	0.976	1	"	"	"	"	"	"
7439-97-6	Mercury	0.212		mg/kg dry	0.0297	1	SW846 7471A	"	10-Aug-10	ARF	1016930	
7439-92-1	Lead	17.5		mg/kg dry	1.46	1	SW846 6010B	"	10-Aug-10	TBG	1016929	
7782-49-2	Selenium	BRL		mg/kg dry	1.46	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		98.0		%		1	SM2540 G Mod.	09-Aug-10	09-Aug-10	BD	1016888	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Hill Side-18
SB16389-02

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
09-Aug-10 10:15

Received
09-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	129	1	SW846 8270C/D	10-Aug-10	10-Aug-10	MSL	1016947	
208-96-8	Acenaphthylene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	189		µg/kg dry	129	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	189		µg/kg dry	129	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	201		µg/kg dry	129	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	148		µg/kg dry	129	1	"	"	"	"	"	"
218-01-9	Chrysene	213		µg/kg dry	129	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
206-44-0	Fluoranthene	427		µg/kg dry	129	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	129	1	"	"	"	"	"	"
85-01-8	Phenanthrene	296		µg/kg dry	129	1	"	"	"	"	"	"
129-00-0	Pyrene	372		µg/kg dry	129	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	105			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	90			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.47	1	SW846 6010B	09-Aug-10	10-Aug-10	TBG	1016929	
7440-38-2	Arsenic	10.6		mg/kg dry	1.47	1	"	"	"	"	"	"
7440-39-3	Barium	106		mg/kg dry	0.980	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.490	1	"	"	"	"	"	"
7440-47-3	Chromium	246		mg/kg dry	0.980	1	"	"	"	"	"	"
7439-97-6	Mercury	0.994	GS1	mg/kg dry	0.286	10	SW846 7471A	"	10-Aug-10	ARF	1016930	
7439-92-1	Lead	56.4		mg/kg dry	1.47	1	SW846 6010B	"	10-Aug-10	TBG	1016929	
7782-49-2	Selenium	BRL		mg/kg dry	1.47	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		96.7		%		1	SM2540 G Mod.	09-Aug-10	09-Aug-10	BD	1016888	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Hill Side-19

SB16389-03

Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
09-Aug-10 11:00Received
09-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	136	1	SW846 8270C/D	10-Aug-10	10-Aug-10	MSL	1016947	
208-96-8	Acenaphthylene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
120-12-7	Anthracene	255		µg/kg dry	136	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	863		µg/kg dry	136	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	869		µg/kg dry	136	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	1,050		µg/kg dry	136	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	320		µg/kg dry	136	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	583		µg/kg dry	136	1	"	"	"	"	"	"
218-01-9	Chrysene	844		µg/kg dry	136	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1,960		µg/kg dry	136	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	359		µg/kg dry	136	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
85-01-8	Phenanthrene	1,050		µg/kg dry	136	1	"	"	"	"	"	"
129-00-0	Pyrene	1,640		µg/kg dry	136	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	104			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	91			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.41	1	SW846 6010B	09-Aug-10	10-Aug-10	TBG	1016929	
7440-38-2	Arsenic	8.33		mg/kg dry	1.41	1	"	"	"	"	"	"
7440-39-3	Barium	446		mg/kg dry	0.942	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.551		mg/kg dry	0.471	1	"	"	"	"	"	"
7440-47-3	Chromium	931		mg/kg dry	0.942	1	"	"	"	"	"	"
7439-97-6	Mercury	0.603	GS1	mg/kg dry	0.293	10	SW846 7471A	"	10-Aug-10	ARF	1016930	
7439-92-1	Lead	54.7		mg/kg dry	1.41	1	SW846 6010B	"	10-Aug-10	TBG	1016929	
7782-49-2	Selenium	BRL		mg/kg dry	1.41	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		95.5		%		1	SM2540 G Mod.	09-Aug-10	09-Aug-10	BD	1016888	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 6 of 13

Sample Identification

Hill Side-20
SB16389-04

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
09-Aug-10 11:30

Received
09-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	135	1	SW846 8270C/D	10-Aug-10	10-Aug-10	MSL	1016947	
208-96-8	Acenaphthylene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	476		µg/kg dry	135	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	507		µg/kg dry	135	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	599		µg/kg dry	135	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	205		µg/kg dry	135	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	444		µg/kg dry	135	1	"	"	"	"	"	"
218-01-9	Chrysene	550		µg/kg dry	135	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1,120		µg/kg dry	135	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	221		µg/kg dry	135	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
85-01-8	Phenanthrene	652		µg/kg dry	135	1	"	"	"	"	"	"
129-00-0	Pyrene	968		µg/kg dry	135	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	100			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	90			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.45	1	SW846 6010B	09-Aug-10	10-Aug-10	TBG	1016929	
7440-38-2	Arsenic	9.80		mg/kg dry	1.45	1	"	"	"	"	"	"
7440-39-3	Barium	351		mg/kg dry	0.963	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.703		mg/kg dry	0.482	1	"	"	"	"	"	"
7440-47-3	Chromium	722		mg/kg dry	0.963	1	"	"	"	"	"	"
7439-97-6	Mercury	0.538		mg/kg dry	0.0305	1	SW846 7471A	"	10-Aug-10	ARF	1016930	
7439-92-1	Lead	81.5		mg/kg dry	1.45	1	SW846 6010B	"	10-Aug-10	TBG	1016929	
7782-49-2	Selenium	BRL		mg/kg dry	1.45	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	94.7		%		1	SM2540 G Mod.	09-Aug-10	09-Aug-10	BD	1016888	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Swale-01
SB16389-05

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
06-Aug-10 12:00

Received
09-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	146	1	SW846 8270C/D	10-Aug-10	10-Aug-10	MSL	1016947	
208-96-8	Acenaphthylene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	246		µg/kg dry	146	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	296		µg/kg dry	146	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	331		µg/kg dry	146	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	149		µg/kg dry	146	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	360		µg/kg dry	146	1	"	"	"	"	"	"
218-01-9	Chrysene	319		µg/kg dry	146	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
206-44-0	Fluoranthene	661		µg/kg dry	146	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	155		µg/kg dry	146	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	146	1	"	"	"	"	"	"
85-01-8	Phenanthrene	278		µg/kg dry	146	1	"	"	"	"	"	"
129-00-0	Pyrene	519		µg/kg dry	146	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	103			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	94			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.67	1	SW846 6010B	09-Aug-10	10-Aug-10	TBG	1016929	
7440-38-2	Arsenic	10.8		mg/kg dry	1.67	1	"	"	"	"	"	"
7440-39-3	Barium	38.4		mg/kg dry	1.11	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.583		mg/kg dry	0.555	1	"	"	"	"	"	"
7440-47-3	Chromium	1,130		mg/kg dry	1.11	1	"	"	"	"	"	"
7439-97-6	Mercury	1.01		mg/kg dry	0.0336	1	SW846 7471A	"	10-Aug-10	ARF	1016930	
7439-92-1	Lead	45.1		mg/kg dry	1.67	1	SW846 6010B	"	10-Aug-10	TBG	1016929	
7782-49-2	Selenium	BRL		mg/kg dry	1.67	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	87.8		%		1	SM2540 G Mod.	09-Aug-10	09-Aug-10	BD	1016888	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016947 - SW846 3545A										
<u>Blank (1016947-BLK1)</u>					<u>Prepared & Analyzed: 10-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1560</i>		<i>µg/kg wet</i>		<i>1670</i>		<i>94</i>	<i>30-130</i>		
<i>Surrogate: Terphenyl-dl4</i>	<i>1520</i>		<i>µg/kg wet</i>		<i>1670</i>		<i>91</i>	<i>30-130</i>		
<u>LCS (1016947-BS1)</u>					<u>Prepared & Analyzed: 10-Aug-10</u>					
Acenaphthene	1470		µg/kg wet	33.2	1670		88	40-140		
Acenaphthylene	1510		µg/kg wet	33.2	1670		91	40-140		
Anthracene	1420		µg/kg wet	33.2	1670		85	40-140		
Benzo (a) anthracene	1340		µg/kg wet	33.2	1670		80	40-140		
Benzo (a) pyrene	1440		µg/kg wet	33.2	1670		87	40-140		
Benzo (b) fluoranthene	1380		µg/kg wet	33.2	1670		83	40-140		
Benzo (g,h,i) perylene	1360		µg/kg wet	33.2	1670		82	40-140		
Benzo (k) fluoranthene	1540		µg/kg wet	33.2	1670		92	40-140		
Chrysene	1480		µg/kg wet	33.2	1670		89	40-140		
Dibenzo (a,h) anthracene	1470		µg/kg wet	33.2	1670		88	40-140		
Fluoranthene	1390		µg/kg wet	33.2	1670		84	40-140		
Fluorene	1730		µg/kg wet	33.2	1670		104	40-140		
Indeno (1,2,3-cd) pyrene	1400		µg/kg wet	33.2	1670		84	40-140		
1-Methylnaphthalene	1360		µg/kg wet	33.2	1670		82	40-140		
2-Methylnaphthalene	1440		µg/kg wet	33.2	1670		86	40-140		
Naphthalene	1340		µg/kg wet	33.2	1670		80	40-140		
Phenanthrene	1310		µg/kg wet	33.2	1670		79	40-140		
Pyrene	1410		µg/kg wet	33.2	1670		85	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1520</i>		<i>µg/kg wet</i>		<i>1670</i>		<i>91</i>	<i>30-130</i>		
<i>Surrogate: Terphenyl-dl4</i>	<i>1390</i>		<i>µg/kg wet</i>		<i>1670</i>		<i>83</i>	<i>30-130</i>		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016929 - SW846 3050B										
<u>Blank (1016929-BLK1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	BRL		mg/kg wet	1.39						
Selenium	BRL		mg/kg wet	1.39						
Arsenic	BRL		mg/kg wet	1.39						
Silver	BRL		mg/kg wet	1.39						
Cadmium	BRL		mg/kg wet	0.463						
Chromium	BRL		mg/kg wet	0.927						
Barium	BRL		mg/kg wet	0.927						
<u>Duplicate (1016929-DUP1)</u>					<u>Source: SB16389-01 Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	18.4		mg/kg dry	1.48		17.5			5	20
Selenium	BRL		mg/kg dry	1.48		BRL				20
Cadmium	0.321	J	mg/kg dry	0.493		0.361			12	20
Silver	0.404	J,QR8	mg/kg dry	1.48		0.522			25	20
Arsenic	11.7		mg/kg dry	1.48		9.76			18	20
Chromium	144	QR6	mg/kg dry	0.986		110			27	20
Barium	68.0	QR6	mg/kg dry	0.986		88.3			26	20
<u>Matrix Spike (1016929-MS1)</u>					<u>Source: SB16389-03 Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Selenium	122		mg/kg dry	1.45	121	BRL	101	75-125		
Lead	164		mg/kg dry	1.45	121	54.7	90	75-125		
Chromium	1170	QM7	mg/kg dry	0.969	121	931	195	75-125		
Cadmium	118		mg/kg dry	0.484	121	0.551	97	75-125		
Silver	115		mg/kg dry	1.45	121	0.527	95	75-125		
Arsenic	119		mg/kg dry	1.45	121	8.33	91	75-125		
Barium	588		mg/kg dry	0.969	121	446	117	75-125		
<u>Matrix Spike Dup (1016929-MSD1)</u>					<u>Source: SB16389-03 Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	156		mg/kg dry	1.45	121	54.7	84	75-125	5	20
Selenium	116		mg/kg dry	1.45	121	BRL	96	75-125	5	20
Cadmium	112		mg/kg dry	0.483	121	0.551	92	75-125	5	20
Chromium	979	QM7	mg/kg dry	0.966	121	931	40	75-125	17	20
Arsenic	113		mg/kg dry	1.45	121	8.33	87	75-125	5	20
Silver	111		mg/kg dry	1.45	121	0.527	91	75-125	4	20
Barium	502	QM7	mg/kg dry	0.966	121	446	46	75-125	16	20
<u>Post Spike (1016929-PS1)</u>					<u>Source: SB16389-03 Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	171		mg/kg dry	1.56	130	54.7	89	80-120		
Selenium	133		mg/kg dry	1.56	130	BRL	102	80-120		
Silver	125		mg/kg dry	1.56	130	0.527	96	80-120		
Arsenic	129		mg/kg dry	1.56	130	8.33	92	80-120		
Cadmium	128		mg/kg dry	0.520	130	0.551	98	80-120		
<u>Reference (1016929-SRM1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	75.8		mg/kg wet	1.50	73.1		104	81.3-118.8		
Selenium	114		mg/kg wet	1.50	102		113	80-120		
Cadmium	38.5		mg/kg wet	0.500	36.0		107	82.9-116.9		
Arsenic	73.8		mg/kg wet	1.50	70.1		105	82.6-117.4		
Silver	23.9		mg/kg wet	1.50	22.9		104	66.3-133.7		
Chromium	51.9		mg/kg wet	1.00	53.3		97	80.3-119		
Barium	124		mg/kg wet	1.00	137		91	79.2-120.8		
<u>Reference (1016929-SRM2)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Lead	68.2		mg/kg wet	1.50	72.6		94	81.3-118.8		
Selenium	100		mg/kg wet	1.50	101		100	80-120		
Cadmium	33.4		mg/kg wet	0.500	35.8		93	82.9-116.9		
Arsenic	66.6		mg/kg wet	1.50	69.6		96	82.6-117.4		
Silver	21.7		mg/kg wet	1.50	22.7		95	66.3-133.7		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1016929 - SW846 3050B										
<u>Reference (1016929-SRM2)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Chromium	49.3		mg/kg wet	1.00	52.9		93	80.3-119		
Barium	121		mg/kg wet	1.00	136		89	79.2-120.8		
Batch 1016930 - SW846 3050B										
<u>Blank (1016930-BLK1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0284						
<u>Duplicate (1016930-DUP1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	0.394	QR6	mg/kg dry	0.0286		0.212			60	20
<u>Matrix Spike (1016930-MS1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	0.975		mg/kg dry	0.278	0.386	0.603	96	75-125		
<u>Matrix Spike Dup (1016930-MSD1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	1.08		mg/kg dry	0.313	0.435	0.603	111	75-125	11	20
<u>Post Spike (1016930-PS1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	0.925		mg/kg dry	0.279	0.387	0.603	83	80-120		
<u>Reference (1016930-SRM1)</u>					<u>Prepared: 09-Aug-10 Analyzed: 10-Aug-10</u>					
Mercury	6.37		mg/kg wet	0.600	6.38		100	71.5-128.1		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Notes and Definitions

GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Kimberly Wisk
Nicole Leja

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001					
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:					
This form provides certifications for the following data set:			SB16389-01 through SB16389-05					
Matrices: Soil								
CAM Protocol								
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A			
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B			
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B				
Affirmative responses to questions A through F are required for "Presumptive Certainty" status								
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓	Yes	No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓	Yes	No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓	Yes	No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓	Yes	No	
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No		
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No		
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓	Yes	No	
Responses to questions G, H and I below are required for "Presumptive Certainty" status								
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?					Yes	✓	No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.								
H	Were all QC performance standards specified in the CAM protocol(s) achieved?					Yes	✓	No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?					Yes	✓	No
All negative responses are addressed in a case narrative on the cover page of this report.								
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.								
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/10/2010								



CHAIN OF CUSTODY RECORD

Page 1 of 1

88116389 RU

Special Handling:
 Standard TAT - 7 to 10 business days
 Rush TAT - Date Needed: 8/10/10
 - All TATs subject to laboratory approval.
 - Min. 24-hour notification needed for rushes.
 - Samples disposed of after 60 days unless otherwise instructed.

Report To: TECH TECH REZO
1 GRANT ST.
FRAMINGHAM MA
01701
 Project Mgr.: KON MYRICK
 Telephone #: 508-903-2367

Invoice To: SAME
 P.O. No.: _____ RQN: 6837

Project No.: 127-55410-10001
 Site Name: ORGANEX
 Location: WOBURN State: MA
 Sampler(s): REM WJF

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8=NaHSO₄ 9= _____ 10= _____ 11= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
 X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers:				Analyses:		QA/QC Reporting Note (check as needed)
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic			
<u>88116389-01</u>	<u>HILLSTOE-17</u>	<u>8/9/10</u>	<u>1030</u>	<u>C</u>	<u>SO</u>					<u>RCRA 8</u>	<u>P41 + 8270</u>	<input checked="" type="checkbox"/> Provide MA DEP MCP CAM R <input type="checkbox"/> Provide CT DPH RCP Report QA/QC Reporting Level <input checked="" type="checkbox"/> Standard <input type="checkbox"/> No QC <input type="checkbox"/> Other _____ State specific reporting standa <u>RCS-1</u>
<u>02</u>	<u>HILLSTOE-18</u>	↓	<u>1015</u>	↓	↓							
<u>03</u>	<u>HILLSTOE-19</u>	↓	<u>1100</u>	↓	↓							
<u>04</u>	<u>HILLSTOE-20</u>	↓	<u>1130</u>	↓	↓							
<u>05</u>	<u>SWALE-01</u>	<u>8/6/10</u>	<u>1200</u>	↓	↓							

EDD Format TRA MS EXCEL
 E-mail to KON.MYRICK@TECHTECH.COM
 Condition upon receipt: Iced Ambient 5.8
CLR

Relinquished by: [Signature] Received by: [Signature]
 Date: 8/9/10 Time: 1345
8/9/10 16:05

2.6

Report Date:
13-Aug-10 16:40



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-1001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16513-01	Swale-02	Soil	10-Aug-10 08:30	11-Aug-10 15:40
SB16513-02	Swale-03	Soil	10-Aug-10 08:40	11-Aug-10 15:40
SB16513-03	Swale-04	Soil	10-Aug-10 08:50	11-Aug-10 15:40

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 2.6 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 0.8 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1017120-DUP1 *Source: SB16513-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Selenium

SW846 8270C/D

Calibration:

S006741-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Naphthalene (69%)

This affected the following samples:

- 1017047-BLK1
- 1017047-BS1
- S007449-CCV1

Samples:

S007449-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Benzo (b) fluoranthene (24.2%)

This affected the following samples:

- 1017047-BLK1
- 1017047-BS1

Sample Identification

Swale-03

SB16513-02

Client Project #

127-55410-1001

Matrix

Soil

Collection Date/Time

10-Aug-10 08:40

Received

11-Aug-10

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	138	1	SW846 8270C/D	11-Aug-10	13-Aug-10	MSL	1017047	
208-96-8	Acenaphthylene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	138	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	65			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	58			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.55	1	SW846 6010B	11-Aug-10	12-Aug-10	JB	1017120	
7440-38-2	Arsenic	5.05		mg/kg dry	1.55	1	"	"	"	"	"	"
7440-39-3	Barium	20.4		mg/kg dry	1.04	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.518	1	"	"	"	"	"	"
7440-47-3	Chromium	24.0		mg/kg dry	1.04	1	"	"	"	"	"	"
7439-97-6	Mercury	BRL		mg/kg dry	0.0281	1	SW846 7471A	"	12-Aug-10	HB	1017121	
7439-92-1	Lead	6.76		mg/kg dry	1.55	1	SW846 6010B	"	12-Aug-10	JB	1017120	
7782-49-2	Selenium	BRL		mg/kg dry	1.55	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	94.0			%		1	SM2540 G Mod.	11-Aug-10	11-Aug-10	BD	1017118	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Page 4 of 10

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017047 - SW846 3545A										
<u>Blank (1017047-BLK1)</u>					<u>Prepared & Analyzed: 11-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1360		µg/kg wet		1670		82	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1320		µg/kg wet		1670		79	30-130		
<u>LCS (1017047-BS1)</u>					<u>Prepared & Analyzed: 11-Aug-10</u>					
Acenaphthene	1300		µg/kg wet	33.2	1670		78	40-140		
Acenaphthylene	1210		µg/kg wet	33.2	1670		73	40-140		
Anthracene	1220		µg/kg wet	33.2	1670		73	40-140		
Benzo (a) anthracene	1110		µg/kg wet	33.2	1670		67	40-140		
Benzo (a) pyrene	1240		µg/kg wet	33.2	1670		74	40-140		
Benzo (b) fluoranthene	1150		µg/kg wet	33.2	1670		69	40-140		
Benzo (g,h,i) perylene	913		µg/kg wet	33.2	1670		55	40-140		
Benzo (k) fluoranthene	1430		µg/kg wet	33.2	1670		86	40-140		
Chrysene	1350		µg/kg wet	33.2	1670		81	40-140		
Dibenzo (a,h) anthracene	1060		µg/kg wet	33.2	1670		64	40-140		
Fluoranthene	1280		µg/kg wet	33.2	1670		77	40-140		
Fluorene	1440		µg/kg wet	33.2	1670		87	40-140		
Indeno (1,2,3-cd) pyrene	1020		µg/kg wet	33.2	1670		61	40-140		
1-Methylnaphthalene	1180		µg/kg wet	33.2	1670		71	40-140		
2-Methylnaphthalene	1360		µg/kg wet	33.2	1670		82	40-140		
Naphthalene	1110		µg/kg wet	33.2	1670		67	40-140		
Phenanthrene	1230		µg/kg wet	33.2	1670		74	40-140		
Pyrene	1160		µg/kg wet	33.2	1670		70	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1390		µg/kg wet		1670		83	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1170		µg/kg wet		1670		70	30-130		

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* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017120 - SW846 3050B										
<u>Blank (1017120-BLK1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Selenium	BRL		mg/kg wet	1.37						
Lead	BRL		mg/kg wet	1.37						
Silver	BRL		mg/kg wet	1.37						
Arsenic	BRL		mg/kg wet	1.37						
Cadmium	BRL		mg/kg wet	0.458						
Chromium	BRL		mg/kg wet	0.916						
Barium	BRL		mg/kg wet	0.916						
<u>Duplicate (1017120-DUP1)</u>					<u>Source: SB16513-01 Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Selenium	0.288	J,QR8	mg/kg dry	1.49		0.450			44	20
Lead	20.2		mg/kg dry	1.49		19.3			5	20
Silver	0.794	J	mg/kg dry	1.49		0.816			3	20
Cadmium	0.566		mg/kg dry	0.496		0.528			7	20
Chromium	124		mg/kg dry	0.993		121			2	20
Arsenic	6.63		mg/kg dry	1.49		6.00			10	20
Barium	33.8		mg/kg dry	0.993		31.4			7	20
<u>Matrix Spike (1017120-MS1)</u>					<u>Source: SB16513-02 Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Lead	114		mg/kg dry	1.36	113	6.76	95	75-125		
Selenium	114		mg/kg dry	1.36	113	0.269	100	75-125		
Cadmium	113		mg/kg dry	0.453	113	0.337	100	75-125		
Chromium	138		mg/kg dry	0.907	113	24.0	100	75-125		
Arsenic	109		mg/kg dry	1.36	113	5.05	92	75-125		
Silver	115		mg/kg dry	1.36	113	0.389	102	75-125		
Barium	137		mg/kg dry	0.907	113	20.4	103	75-125		
<u>Matrix Spike Dup (1017120-MSD1)</u>					<u>Source: SB16513-02 Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Lead	116		mg/kg dry	1.40	117	6.76	93	75-125	2	20
Selenium	114		mg/kg dry	1.40	117	0.269	98	75-125	0.4	20
Arsenic	110		mg/kg dry	1.40	117	5.05	90	75-125	0.3	20
Cadmium	115		mg/kg dry	0.467	117	0.337	98	75-125	1	20
Chromium	141		mg/kg dry	0.935	117	24.0	100	75-125	2	20
Silver	118		mg/kg dry	1.40	117	0.389	101	75-125	2	20
Barium	140		mg/kg dry	0.935	117	20.4	102	75-125	2	20
<u>Post Spike (1017120-PS1)</u>					<u>Source: SB16513-02 Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Lead	118		mg/kg dry	1.38	115	6.76	97	80-120		
Selenium	119		mg/kg dry	1.38	115	0.269	103	80-120		
Cadmium	118		mg/kg dry	0.459	115	0.337	102	80-120		
Arsenic	114		mg/kg dry	1.38	115	5.05	95	80-120		
Silver	119		mg/kg dry	1.38	115	0.389	103	80-120		
Chromium	136		mg/kg dry	0.918	115	24.0	98	80-120		
Barium	127		mg/kg dry	0.918	115	20.4	93	80-120		
<u>Reference (1017120-SRM1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Lead	67.2		mg/kg wet	1.50	73.8		91	81.3-118.8		
Selenium	103		mg/kg wet	1.50	102		100	80-120		
Silver	22.5		mg/kg wet	1.50	23.1		97	66.3-133.7		
Arsenic	65.8		mg/kg wet	1.50	70.7		93	82.6-117.4		
Cadmium	35.3		mg/kg wet	0.500	36.4		97	82.9-116.9		
Chromium	49.4		mg/kg wet	1.00	53.8		92	80.3-119		
Barium	115		mg/kg wet	1.00	138		83	79.2-120.8		
<u>Reference (1017120-SRM2)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Selenium	101		mg/kg wet	1.50	103		98	80-120		
Lead	67.8		mg/kg wet	1.50	74.2		91	81.3-118.8		
Silver	23.0		mg/kg wet	1.50	23.2		99	66.3-133.7		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017120 - SW846 3050B										
<u>Reference (1017120-SRM2)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Chromium	49.2		mg/kg wet	1.00	54.1		91	80.3-119		
Cadmium	35.4		mg/kg wet	0.500	36.6		97	82.9-116.9		
Arsenic	65.1		mg/kg wet	1.50	71.1		92	82.6-117.4		
Barium	116		mg/kg wet	1.00	139		83	79.2-120.8		
Batch 1017121 - EPA200/SW7000 Series										
<u>Blank (1017121-BLK1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0273						
<u>Duplicate (1017121-DUP1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	0.0853		mg/kg dry	0.0324		0.101			17	20
<u>Matrix Spike (1017121-MS1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	0.473		mg/kg dry	0.0307	0.427	0.0199	106	75-125		
<u>Matrix Spike Dup (1017121-MSD1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	0.472		mg/kg dry	0.0311	0.432	0.0199	105	75-125	0.2	20
<u>Post Spike (1017121-PS1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	0.486		mg/kg dry	0.0314	0.437	0.0199	107	80-120		
<u>Reference (1017121-SRM1)</u>					<u>Prepared: 11-Aug-10 Analyzed: 12-Aug-10</u>					
Mercury	6.53		mg/kg wet	0.600	6.70		97	71.5-128.1		

Notes and Definitions

QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Leja
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-1001					
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:					
This form provides certifications for the following data set:			SB16513-01 through SB16513-03					
Matrices: Soil								
CAM Protocol								
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A			
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B			
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B				
Affirmative responses to questions A through F are required for "Presumptive Certainty" status								
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓	Yes	No	
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓	Yes	No	
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓	Yes	No	
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓	Yes	No	
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No		
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No		
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓	Yes	No	
Responses to questions G, H and I below are required for "Presumptive Certainty" status								
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?					Yes	✓	No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.								
H	Were all QC performance standards specified in the CAM protocol(s) achieved?					Yes	✓	No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?					Yes	✓	No
All negative responses are addressed in a case narrative on the cover page of this report.								
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.								
						 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/13/2010		



SPECTRUM ANALYTICAL, INC.
Environmental Technology

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
Standard TAT - 7 to 10 business days
Kash TAT - Date Needed 2-21-02
All TAT's subject to laboratory approval.
Min. 24-hour notification needed for rush samples disposed of after 60 days unless otherwise instructed.

SB16513

Report To: Ron Myrick

Invoice To: same

Project No.: 127-55410-1001

Terra Tech Reco
1 Grant St

Site Name: Organix

Location: Woburn

Project Mgr: Ron Myrick

P.O. No.: _____

Sampler(s): MT

Telephone #: 508 963 2000

RON: 6827

List preservative code below:

1=Na₂S₂O₅, 2=HCl, 3=H₂SO₄, 4=HNO₃, 5=NaOH, 6=Ascorbic Acid, 7=CH₃OH

QA/QC Reporting Notes:

8=NaHSO₄, 9= _____, 10= _____, 11= _____

DW=Drinking Water, GW=Groundwater, WW=Wastewater

O=Oil, SW=Surface Water, SO=Soil, SL=Sludge, A=Air

X1= _____, X2= _____, X3= _____

G=Cermb, C=Composite

Analyses:

Provide MA DEP MCP CAM Report
 Provide CT DEP RCP Report
QA/QC Reporting Level
 Standard No QC
 Other _____
State specific reporting standards
RS-1

Lab Id.	Sample Id.	Date	Time	Type	Matrix	Containers:				Analyses:	Date	Time
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic			
163301	SWALE-03	7/10/00	0830	C	SO	1	1	1	1	TOTAL RCRA 8 4270 PAH		
	OR SWALE-63		0840	C	SO	1	1	1	1			
	OR SWALE-04		0850	C	SO	1	1	1	1			

EDD Format: TRE MS EXCEL

E-mail to: RON.MYRICK@TERRATECH.COM

Condition upon receipt: Good Ambient W.C. 2.6

Relinquished by: Walter Patis
Bill Henry

Received by: Bill Henry

Date: 8/1/00 Time: 1407
8/1/00 13:40

Report Date:
13-Aug-10 17:37



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16577-01	Swale-05	Soil	12-Aug-10 11:10	12-Aug-10 16:40

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 9 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 23.7 degrees Celsius. The samples were transported on ice to the laboratory facility and the temperature was recorded at 0.2 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1017239-DUP1 *Source: SB16577-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Selenium
Silver

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Barium
Chromium

SW846 7471A

Spikes:

1017241-MS1 *Source: SB16577-01*

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Mercury

SW846 8270C/D

Samples:

S007489-CCV1

Samples:

S007489-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

- Benzo (g,h,i) perylene (-36.6%)
- Benzo (k) fluoranthene (37.5%)
- Dibenzo (a,h) anthracene (-29.8%)
- Indeno (1,2,3-cd) pyrene (-35.0%)

This affected the following samples:

Swale-05

Sample Identification

Swale-05
SB16577-01

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
12-Aug-10 11:10

Received
12-Aug-10

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Semivolatile Organic Compounds by GCMS												
<u>PAHs by SW846 8270C</u>												
<u>Prepared by method SW846 3545A</u>												
83-32-9	Acenaphthene	BRL		µg/kg dry	141	1	SW846 8270C/D	12-Aug-10	13-Aug-10	MSL	1017136	
208-96-8	Acenaphthylene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	141	1	"	"	"	"	"	"
<i>Surrogate recoveries:</i>												
321-60-8	2-Fluorobiphenyl	90			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	125			30-130 %		"	"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods												
7440-22-4	Silver	BRL		mg/kg dry	1.53	1	SW846 6010B	12-Aug-10	13-Aug-10	JB	1017239	
7440-38-2	Arsenic	6.57		mg/kg dry	1.53	1	"	"	"	"	"	"
7440-39-3	Barium	43.8		mg/kg dry	1.02	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.511		mg/kg dry	0.511	1	"	"	"	"	"	"
7440-47-3	Chromium	235		mg/kg dry	1.02	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0900		mg/kg dry	0.0317	1	SW846 7471A	13-Aug-10	13-Aug-10	ARF	1017241	
7439-92-1	Lead	19.4		mg/kg dry	1.53	1	SW846 6010B	12-Aug-10	13-Aug-10	JB	1017239	
7782-49-2	Selenium	BRL		mg/kg dry	1.53	1	"	"	"	"	"	"
General Chemistry Parameters												
	% Solids	88.8		%		1	SM2540 G Mod.	12-Aug-10	12-Aug-10	AB	1017236	

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017136 - SW846 3545A										
<u>Blank (1017136-BLK1)</u>					<u>Prepared & Analyzed: 12-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1390		µg/kg wet		1670		83	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1270		µg/kg wet		1670		76	30-130		
<u>LCS (1017136-BS1)</u>					<u>Prepared & Analyzed: 12-Aug-10</u>					
Acenaphthene	1350		µg/kg wet	33.2	1670		81	40-140		
Acenaphthylene	1400		µg/kg wet	33.2	1670		84	40-140		
Anthracene	1310		µg/kg wet	33.2	1670		78	40-140		
Benzo (a) anthracene	1220		µg/kg wet	33.2	1670		73	40-140		
Benzo (a) pyrene	1320		µg/kg wet	33.2	1670		79	40-140		
Benzo (b) fluoranthene	1240		µg/kg wet	33.2	1670		74	40-140		
Benzo (g,h,i) perylene	1050		µg/kg wet	33.2	1670		63	40-140		
Benzo (k) fluoranthene	1460		µg/kg wet	33.2	1670		87	40-140		
Chrysene	1360		µg/kg wet	33.2	1670		82	40-140		
Dibenzo (a,h) anthracene	1210		µg/kg wet	33.2	1670		73	40-140		
Fluoranthene	1300		µg/kg wet	33.2	1670		78	40-140		
Fluorene	1600		µg/kg wet	33.2	1670		96	40-140		
Indeno (1,2,3-cd) pyrene	1130		µg/kg wet	33.2	1670		68	40-140		
1-Methylnaphthalene	1260		µg/kg wet	33.2	1670		76	40-140		
2-Methylnaphthalene	1350		µg/kg wet	33.2	1670		81	40-140		
Naphthalene	1250		µg/kg wet	33.2	1670		75	40-140		
Phenanthrene	1220		µg/kg wet	33.2	1670		73	40-140		
Pyrene	1270		µg/kg wet	33.2	1670		76	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1390		µg/kg wet		1670		83	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1290		µg/kg wet		1670		77	30-130		

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* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017239 - SW846 3050B										
<u>Blank (1017239-BLK1)</u>					<u>Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Lead	BRL		mg/kg wet	1.45						
Selenium	BRL		mg/kg wet	1.45						
Chromium	BRL		mg/kg wet	0.965						
Silver	BRL		mg/kg wet	1.45						
Arsenic	BRL		mg/kg wet	1.45						
Cadmium	BRL		mg/kg wet	0.482						
Barium	BRL		mg/kg wet	0.965						
<u>Duplicate (1017239-DUP1)</u>					<u>Source: SB16577-01 Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Lead	19.7		mg/kg dry	1.63		19.4			1	20
Selenium	0.692	J,QR8	mg/kg dry	1.63		0.941			31	20
Silver	0.648	J,QR8	mg/kg dry	1.63		0.511			24	20
Arsenic	6.63		mg/kg dry	1.63		6.57			0.9	20
Cadmium	0.517	J	mg/kg dry	0.545		0.511			1	20
Chromium	291	QR6	mg/kg dry	1.09		235			21	20
Barium	56.2	QR6	mg/kg dry	1.09		43.8			25	20
<u>Matrix Spike (1017239-MS1)</u>					<u>Source: SB16577-01 Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Selenium	137		mg/kg dry	1.66	138	0.941	98	75-125		
Lead	145		mg/kg dry	1.66	138	19.4	91	75-125		
Arsenic	134		mg/kg dry	1.66	138	6.57	92	75-125		
Chromium	359		mg/kg dry	1.11	138	235	89	75-125		
Cadmium	132		mg/kg dry	0.553	138	0.511	95	75-125		
Silver	136		mg/kg dry	1.66	138	0.511	98	75-125		
Barium	182		mg/kg dry	1.11	138	43.8	100	75-125		
<u>Matrix Spike Dup (1017239-MSD1)</u>					<u>Source: SB16577-01 Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Selenium	133		mg/kg dry	1.65	138	0.941	96	75-125	2	20
Lead	146		mg/kg dry	1.65	138	19.4	92	75-125	0.6	20
Silver	136		mg/kg dry	1.65	138	0.511	98	75-125	0.2	20
Arsenic	131		mg/kg dry	1.65	138	6.57	91	75-125	2	20
Cadmium	129		mg/kg dry	0.551	138	0.511	94	75-125	2	20
Chromium	352		mg/kg dry	1.10	138	235	85	75-125	2	20
Barium	188		mg/kg dry	1.10	138	43.8	105	75-125	3	20
<u>Post Spike (1017239-PS1)</u>					<u>Source: SB16577-01 Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Lead	151		mg/kg dry	1.63	136	19.4	97	80-120		
Selenium	136		mg/kg dry	1.63	136	0.941	100	80-120		
Chromium	378		mg/kg dry	1.09	136	235	105	80-120		
Silver	136		mg/kg dry	1.63	136	0.511	100	80-120		
Cadmium	131		mg/kg dry	0.543	136	0.511	96	80-120		
Arsenic	136		mg/kg dry	1.63	136	6.57	96	80-120		
Barium	181		mg/kg dry	1.09	136	43.8	101	80-120		
<u>Reference (1017239-SRM1)</u>					<u>Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Selenium	106		mg/kg wet	1.50	104		102	80-120		
Lead	68.6		mg/kg wet	1.50	74.8		92	81.3-118.8		
Silver	23.6		mg/kg wet	1.50	23.4		101	66.3-133.7		
Arsenic	69.6		mg/kg wet	1.50	71.7		97	82.6-117.4		
Cadmium	35.6		mg/kg wet	0.500	36.9		97	82.9-116.9		
Chromium	52.8		mg/kg wet	1.00	54.5		97	80.3-119		
Barium	130		mg/kg wet	1.00	140		93	79.2-120.8		
<u>Reference (1017239-SRM2)</u>					<u>Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Selenium	103		mg/kg wet	1.50	103		101	80-120		
Lead	71.0		mg/kg wet	1.50	73.9		96	81.3-118.8		
Chromium	51.2		mg/kg wet	1.00	53.9		95	80.3-119		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017239 - SW846 3050B										
<u>Reference (1017239-SRM2)</u>					<u>Prepared: 12-Aug-10 Analyzed: 13-Aug-10</u>					
Cadmium	34.4		mg/kg wet	0.500	36.5		94	82.9-116.9		
Silver	22.3		mg/kg wet	1.50	23.2		96	66.3-133.7		
Arsenic	67.0		mg/kg wet	1.50	70.8		95	82.6-117.4		
Barium	131		mg/kg wet	1.00	138		95	79.2-120.8		
Batch 1017241 - EPA 200 Series										
<u>Blank (1017241-BLK1)</u>					<u>Prepared & Analyzed: 13-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0261						
<u>Duplicate (1017241-DUP1)</u>					<u>Source: SB16577-01 Prepared & Analyzed: 13-Aug-10</u>					
Mercury	0.109		mg/kg dry	0.0305		0.0900			19	20
<u>Matrix Spike (1017241-MS1)</u>					<u>Source: SB16577-01 Prepared & Analyzed: 13-Aug-10</u>					
Mercury	0.648	QM7	mg/kg dry	0.0320	0.445	0.0900	126	75-125		
<u>Matrix Spike Dup (1017241-MSD1)</u>					<u>Source: SB16577-01 Prepared & Analyzed: 13-Aug-10</u>					
Mercury	0.647		mg/kg dry	0.0325	0.451	0.0900	124	75-125	0.2	20
<u>Reference (1017241-SRM1)</u>					<u>Prepared & Analyzed: 13-Aug-10</u>					
Mercury	6.55		mg/kg wet	0.600	6.41		102	71.5-128.1		

Notes and Definitions

QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Leja
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001		
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:		
This form provides certifications for the following data set:			SB16577-01		
Matrices: Soil					
CAM Protocol					
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	
Affirmative responses to questions A through F are required for "Presumptive Certainty" status					
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				Yes ✓ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes No
Responses to questions G, H and I below are required for "Presumptive Certainty" status					
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes ✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.					
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes ✓ No
All negative responses are addressed in a case narrative on the cover page of this report.					
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.					
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/13/2010					

Report Date:
18-Aug-10 10:47



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16706-01	Swale-06	Soil	13-Aug-10 13:30	16-Aug-10 16:35
SB16706-02	Swale-07	Soil	13-Aug-10 14:02	16-Aug-10 16:35
SB16706-03	Swale-08	Soil	16-Aug-10 11:45	16-Aug-10 16:35
SB16706-04	Down Stream-4	Soil	16-Aug-10 12:15	16-Aug-10 16:35

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 3.8 degrees Celsius. The samples were transported on ice to the laboratory facility and the temperature was recorded at 0.2 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Identification

Swale-06
SB16706-01

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
13-Aug-10 13:30

Received
16-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	165	1	SW846 8270C/D	17-Aug-10	17-Aug-10	MSL	1017465	
208-96-8	Acenaphthylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	91			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	81			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.91	1	SW846 6010B	17-Aug-10	17-Aug-10	JB	1017501	
7440-38-2	Arsenic	6.05		mg/kg dry	1.91	1	"	"	"	"	"	"
7440-39-3	Barium	33.4		mg/kg dry	1.27	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.637	1	"	"	"	"	"	"
7440-47-3	Chromium	229		mg/kg dry	1.27	1	"	"	"	"	"	"
7439-97-6	Mercury	0.183		mg/kg dry	0.0345	1	SW846 7471A	"	17-Aug-10	HB	1017503	
7439-92-1	Lead	19.4		mg/kg dry	1.91	1	SW846 6010B	"	17-Aug-10	JB	1017501	
7782-49-2	Selenium	BRL		mg/kg dry	1.91	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		78.3		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	TDD	1017506	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Swale-07
SB16706-02

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
13-Aug-10 14:02

Received
16-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	161	1	SW846 8270C/D	17-Aug-10	17-Aug-10	MSL	1017465	
208-96-8	Acenaphthylene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	100			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	89			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.81	1	SW846 6010B	17-Aug-10	17-Aug-10	JB	1017501	
7440-38-2	Arsenic	2.54		mg/kg dry	1.81	1	"	"	"	"	"	"
7440-39-3	Barium	11.0		mg/kg dry	1.21	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.604	1	"	"	"	"	"	"
7440-47-3	Chromium	21.0		mg/kg dry	1.21	1	"	"	"	"	"	"
7439-97-6	Mercury	BRL		mg/kg dry	0.0359	1	SW846 7471A	"	17-Aug-10	HB	1017503	
7439-92-1	Lead	2.56		mg/kg dry	1.81	1	SW846 6010B	"	17-Aug-10	JB	1017501	
7782-49-2	Selenium	BRL		mg/kg dry	1.81	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		78.4		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	TDD	1017506	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Swale-08
SB16706-03

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
16-Aug-10 11:45

Received
16-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	140	1	SW846 8270C/D	17-Aug-10	17-Aug-10	MSL	1017465	
208-96-8	Acenaphthylene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
206-44-0	Fluoranthene	282		µg/kg dry	140	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	140	1	"	"	"	"	"	"
85-01-8	Phenanthrene	177		µg/kg dry	140	1	"	"	"	"	"	"
129-00-0	Pyrene	226		µg/kg dry	140	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	97			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	86			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.60	1	SW846 6010B	17-Aug-10	17-Aug-10	JB	1017501	
7440-38-2	Arsenic	6.48		mg/kg dry	1.60	1	"	"	"	"	"	"
7440-39-3	Barium	66.8		mg/kg dry	1.07	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.534	1	"	"	"	"	"	"
7440-47-3	Chromium	833		mg/kg dry	1.07	1	"	"	"	"	"	"
7439-97-6	Mercury	0.273		mg/kg dry	0.0322	1	SW846 7471A	"	17-Aug-10	HB	1017503	
7439-92-1	Lead	23.4		mg/kg dry	1.60	1	SW846 6010B	"	17-Aug-10	JB	1017501	
7782-49-2	Selenium	BRL		mg/kg dry	1.60	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		91.6		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	TDD	1017506	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-4

SB16706-04

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
16-Aug-10 12:15

Received
16-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	171	1	SW846 8270C/D	17-Aug-10	17-Aug-10	MSL	1017465	
208-96-8	Acenaphthylene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	99			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	90			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.83	1	SW846 6010B	17-Aug-10	17-Aug-10	JB	1017501	
7440-38-2	Arsenic	4.47		mg/kg dry	1.83	1	"	"	"	"	"	"
7440-39-3	Barium	60.1		mg/kg dry	1.22	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.609	1	"	"	"	"	"	"
7440-47-3	Chromium	209		mg/kg dry	1.22	1	"	"	"	"	"	"
7439-97-6	Mercury	0.143		mg/kg dry	0.0362	1	SW846 7471A	"	17-Aug-10	HB	1017503	
7439-92-1	Lead	16.9		mg/kg dry	1.83	1	SW846 6010B	"	17-Aug-10	JB	1017501	
7782-49-2	Selenium	BRL		mg/kg dry	1.83	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		74.7		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	TDD	1017506	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017465 - SW846 3545A										
<u>Blank (1017465-BLK1)</u>					<u>Prepared & Analyzed: 17-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1370		µg/kg wet		1670		82	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1300		µg/kg wet		1670		78	30-130		
<u>LCS (1017465-BS1)</u>					<u>Prepared & Analyzed: 17-Aug-10</u>					
Acenaphthene	1440		µg/kg wet	33.2	1670		87	40-140		
Acenaphthylene	1490		µg/kg wet	33.2	1670		90	40-140		
Anthracene	1360		µg/kg wet	33.2	1670		82	40-140		
Benzo (a) anthracene	1330		µg/kg wet	33.2	1670		80	40-140		
Benzo (a) pyrene	1400		µg/kg wet	33.2	1670		84	40-140		
Benzo (b) fluoranthene	1560		µg/kg wet	33.2	1670		94	40-140		
Benzo (g,h,i) perylene	1370		µg/kg wet	33.2	1670		82	40-140		
Benzo (k) fluoranthene	1180		µg/kg wet	33.2	1670		71	40-140		
Chrysene	1400		µg/kg wet	33.2	1670		84	40-140		
Dibenzo (a,h) anthracene	1470		µg/kg wet	33.2	1670		88	40-140		
Fluoranthene	1370		µg/kg wet	33.2	1670		82	40-140		
Fluorene	1720		µg/kg wet	33.2	1670		103	40-140		
Indeno (1,2,3-cd) pyrene	1520		µg/kg wet	33.2	1670		91	40-140		
1-Methylnaphthalene	1380		µg/kg wet	33.2	1670		83	40-140		
2-Methylnaphthalene	1370		µg/kg wet	33.2	1670		82	40-140		
Naphthalene	1360		µg/kg wet	33.2	1670		82	40-140		
Phenanthrene	1340		µg/kg wet	33.2	1670		80	40-140		
Pyrene	1350		µg/kg wet	33.2	1670		81	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1560		µg/kg wet		1670		94	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1340		µg/kg wet		1670		80	30-130		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017501 - SW846 3050B										
<u>Blank (1017501-BLK1)</u>				<u>Prepared & Analyzed: 17-Aug-10</u>						
Selenium	BRL		mg/kg wet	1.41						
Lead	BRL		mg/kg wet	1.41						
Silver	BRL		mg/kg wet	1.41						
Arsenic	BRL		mg/kg wet	1.41						
Cadmium	BRL		mg/kg wet	0.471						
Chromium	BRL		mg/kg wet	0.943						
Barium	BRL		mg/kg wet	0.943						
<u>Duplicate (1017501-DUP1)</u>				<u>Source: SB16706-03</u>			<u>Prepared & Analyzed: 17-Aug-10</u>			
Selenium	0.348	J	mg/kg dry	1.56		0.342			2	20
Lead	24.2		mg/kg dry	1.56		23.4			3	20
Silver	BRL		mg/kg dry	1.56		0.326				20
Cadmium	0.265	J	mg/kg dry	0.520		0.267			0.7	20
Chromium	807		mg/kg dry	1.04		833			3	20
Arsenic	6.47		mg/kg dry	1.56		6.48			0.09	20
Barium	64.6		mg/kg dry	1.04		66.8			3	20
<u>Matrix Spike (1017501-MS1)</u>				<u>Source: SB16706-01</u>			<u>Prepared & Analyzed: 17-Aug-10</u>			
Lead	150		mg/kg dry	1.68	140	19.4	94	75-125		
Selenium	136		mg/kg dry	1.68	140	0.529	97	75-125		
Cadmium	134		mg/kg dry	0.559	140	0.350	96	75-125		
Chromium	392		mg/kg dry	1.12	140	229	117	75-125		
Arsenic	130		mg/kg dry	1.68	140	6.05	88	75-125		
Silver	118		mg/kg dry	1.68	140	0.408	84	75-125		
Barium	163		mg/kg dry	1.12	140	33.4	93	75-125		
<u>Matrix Spike Dup (1017501-MSD1)</u>				<u>Source: SB16706-01</u>			<u>Prepared & Analyzed: 17-Aug-10</u>			
Lead	150		mg/kg dry	1.74	145	19.4	90	75-125	0.2	20
Selenium	134		mg/kg dry	1.74	145	0.529	92	75-125	1	20
Arsenic	129		mg/kg dry	1.74	145	6.05	85	75-125	0.7	20
Cadmium	133		mg/kg dry	0.580	145	0.350	91	75-125	0.7	20
Chromium	354		mg/kg dry	1.16	145	229	86	75-125	10	20
Silver	127		mg/kg dry	1.74	145	0.408	87	75-125	7	20
Barium	164		mg/kg dry	1.16	145	33.4	90	75-125	0.5	20
<u>Post Spike (1017501-PS1)</u>				<u>Source: SB16706-01</u>			<u>Prepared & Analyzed: 17-Aug-10</u>			
Lead	173		mg/kg dry	1.91	159	19.4	96	80-120		
Selenium	158		mg/kg dry	1.91	159	0.529	99	80-120		
Cadmium	158		mg/kg dry	0.637	159	0.350	99	80-120		
Arsenic	152		mg/kg dry	1.91	159	6.05	91	80-120		
Silver	147		mg/kg dry	1.91	159	0.408	92	80-120		
Chromium	366		mg/kg dry	1.27	159	229	86	80-120		
Barium	173		mg/kg dry	1.27	159	33.4	87	80-120		
<u>Reference (1017501-SRM1)</u>				<u>Prepared & Analyzed: 17-Aug-10</u>						
Lead	71.5		mg/kg wet	1.50	72.4		99	81.3-118.8		
Selenium	100		mg/kg wet	1.50	101		100	80-120		
Silver	22.6		mg/kg wet	1.50	22.7		100	66.3-133.7		
Arsenic	66.0		mg/kg wet	1.50	69.4		95	82.6-117.4		
Cadmium	34.3		mg/kg wet	0.500	35.7		96	82.9-116.9		
Chromium	50.6		mg/kg wet	1.00	52.8		96	80.3-119		
Barium	122		mg/kg wet	1.00	135		90	79.2-120.8		
<u>Reference (1017501-SRM2)</u>				<u>Prepared & Analyzed: 17-Aug-10</u>						
Selenium	96.7		mg/kg wet	1.50	101		96	80-120		
Lead	68.2		mg/kg wet	1.50	72.6		94	81.3-118.8		
Silver	21.3		mg/kg wet	1.50	22.7		93	66.3-133.7		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017501 - SW846 3050B										
<u>Reference (1017501-SRM2)</u>					<u>Prepared & Analyzed: 17-Aug-10</u>					
Chromium	49.0		mg/kg wet	1.00	53.0		92	80.3-119		
Cadmium	32.8		mg/kg wet	0.500	35.8		92	82.9-116.9		
Arsenic	63.2		mg/kg wet	1.50	69.6		91	82.6-117.4		
Barium	114		mg/kg wet	1.00	136		84	79.2-120.8		
Batch 1017503 - EPA 200 Series										
<u>Blank (1017503-BLK1)</u>					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0285						
<u>Duplicate (1017503-DUP1)</u>					<u>Source: SB16706-03</u>					
					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	0.267		mg/kg dry	0.0320		0.273			2	20
<u>Matrix Spike (1017503-MS1)</u>					<u>Source: SB16706-01</u>					
					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	0.752		mg/kg dry	0.0374	0.520	0.183	109	75-125		
<u>Matrix Spike Dup (1017503-MSD1)</u>					<u>Source: SB16706-01</u>					
					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	0.717		mg/kg dry	0.0360	0.500	0.183	107	75-125	5	20
<u>Post Spike (1017503-PS1)</u>					<u>Source: SB16706-01</u>					
					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	0.717		mg/kg dry	0.0363	0.504	0.183	106	80-120		
<u>Reference (1017503-SRM1)</u>					<u>Prepared & Analyzed: 17-Aug-10</u>					
Mercury	5.83		mg/kg wet	0.600	6.36		92	71.5-128.1		

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor
Kimberly Wisk

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB16706-01 through SB16706-04			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				✓ Yes	No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/18/2010						



CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: 8/17/10
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

8816706 @

Report To: Tetra Tech Rizzo
1 Grant St
Flamingham, MA

Invoice To: Sone C/O AP

Project No.: 127-55410-10001

Project Mgr.: Ron Myrick
Telephone #: 508 903 2060

P.O. No.: _____ RQN: 6837

Site Name: Organix

Location: Webster State: MA

Sampler(s): [Signature]

1=Na₂S₂O₅ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9=_____ 10=_____ 11=_____

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

Containers:

Analyses:

- Provide MA DEP MCP CAM Report
- Provide CT DPH RCP Report
- QA/QC Reporting Level
 Standard No QC
- Other _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses
<u>8816706-01</u>	<u>Swale-06</u>	<u>8/15/10</u>	<u>1530</u>	<u>C</u>	<u>SO</u>		<u>1</u>			<u>X RCEA & metals</u> <u>X PAHs 6270</u>
<u>02</u>	<u>Swale-07</u>	<u>↓</u>	<u>1402</u>	<u>C</u>	<u>↓</u>		<u>1</u>			<u>X X</u>
<u>03</u>	<u>Swale-08</u>	<u>8/16/10</u>	<u>1145</u>	<u>C</u>	<u>SO</u>		<u>1</u>			<u>X X</u>
<u>04</u>	<u>Down stream-4</u>	<u>↓</u>	<u>1215</u>	<u>C</u>	<u>SO</u>		<u>1</u>			<u>X X</u>

State specific reporting standards:
RCS-1

EDD Format: TT Excel
E-mail to: Ron.myrick@waterdata.com

Relinquished by: [Signature]
Bill Horvitz

Received by: [Signature]
Danielle [Signature]

Date: 8/16/10 Time: 1355
8/16/10 16:35

Condition upon receipt: Iced Ambient °C 3.8

Report Date:
20-Aug-10 09:43



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16784-01	Swale-09	Soil	17-Aug-10 11:20	17-Aug-10 17:05
SB16784-02	Swale-10	Soil	17-Aug-10 10:35	17-Aug-10 17:05
SB16784-03	Swale-11	Soil	17-Aug-10 10:20	17-Aug-10 17:05
SB16784-04	Down Stream-5	Soil	17-Aug-10 11:30	17-Aug-10 17:05
SB16784-05	Down Stream-6	Soil	17-Aug-10 11:40	17-Aug-10 17:05
SB16784-06	Down Stream-7	Soil	17-Aug-10 11:50	17-Aug-10 17:05
SB16784-07	Down Stream-8	Soil	17-Aug-10 12:00	17-Aug-10 17:05
SB16784-08	Down Stream-9	Soil	17-Aug-10 12:10	17-Aug-10 17:05
SB16784-09	Dup-3	Soil	17-Aug-10 00:01	17-Aug-10 17:05
SB16784-10	Dup-4	Soil	17-Aug-10 00:02	17-Aug-10 17:05
SB16784-11	Dup-5	Soil	17-Aug-10 00:03	17-Aug-10 17:05

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 22 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air Analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 5.1 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 4.4 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Spikes:

1017565-MS1 *Source: SB16784-08*

The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Barium

The spike recovery was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

Chromium

1017565-PS1 *Source: SB16784-08*

The spike recovery was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.

Chromium

Duplicates:

1017565-DUP1 *Source: SB16784-09*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Chromium

The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Selenium

Samples:

SB16784-06 *Down Stream-7*

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

SW846 6010B

Samples:

SB16784-06 *Down Stream-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Chromium

SW846 8270C/D

Calibration:

S006741-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Naphthalene (69%)

This affected the following samples:

- Down Stream-5
- Down Stream-6
- Dup-4
- Dup-5
- S007626-CCV1

Samples:

S007626-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Benzo (b) fluoranthene (33.3%)

This affected the following samples:

- Down Stream-5
- Down Stream-6
- Dup-4
- Dup-5

Sample Identification

Swale-09

SB16784-01

Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
17-Aug-10 11:20Received
17-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
---------	------------	--------	------	-------	------	----------	-------------	----------	----------	---------	-------	-------

Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	136	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	412		µg/kg dry	136	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	429		µg/kg dry	136	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	409		µg/kg dry	136	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	294		µg/kg dry	136	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	353		µg/kg dry	136	1	"	"	"	"	"	"
218-01-9	Chrysene	454		µg/kg dry	136	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1,060		µg/kg dry	136	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	288		µg/kg dry	136	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	136	1	"	"	"	"	"	"
85-01-8	Phenanthrene	658		µg/kg dry	136	1	"	"	"	"	"	"
129-00-0	Pyrene	871		µg/kg dry	136	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	102			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	89			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.37	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	6.31		mg/kg dry	1.37	1	"	"	"	"	"	"
7440-39-3	Barium	155		mg/kg dry	0.912	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.825		mg/kg dry	0.456	1	"	"	"	"	"	"
7440-47-3	Chromium	123		mg/kg dry	0.912	1	"	"	"	"	"	"
7439-97-6	Mercury	0.128		mg/kg dry	0.0281	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	52.9		mg/kg dry	1.37	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.37	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		96.8		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 4 of 22

Sample Identification

Swale-10
SB16784-02

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 10:35

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	137	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	139		µg/kg dry	137	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	163		µg/kg dry	137	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	156		µg/kg dry	137	1	"	"	"	"	"	"
218-01-9	Chrysene	185		µg/kg dry	137	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
206-44-0	Fluoranthene	307		µg/kg dry	137	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	137	1	"	"	"	"	"	"
129-00-0	Pyrene	231		µg/kg dry	137	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	96			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	83			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.43	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	6.29		mg/kg dry	1.43	1	"	"	"	"	"	"
7440-39-3	Barium	65.5		mg/kg dry	0.951	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.637		mg/kg dry	0.475	1	"	"	"	"	"	"
7440-47-3	Chromium	180		mg/kg dry	0.951	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0755		mg/kg dry	0.0302	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	38.2		mg/kg dry	1.43	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.43	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		93.0		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Swale-11
SB16784-03

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 10:20

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	139	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	162		µg/kg dry	139	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	166		µg/kg dry	139	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	224		µg/kg dry	139	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	142		µg/kg dry	139	1	"	"	"	"	"	"
218-01-9	Chrysene	202		µg/kg dry	139	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
206-44-0	Fluoranthene	373		µg/kg dry	139	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	139	1	"	"	"	"	"	"
85-01-8	Phenanthrene	180		µg/kg dry	139	1	"	"	"	"	"	"
129-00-0	Pyrene	281		µg/kg dry	139	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	93			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	80			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.53	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	7.04		mg/kg dry	1.53	1	"	"	"	"	"	"
7440-39-3	Barium	76.7		mg/kg dry	1.02	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.598		mg/kg dry	0.511	1	"	"	"	"	"	"
7440-47-3	Chromium	397		mg/kg dry	1.02	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0827		mg/kg dry	0.0301	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	49.4		mg/kg dry	1.53	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.53	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		94.1		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-5

SB16784-04

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 11:30

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	149	1	SW846 8270C/D	18-Aug-10	18-Aug-10	ML	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	99			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	87			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.57	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	1.76		mg/kg dry	1.57	1	"	"	"	"	"	"
7440-39-3	Barium	19.0		mg/kg dry	1.05	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.523	1	"	"	"	"	"	"
7440-47-3	Chromium	35.1		mg/kg dry	1.05	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0471		mg/kg dry	0.0310	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	6.29		mg/kg dry	1.57	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.57	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		84.5		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-6

SB16784-05

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 11:40

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	171	1	SW846 8270C/D	18-Aug-10	18-Aug-10	ML	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	171	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	98			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	87			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.85	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	4.57		mg/kg dry	1.85	1	"	"	"	"	"	"
7440-39-3	Barium	54.1		mg/kg dry	1.23	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.617	1	"	"	"	"	"	"
7440-47-3	Chromium	108		mg/kg dry	1.23	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0992		mg/kg dry	0.0379	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	13.5		mg/kg dry	1.85	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.85	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		75.5		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-7

SB16784-06

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 11:50

Received
17-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	168	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	591		µg/kg dry	168	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	786		µg/kg dry	168	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	1,140		µg/kg dry	168	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	475		µg/kg dry	168	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	680		µg/kg dry	168	1	"	"	"	"	"	"
218-01-9	Chrysene	926		µg/kg dry	168	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1,530		µg/kg dry	168	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	532		µg/kg dry	168	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	168	1	"	"	"	"	"	"
85-01-8	Phenanthrene	576		µg/kg dry	168	1	"	"	"	"	"	"
129-00-0	Pyrene	1,220		µg/kg dry	168	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	91			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	76			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.78	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	12.7		mg/kg dry	1.78	1	"	"	18-Aug-10	"	"	
7440-39-3	Barium	2,680		mg/kg dry	1.19	1	"	"	18-Aug-10	"	"	
7440-43-9	Cadmium	0.819		mg/kg dry	0.593	1	"	"	"	"	"	
7440-47-3	Chromium	5,470	GS1	mg/kg dry	23.7	20	"	"	18-Aug-10	"	"	
7439-97-6	Mercury	1.38		mg/kg dry	0.341	10	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	180		mg/kg dry	1.78	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.78	1	"	"	"	"	"	

General Chemistry Parameters

% Solids		78.0		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-8

SB16784-07

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 12:00

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	165	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	290		µg/kg dry	165	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	300		µg/kg dry	165	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	363		µg/kg dry	165	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	267		µg/kg dry	165	1	"	"	"	"	"	"
218-01-9	Chrysene	336		µg/kg dry	165	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
206-44-0	Fluoranthene	686		µg/kg dry	165	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	167		µg/kg dry	165	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
85-01-8	Phenanthrene	350		µg/kg dry	165	1	"	"	"	"	"	"
129-00-0	Pyrene	544		µg/kg dry	165	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	93			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	82			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.77	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	13.4		mg/kg dry	1.77	1	"	"	"	"	"	"
7440-39-3	Barium	317		mg/kg dry	1.18	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.591	1	"	"	"	"	"	"
7440-47-3	Chromium	2,180		mg/kg dry	1.18	1	"	"	"	"	"	"
7439-97-6	Mercury	1.33		mg/kg dry	0.372	10	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	89.6		mg/kg dry	1.77	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.77	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		78.8		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Down Stream-9

SB16784-08

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 12:10

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	147	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	147	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	147	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	89			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	83			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.53	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	5.77		mg/kg dry	1.53	1	"	"	"	"	"	"
7440-39-3	Barium	60.8		mg/kg dry	1.02	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.510	1	"	"	"	"	"	"
7440-47-3	Chromium	607		mg/kg dry	1.02	1	"	"	"	"	"	"
7439-97-6	Mercury	0.467		mg/kg dry	0.0315	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	29.0		mg/kg dry	1.53	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.53	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		86.3		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Dup-3

SB16784-09

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 00:01

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	135	1	SW846 8270C/D	18-Aug-10	18-Aug-10	MSL	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	229		µg/kg dry	135	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	229		µg/kg dry	135	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	293		µg/kg dry	135	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	195		µg/kg dry	135	1	"	"	"	"	"	"
218-01-9	Chrysene	264		µg/kg dry	135	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
206-44-0	Fluoranthene	600		µg/kg dry	135	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	135	1	"	"	"	"	"	"
85-01-8	Phenanthrene	337		µg/kg dry	135	1	"	"	"	"	"	"
129-00-0	Pyrene	454		µg/kg dry	135	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	92			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	81			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.40	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	5.61		mg/kg dry	1.40	1	"	"	"	"	"	"
7440-39-3	Barium	86.1		mg/kg dry	0.936	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.688		mg/kg dry	0.468	1	"	"	"	"	"	"
7440-47-3	Chromium	165		mg/kg dry	0.936	1	"	"	18-Aug-10	"	"	"
7439-97-6	Mercury	0.104		mg/kg dry	0.0306	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	41.4		mg/kg dry	1.40	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.40	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		94.2		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Dup-4

SB16784-10

Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
17-Aug-10 00:02Received
17-Aug-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	155	1	SW846 8270C/D	18-Aug-10	18-Aug-10	ML	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	155	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	155	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	102			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	88			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.72	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	2.09		mg/kg dry	1.72	1	"	"	"	"	"	"
7440-39-3	Barium	22.2		mg/kg dry	1.14	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.572	1	"	"	"	"	"	"
7440-47-3	Chromium	71.8		mg/kg dry	1.14	1	"	"	18-Aug-10	"	"	"
7439-97-6	Mercury	0.0419		mg/kg dry	0.0356	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	8.77		mg/kg dry	1.72	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.72	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	84.1			%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 13 of 22

Sample Identification

Dup-5

SB16784-11

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
17-Aug-10 00:03

Received
17-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	165	1	SW846 8270C/D	18-Aug-10	18-Aug-10	ML	1017574	
208-96-8	Acenaphthylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	165	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	103			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	92			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.74	1	SW846 6010B	17-Aug-10	18-Aug-10	TBG	1017565	
7440-38-2	Arsenic	5.29		mg/kg dry	1.74	1	"	"	"	"	"	"
7440-39-3	Barium	48.6		mg/kg dry	1.16	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.579	1	"	"	"	"	"	"
7440-47-3	Chromium	88.0		mg/kg dry	1.16	1	"	"	18-Aug-10	"	"	"
7439-97-6	Mercury	0.120		mg/kg dry	0.0350	1	SW846 7471A	"	19-Aug-10	ARF	1017566	
7439-92-1	Lead	13.0		mg/kg dry	1.74	1	SW846 6010B	"	18-Aug-10	TBG	1017565	
7782-49-2	Selenium	BRL		mg/kg dry	1.74	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		76.7		%		1	SM2540 G Mod.	17-Aug-10	17-Aug-10	BD	1017563	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017574 - SW846 3545A										
<u>Blank (1017574-BLK1)</u>					<u>Prepared & Analyzed: 18-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1310		µg/kg wet		1670		79	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1220		µg/kg wet		1670		73	30-130		
<u>LCS (1017574-BS1)</u>					<u>Prepared & Analyzed: 18-Aug-10</u>					
Acenaphthene	1220		µg/kg wet	33.2	1670		73	40-140		
Acenaphthylene	1230		µg/kg wet	33.2	1670		74	40-140		
Anthracene	1080		µg/kg wet	33.2	1670		65	40-140		
Benzo (a) anthracene	1110		µg/kg wet	33.2	1670		67	40-140		
Benzo (a) pyrene	1150		µg/kg wet	33.2	1670		69	40-140		
Benzo (b) fluoranthene	1110		µg/kg wet	33.2	1670		67	40-140		
Benzo (g,h,i) perylene	1110		µg/kg wet	33.2	1670		67	40-140		
Benzo (k) fluoranthene	1160		µg/kg wet	33.2	1670		70	40-140		
Chrysene	1150		µg/kg wet	33.2	1670		69	40-140		
Dibenzo (a,h) anthracene	1210		µg/kg wet	33.2	1670		72	40-140		
Fluoranthene	1100		µg/kg wet	33.2	1670		66	40-140		
Fluorene	1440		µg/kg wet	33.2	1670		86	40-140		
Indeno (1,2,3-cd) pyrene	1140		µg/kg wet	33.2	1670		69	40-140		
1-Methylnaphthalene	1150		µg/kg wet	33.2	1670		69	40-140		
2-Methylnaphthalene	1130		µg/kg wet	33.2	1670		68	40-140		
Naphthalene	1130		µg/kg wet	33.2	1670		68	40-140		
Phenanthrene	1110		µg/kg wet	33.2	1670		67	40-140		
Pyrene	1100		µg/kg wet	33.2	1670		66	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1280		µg/kg wet		1670		77	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1110		µg/kg wet		1670		66	30-130		
<u>Duplicate (1017574-DUP1)</u>					<u>Source: SB16784-08</u>		<u>Prepared & Analyzed: 18-Aug-10</u>			
Acenaphthene	BRL		µg/kg dry	152		BRL				50
Acenaphthylene	BRL		µg/kg dry	152		BRL				50
Anthracene	BRL		µg/kg dry	152		BRL				50
Benzo (a) anthracene	BRL		µg/kg dry	152		BRL				50
Benzo (a) pyrene	BRL		µg/kg dry	152		BRL				50
Benzo (b) fluoranthene	BRL		µg/kg dry	152		78.3				50
Benzo (g,h,i) perylene	BRL		µg/kg dry	152		BRL				50
Benzo (k) fluoranthene	BRL		µg/kg dry	152		BRL				50
Chrysene	BRL		µg/kg dry	152		BRL				50

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* Reportable Detection Limit BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017574 - SW846 3545A										
<u>Duplicate (1017574-DUP1)</u>			<u>Source: SB16784-08</u>			<u>Prepared & Analyzed: 18-Aug-10</u>				
Dibenzo (a,h) anthracene	BRL		µg/kg dry	152		BRL				50
Fluoranthene	142	J	µg/kg dry	152		114			22	50
Fluorene	BRL		µg/kg dry	152		BRL				50
Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	152		BRL				50
1-Methylnaphthalene	BRL		µg/kg dry	152		BRL				50
2-Methylnaphthalene	BRL		µg/kg dry	152		BRL				50
Naphthalene	BRL		µg/kg dry	152		BRL				50
Phenanthrene	BRL		µg/kg dry	152		BRL				50
Pyrene	111	J	µg/kg dry	152		88.7			22	50
<i>Surrogate: 2-Fluorobiphenyl</i>	3500		µg/kg dry		3800		92	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3270		µg/kg dry		3800		86	30-130		
<u>Matrix Spike (1017574-MS1)</u>			<u>Source: SB16784-08</u>			<u>Prepared & Analyzed: 18-Aug-10</u>				
Acenaphthene	3230		µg/kg dry	77.0	3860	BRL	84	40-140		
Acenaphthylene	3180		µg/kg dry	77.0	3860	BRL	82	40-140		
Anthracene	3030		µg/kg dry	77.0	3860	BRL	79	40-140		
Benzo (a) anthracene	2930		µg/kg dry	77.0	3860	BRL	76	40-140		
Benzo (a) pyrene	3110		µg/kg dry	77.0	3860	BRL	80	40-140		
Benzo (b) fluoranthene	3370		µg/kg dry	77.0	3860	78.3	85	40-140		
Benzo (g,h,i) perylene	2330		µg/kg dry	77.0	3860	BRL	60	40-140		
Benzo (k) fluoranthene	3040		µg/kg dry	77.0	3860	BRL	79	40-140		
Chrysene	3220		µg/kg dry	77.0	3860	BRL	83	30-130		
Dibenzo (a,h) anthracene	2760		µg/kg dry	77.0	3860	BRL	71	30-130		
Fluoranthene	3100		µg/kg dry	77.0	3860	114	77	40-140		
Fluorene	3760		µg/kg dry	77.0	3860	BRL	97	40-140		
Indeno (1,2,3-cd) pyrene	2570		µg/kg dry	77.0	3860	BRL	67	40-140		
1-Methylnaphthalene	2910		µg/kg dry	77.0	3860	BRL	75	40-140		
2-Methylnaphthalene	3150		µg/kg dry	77.0	3860	BRL	82	40-140		
Naphthalene	2950		µg/kg dry	77.0	3860	BRL	76	40-140		
Phenanthrene	3020		µg/kg dry	77.0	3860	BRL	78	40-140		
Pyrene	3130		µg/kg dry	77.0	3860	88.7	79	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	3240		µg/kg dry		3860		84	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3070		µg/kg dry		3860		79	30-130		
<u>Matrix Spike Dup (1017574-MSD1)</u>			<u>Source: SB16784-08</u>			<u>Prepared & Analyzed: 18-Aug-10</u>				
Acenaphthene	3120		µg/kg dry	72.3	3620	BRL	86	40-140	3	30
Acenaphthylene	3130		µg/kg dry	72.3	3620	BRL	86	40-140	5	30
Anthracene	2880		µg/kg dry	72.3	3620	BRL	79	40-140	1	30
Benzo (a) anthracene	2730		µg/kg dry	72.3	3620	BRL	75	40-140	0.6	30
Benzo (a) pyrene	2960		µg/kg dry	72.3	3620	BRL	82	40-140	2	30
Benzo (b) fluoranthene	3280		µg/kg dry	72.3	3620	78.3	88	40-140	3	30
Benzo (g,h,i) perylene	2120		µg/kg dry	72.3	3620	BRL	59	40-140	3	30
Benzo (k) fluoranthene	2750		µg/kg dry	72.3	3620	BRL	76	40-140	4	30
Chrysene	3050		µg/kg dry	72.3	3620	BRL	84	30-130	0.8	30
Dibenzo (a,h) anthracene	2510		µg/kg dry	72.3	3620	BRL	69	30-130	3	30
Fluoranthene	2990		µg/kg dry	72.3	3620	114	79	40-140	3	30
Fluorene	3620		µg/kg dry	72.3	3620	BRL	100	40-140	3	30
Indeno (1,2,3-cd) pyrene	2310		µg/kg dry	72.3	3620	BRL	64	40-140	4	30
1-Methylnaphthalene	2880		µg/kg dry	72.3	3620	BRL	80	40-140	5	30
2-Methylnaphthalene	3030		µg/kg dry	72.3	3620	BRL	84	40-140	2	30
Naphthalene	2830		µg/kg dry	72.3	3620	BRL	78	40-140	2	30
Phenanthrene	2870		µg/kg dry	72.3	3620	BRL	79	40-140	1	30
Pyrene	2930		µg/kg dry	72.3	3620	88.7	78	40-140	0.4	30

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017574 - SW846 3545A										
<u>Matrix Spike Dup (1017574-MSD1)</u>			<u>Source: SB16784-08</u>			<u>Prepared & Analyzed: 18-Aug-10</u>				
Surrogate: 2-Fluorobiphenyl	3290		µg/kg dry		3620		91	30-130		
Surrogate: Terphenyl-d14	2890		µg/kg dry		3620		80	30-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017565 - SW846 3050B										
<u>Blank (1017565-BLK1)</u>					<u>Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Lead	BRL		mg/kg wet	1.39						
Selenium	BRL		mg/kg wet	1.39						
Cadmium	BRL		mg/kg wet	0.462						
Chromium	BRL		mg/kg wet	0.924						
Silver	BRL		mg/kg wet	1.39						
Arsenic	BRL		mg/kg wet	1.39						
Barium	BRL		mg/kg wet	0.924						
<u>Duplicate (1017565-DUP1)</u>					<u>Source: SB16784-09 Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Selenium	0.874	J,QM8	mg/kg dry	1.42		0.674			26	20
Lead	48.2		mg/kg dry	1.42		41.4			15	20
Silver	0.817	J	mg/kg dry	1.42		0.795			3	20
Cadmium	0.803		mg/kg dry	0.475		0.688			15	20
Chromium	216	QR6	mg/kg dry	0.950		165			26	20
Arsenic	6.48		mg/kg dry	1.42		5.61			14	20
Barium	93.0		mg/kg dry	0.950		86.1			8	20
<u>Matrix Spike (1017565-MS1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Lead	158		mg/kg dry	1.52	127	29.0	102	75-125		
Selenium	122		mg/kg dry	1.52	127	0.419	96	75-125		
Silver	126		mg/kg dry	1.52	127	0.863	99	75-125		
Chromium	883	QM4X	mg/kg dry	1.02	127	607	217	75-125		
Arsenic	128		mg/kg dry	1.52	127	5.77	96	75-125		
Cadmium	126		mg/kg dry	0.508	127	0.362	99	75-125		
Barium	220	QM8	mg/kg dry	1.02	127	60.8	126	75-125		
<u>Matrix Spike Dup (1017565-MSD1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Lead	163		mg/kg dry	1.57	131	29.0	102	75-125	3	20
Selenium	125		mg/kg dry	1.57	131	0.419	95	75-125	3	20
Arsenic	132		mg/kg dry	1.57	131	5.77	96	75-125	3	20
Cadmium	129		mg/kg dry	0.525	131	0.362	98	75-125	3	20
Chromium	741		mg/kg dry	1.05	131	607	101	75-125	18	20
Silver	131		mg/kg dry	1.57	131	0.863	100	75-125	4	20
Barium	209		mg/kg dry	1.05	131	60.8	113	75-125	5	20
<u>Post Spike (1017565-PS1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Selenium	131		mg/kg dry	1.60	133	0.419	98	80-120		
Lead	169		mg/kg dry	1.60	133	29.0	105	80-120		
Silver	135		mg/kg dry	1.60	133	0.863	101	80-120		
Cadmium	135		mg/kg dry	0.532	133	0.362	101	80-120		
Chromium	802	QM4X	mg/kg dry	1.06	133	607	146	80-120		
Arsenic	138		mg/kg dry	1.60	133	5.77	99	80-120		
Barium	201		mg/kg dry	1.06	133	60.8	105	80-120		
<u>Reference (1017565-SRM1)</u>					<u>Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Lead	71.2		mg/kg wet	1.50	73.4		97	81.3-118.8		
Selenium	94.9		mg/kg wet	1.50	102		93	80-120		
Silver	22.0		mg/kg wet	1.50	23.0		96	66.3-133.7		
Chromium	53.0		mg/kg wet	1.00	53.5		99	80.3-119		
Arsenic	67.3		mg/kg wet	1.50	70.4		96	82.6-117.4		
Cadmium	33.9		mg/kg wet	0.500	36.2		94	82.9-116.9		
Barium	134		mg/kg wet	1.00	137		98	79.2-120.8		
<u>Reference (1017565-SRM2)</u>					<u>Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Lead	70.8		mg/kg wet	1.50	72.8		97	81.3-118.8		
Selenium	96.2		mg/kg wet	1.50	101		95	80-120		
Cadmium	34.2		mg/kg wet	0.500	35.9		95	82.9-116.9		

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* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017565 - SW846 3050B										
<u>Reference (1017565-SRM2)</u>					<u>Prepared: 17-Aug-10 Analyzed: 18-Aug-10</u>					
Arsenic	68.4		mg/kg wet	1.50	69.8		98	82.6-117.4		
Silver	23.0		mg/kg wet	1.50	22.8		101	66.3-133.7		
Chromium	53.6		mg/kg wet	1.00	53.1		101	80.3-119		
Barium	138		mg/kg wet	1.00	136		101	79.2-120.8		
Batch 1017566 - EPA 200 Series										
<u>Blank (1017566-BLK1)</u>					<u>Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0281						
<u>Duplicate (1017566-DUP1)</u>					<u>Source: SB16784-09 Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	0.112		mg/kg dry	0.0282		0.104			7	20
<u>Matrix Spike (1017566-MS1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	0.981		mg/kg dry	0.0319	0.444	0.467	116	75-125		
<u>Matrix Spike Dup (1017566-MSD1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	0.923		mg/kg dry	0.0307	0.427	0.467	107	75-125	6	20
<u>Post Spike (1017566-PS1)</u>					<u>Source: SB16784-08 Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	1.01		mg/kg dry	0.0335	0.465	0.467	117	80-120		
<u>Reference (1017566-SRM1)</u>					<u>Prepared: 17-Aug-10 Analyzed: 19-Aug-10</u>					
Mercury	6.31		mg/kg wet	0.600	6.41		98	71.5-128.1		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017563 - General Preparation										
<u>Duplicate (1017563-DUP1)</u>				<u>Source: SB16784-08</u>		<u>Prepared & Analyzed: 17-Aug-10</u>				
% Solids	86.7		%			86.3			0.5	20

Notes and Definitions

GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
QM4X	The spike recovery was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
QM8	The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
June O'Connor
Kimberly Wisk
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB16784-01 through SB16784-11			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
Affirmative responses to questions A through F are required for "Presumptive Certainty" status						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
Responses to questions G, H and I below are required for "Presumptive Certainty" status						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes	✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
All negative responses are addressed in a case narrative on the cover page of this report.						
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/20/2010						



CHAIN OF CUSTODY RECORD

Page 1 of 2

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: 24-HR
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

SB116784 @

Report To: Tetra Tech Rizzo
1 Grant St.
Framingham, MA

Telephone #: 508 703 2000

Project Mgr. Ron Myrick

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 07-55410-0001

Site Name: Organix

Location: Woburn State: MA

Sampler(s): MJT

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
 8= NaHSO₄ 9= _____ 10= _____ 11= _____

List preservative code below:

QA/QC Reporting Notes:
 (check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
 X1= _____ X2= _____ X3= _____

Containers:

Analyses:

- Provide MA DEP MCP CAM Report
- Provide CT DPH RCP Report
- QA/QC Reporting Level
- Standard No QC
- Other _____

State specific reporting standards:
RCS-1

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses
SB116784-01	SWALE-01	8/17/10	1120	C	SO		1			XXXX RCRAS nbn
02	-10		1035							XX XX
03	-11		1020							X X
04	DOWN STREAM-5		1130							X X
05	-6		1140							X X
06	-7		1150							X X
07	-8		1200							X X
08	-7		1210							X X
09	SUP-3		001							X X

Relinquished by: [Signature] Received by: [Signature]

Date: 8/17/10 Time: 14:00 Temp °C: 5.1

Date: 8/17/10 Time: 17:05 Temp °C: 4.4

- EDD Format TTR MS Excel
- E-mail to ron.myrick@tetratech.
- Ambient Ice Refrigerated Fridge temp _____ °C Freezer temp _____ °C



CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

- Standard TAT - 7 to 10 business days.
- Rush TAT - Date Needed: 04-11-10
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Tetra Tech Rizzo
1 Grant St
Frammingham, MA

Invoice To: Same

Project No.: 127-55410-10001

Telephone #: 508 903 2000
Project Mgr. Ron Myrick

P.O. No.: _____ RQN: _____

Site Name: Organix
Location: Woburn State: MA
Sampler(s): MJT

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9= _____ 10= _____ 11= _____

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

Containers:

Analyses:

- Provide MA DEP MCP CAM Report
- Provide CT DPH RCP Report

QA/QC Reporting Level
 Standard No QC

State specific reporting standards:
RCS-1

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses
<u>8/17/10-10</u>	<u>DUP-4</u>	<u>8/17/10</u>	<u>0002</u>	<u>C</u>	<u>∅</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>PCRA & metals</u>
<u>11</u>	<u>DUP-5</u>	<u>↓</u>	<u>0003</u>	<u>↓</u>	<u>↓</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>PAH 870</u>
<u>08</u>	<u>MS/MSD-DS-9</u>	<u>↓</u>	<u>010</u>	<u>↓</u>	<u>↓</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	

Relinquished by:

Received by:

Date:

Time:

Temp °C

SEDD Format TTR MS Excel

E-mail to Ron.myrick@tetra-tech.com

Ambient Ice Refrigerated Fridge temp _____ °C Freezer temp _____ °C

Report Date:
20-Aug-10 16:03



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB16930-01	Downstream-10	Soil	18-Aug-10 12:30	19-Aug-10 13:00
SB16930-02	Downstream-11	Soil	18-Aug-10 12:40	19-Aug-10 13:00
SB16930-03	Downstream-12	Soil	18-Aug-10 12:50	19-Aug-10 13:00
SB16930-04	Downstream-13	Soil	18-Aug-10 13:00	19-Aug-10 13:00
SB16930-05	Downstream-14	Soil	18-Aug-10 13:10	19-Aug-10 13:00
SB16930-06	Downstream-15	Soil	18-Aug-10 08:50	19-Aug-10 13:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received. All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.

Please note that this report contains 14 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.7 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 3.8 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1017755-DUP1 *Source: SB16930-01*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Lead

Samples:

SB16930-03 *Downstream-12*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Chromium

SW846 7471A

Samples:

SB16930-02 *Downstream-11*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SB16930-04 *Downstream-13*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SW846 8270C/D

Samples:

S007722-CCV1

Samples:

S007722-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Benzo (k) fluoranthene (-20.8%)

This affected the following samples:

1017740-BLK1

1017740-BS1

Sample Identification

Downstream-10

SB16930-01

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 12:30

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	190		µg/kg dry	149	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
120-12-7	Anthracene	359		µg/kg dry	149	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	1,110		µg/kg dry	149	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	1,020		µg/kg dry	149	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	1,040		µg/kg dry	149	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	464		µg/kg dry	149	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	923		µg/kg dry	149	1	"	"	"	"	"	"
218-01-9	Chrysene	1,070		µg/kg dry	149	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
206-44-0	Fluoranthene	2,360		µg/kg dry	149	1	"	"	"	"	"	"
86-73-7	Fluorene	217		µg/kg dry	149	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	517		µg/kg dry	149	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
85-01-8	Phenanthrene	1,910		µg/kg dry	149	1	"	"	"	"	"	"
129-00-0	Pyrene	1,990		µg/kg dry	149	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	89			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	78			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.71	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	9.01		mg/kg dry	1.71	1	"	"	"	"	"	"
7440-39-3	Barium	390		mg/kg dry	1.14	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.975		mg/kg dry	0.570	1	"	"	"	"	"	"
7440-47-3	Chromium	1,810		mg/kg dry	1.14	1	"	"	"	"	"	"
7439-97-6	Mercury	0.416		mg/kg dry	0.0343	1	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	93.7		mg/kg dry	1.71	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.71	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		87.5		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downstream-11

SB16930-02

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 12:40

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	171	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	401		µg/kg dry	171	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	451		µg/kg dry	171	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	554		µg/kg dry	171	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	230		µg/kg dry	171	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	372		µg/kg dry	171	1	"	"	"	"	"	"
218-01-9	Chrysene	484		µg/kg dry	171	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
206-44-0	Fluoranthene	883		µg/kg dry	171	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	262		µg/kg dry	171	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	171	1	"	"	"	"	"	"
85-01-8	Phenanthrene	415		µg/kg dry	171	1	"	"	"	"	"	"
129-00-0	Pyrene	694		µg/kg dry	171	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	98			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	84			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.66	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	9.64		mg/kg dry	1.66	1	"	"	"	"	"	"
7440-39-3	Barium	284		mg/kg dry	1.10	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.895		mg/kg dry	0.552	1	"	"	"	"	"	"
7440-47-3	Chromium	1,800		mg/kg dry	1.10	1	"	"	"	"	"	"
7439-97-6	Mercury	1.33		mg/kg dry	0.346	10	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	84.1		mg/kg dry	1.66	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.66	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		77.2		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downstream-12

SB16930-03

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 12:50

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	162	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	491		µg/kg dry	162	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	541		µg/kg dry	162	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	730		µg/kg dry	162	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	262		µg/kg dry	162	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	455		µg/kg dry	162	1	"	"	"	"	"	"
218-01-9	Chrysene	592		µg/kg dry	162	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
206-44-0	Fluoranthene	1,120		µg/kg dry	162	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	294		µg/kg dry	162	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	162	1	"	"	"	"	"	"
85-01-8	Phenanthrene	579		µg/kg dry	162	1	"	"	"	"	"	"
129-00-0	Pyrene	904		µg/kg dry	162	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	98			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	84			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.62	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	11.7		mg/kg dry	1.62	1	"	"	"	"	"	"
7440-39-3	Barium	2,440		mg/kg dry	1.08	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.665		mg/kg dry	0.541	1	"	"	"	"	"	"
7440-47-3	Chromium	5,050	GS1	mg/kg dry	10.8	10	"	"	20-Aug-10	"	"	"
7439-97-6	Mercury	0.844		mg/kg dry	0.0335	1	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	152		mg/kg dry	1.62	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.62	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		80.1		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downstream-13

SB16930-04

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 13:00

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	180	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	236		µg/kg dry	180	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	254		µg/kg dry	180	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	320		µg/kg dry	180	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	230		µg/kg dry	180	1	"	"	"	"	"	"
218-01-9	Chrysene	259		µg/kg dry	180	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
206-44-0	Fluoranthene	473		µg/kg dry	180	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	180	1	"	"	"	"	"	"
85-01-8	Phenanthrene	211		µg/kg dry	180	1	"	"	"	"	"	"
129-00-0	Pyrene	398		µg/kg dry	180	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	97			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	84			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.83	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	11.7		mg/kg dry	1.83	1	"	"	"	"	"	"
7440-39-3	Barium	174		mg/kg dry	1.22	1	"	"	"	"	"	"
7440-43-9	Cadmium	0.672		mg/kg dry	0.611	1	"	"	"	"	"	"
7440-47-3	Chromium	1,770		mg/kg dry	1.22	1	"	"	"	"	"	"
7439-97-6	Mercury	3.82		mg/kg dry	0.413	10	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	123		mg/kg dry	1.83	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.83	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		71.0		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downstream-14

SB16930-05

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 13:10

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	161	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	161	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	98			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	91			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.73	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	6.33		mg/kg dry	1.73	1	"	"	"	"	"	"
7440-39-3	Barium	79.5		mg/kg dry	1.15	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.577	1	"	"	"	"	"	"
7440-47-3	Chromium	393		mg/kg dry	1.15	1	"	"	"	"	"	"
7439-97-6	Mercury	0.185		mg/kg dry	0.0335	1	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	18.4		mg/kg dry	1.73	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.73	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		79.7		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

Downstream-15

SB16930-06

Client Project #
127-55410-10001

Matrix
Soil

Collection Date/Time
18-Aug-10 08:50

Received
19-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	149	1	SW846 8270C/D	19-Aug-10	20-Aug-10	MSL	1017740	
208-96-8	Acenaphthylene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
206-44-0	Fluoranthene	175		µg/kg dry	149	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	149	1	"	"	"	"	"	"
129-00-0	Pyrene	157		µg/kg dry	149	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	99			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	93			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.48	1	SW846 6010B	19-Aug-10	20-Aug-10	LR	1017755	
7440-38-2	Arsenic	3.87		mg/kg dry	1.48	1	"	"	"	"	"	"
7440-39-3	Barium	34.8		mg/kg dry	0.984	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.492	1	"	"	"	"	"	"
7440-47-3	Chromium	75.3		mg/kg dry	0.984	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0517		mg/kg dry	0.0323	1	SW846 7471A	"	20-Aug-10	ARF	1017757	
7439-92-1	Lead	9.89		mg/kg dry	1.48	1	SW846 6010B	"	20-Aug-10	LR	1017755	
7782-49-2	Selenium	BRL		mg/kg dry	1.48	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		87.5		%		1	SM2540 G Mod.	19-Aug-10	19-Aug-10	BD	1017762	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017740 - SW846 3545A										
<u>Blank (1017740-BLK1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1550		µg/kg wet		1670		93	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1560		µg/kg wet		1670		93	30-130		
<u>LCS (1017740-BS1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Acenaphthene	1520		µg/kg wet	33.2	1670		91	40-140		
Acenaphthylene	1540		µg/kg wet	33.2	1670		93	40-140		
Anthracene	1430		µg/kg wet	33.2	1670		86	40-140		
Benzo (a) anthracene	1410		µg/kg wet	33.2	1670		84	40-140		
Benzo (a) pyrene	1480		µg/kg wet	33.2	1670		89	40-140		
Benzo (b) fluoranthene	1420		µg/kg wet	33.2	1670		85	40-140		
Benzo (g,h,i) perylene	1460		µg/kg wet	33.2	1670		88	40-140		
Benzo (k) fluoranthene	1580		µg/kg wet	33.2	1670		95	40-140		
Chrysene	1620		µg/kg wet	33.2	1670		97	40-140		
Dibenzo (a,h) anthracene	1530		µg/kg wet	33.2	1670		92	40-140		
Fluoranthene	1420		µg/kg wet	33.2	1670		85	40-140		
Fluorene	1820		µg/kg wet	33.2	1670		109	40-140		
Indeno (1,2,3-cd) pyrene	1480		µg/kg wet	33.2	1670		89	40-140		
1-Methylnaphthalene	1480		µg/kg wet	33.2	1670		89	40-140		
2-Methylnaphthalene	1320		µg/kg wet	33.2	1670		79	40-140		
Naphthalene	1460		µg/kg wet	33.2	1670		87	40-140		
Phenanthrene	1390		µg/kg wet	33.2	1670		83	40-140		
Pyrene	1480		µg/kg wet	33.2	1670		89	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1690		µg/kg wet		1670		101	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1560		µg/kg wet		1670		93	30-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017755 - SW846 3050B										
<u>Blank (1017755-BLK1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Selenium	BRL		mg/kg wet	1.48						
Lead	BRL		mg/kg wet	1.48						
Silver	BRL		mg/kg wet	1.48						
Arsenic	BRL		mg/kg wet	1.48						
Cadmium	BRL		mg/kg wet	0.492						
Chromium	BRL		mg/kg wet	0.984						
Barium	BRL		mg/kg wet	0.984						
<u>Duplicate (1017755-DUP1)</u>					<u>Source: SB16930-01 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Selenium	0.546	J	mg/kg dry	1.62		0.605			10	20
Lead	137	QR6	mg/kg dry	1.62		93.7			38	20
Silver	0.709	J	mg/kg dry	1.62		0.736			4	20
Cadmium	1.08		mg/kg dry	0.541		0.975			10	20
Chromium	1870		mg/kg dry	1.08		1810			3	20
Arsenic	9.47		mg/kg dry	1.62		9.01			5	20
Barium	430		mg/kg dry	1.08		390			10	20
<u>Matrix Spike (1017755-MS1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Lead	129		mg/kg dry	1.51	126	9.89	95	75-125		
Selenium	123		mg/kg dry	1.51	126	0.492	97	75-125		
Cadmium	119		mg/kg dry	0.503	126	0.290	94	75-125		
Chromium	193		mg/kg dry	1.01	126	75.3	94	75-125		
Arsenic	126		mg/kg dry	1.51	126	3.87	97	75-125		
Silver	127		mg/kg dry	1.51	126	BRL	101	75-125		
Barium	179		mg/kg dry	1.01	126	34.8	114	75-125		
<u>Matrix Spike Dup (1017755-MSD1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Lead	143		mg/kg dry	1.68	140	9.89	95	75-125	11	20
Selenium	138		mg/kg dry	1.68	140	0.492	98	75-125	11	20
Arsenic	141		mg/kg dry	1.68	140	3.87	98	75-125	11	20
Cadmium	133		mg/kg dry	0.560	140	0.290	95	75-125	11	20
Chromium	214		mg/kg dry	1.12	140	75.3	99	75-125	10	20
Silver	143		mg/kg dry	1.68	140	BRL	102	75-125	12	20
Barium	199		mg/kg dry	1.12	140	34.8	117	75-125	10	20
<u>Post Spike (1017755-PS1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Lead	136		mg/kg dry	1.52	126	9.89	100	80-120		
Selenium	128		mg/kg dry	1.52	126	0.492	101	80-120		
Cadmium	124		mg/kg dry	0.505	126	0.290	98	80-120		
Arsenic	131		mg/kg dry	1.52	126	3.87	101	80-120		
Silver	127		mg/kg dry	1.52	126	BRL	101	80-120		
Chromium	218		mg/kg dry	1.01	126	75.3	113	80-120		
Barium	166		mg/kg dry	1.01	126	34.8	104	80-120		
<u>Reference (1017755-SRM1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Lead	70.2		mg/kg wet	1.50	72.5		97	81.3-118.8		
Selenium	105		mg/kg wet	1.50	101		104	80-120		
Silver	23.5		mg/kg wet	1.50	22.7		104	66.3-133.7		
Arsenic	71.4		mg/kg wet	1.50	69.5		103	82.6-117.4		
Cadmium	34.9		mg/kg wet	0.500	35.7		98	82.9-116.9		
Chromium	54.7		mg/kg wet	1.00	52.9		103	80.3-119		
Barium	136		mg/kg wet	1.00	135		101	79.2-120.8		
<u>Reference (1017755-SRM2)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Selenium	104		mg/kg wet	1.50	103		101	80-120		
Lead	70.2		mg/kg wet	1.50	74.2		95	81.3-118.8		
Silver	23.4		mg/kg wet	1.50	23.2		100	66.3-133.7		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017755 - SW846 3050B										
<u>Reference (1017755-SRM2)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Chromium	54.8		mg/kg wet	1.00	54.1		101	80.3-119		
Cadmium	34.4		mg/kg wet	0.500	36.6		94	82.9-116.9		
Arsenic	70.6		mg/kg wet	1.50	71.1		99	82.6-117.4		
Barium	137		mg/kg wet	1.00	139		99	79.2-120.8		
Batch 1017757 - EPA200/SW7000 Series										
<u>Blank (1017757-BLK1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	BRL		mg/kg wet	0.0276						
<u>Duplicate (1017757-DUP1)</u>					<u>Source: SB16930-01 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	0.387		mg/kg dry	0.0311		0.416			7	20
<u>Matrix Spike (1017757-MS1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	0.518		mg/kg dry	0.0308	0.428	0.0517	109	75-125		
<u>Matrix Spike Dup (1017757-MSD1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	0.533		mg/kg dry	0.0317	0.440	0.0517	109	75-125	3	20
<u>Post Spike (1017757-PS1)</u>					<u>Source: SB16930-06 Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	0.551		mg/kg dry	0.0318	0.442	0.0517	113	80-120		
<u>Reference (1017757-SRM1)</u>					<u>Prepared: 19-Aug-10 Analyzed: 20-Aug-10</u>					
Mercury	6.58		mg/kg wet	0.600	6.37		103	71.5-128.1		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Notes and Definitions

GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Kimberly Wisk
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB16930-01 through SB16930-06			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes	✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/20/2010						



CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

Standard TAT - 7 to 10 business days

Rush TAT - Date Needed 04/11/10

All TATs subject to laboratory approval.

Min. 24-hour notification needed for rushes.

Samples disposed of after 60 days unless otherwise instructed.

Report To: Terra Teen Rizzo

Invoice To: Same

Project No.: 101-55410-10001

1 Grant St
Farmington, Mt 01701

Site Name: Organix

Telephone #: 508 903 2000

P.O. No.: _____ RQN: 48397

Location: Edburg State: MT

Project Mgr: Don Myrick

Sampler(s): MT, Edburg

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH

List preservative code below:

QA/QC Reporting Notes:
(check as needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Containers:

Analyses:

Provide MA DEP MCP CAM Report
 Provide CT DPH RCP Report
QA/QC Reporting Level
 Standard No QC
 Other _____

State specific reporting standards:
RCS-1

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers:				Analyses:
						# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	
<u>SB10930-01</u>	<u>Stream-10</u>	<u>7/19/10</u>	<u>1230</u>	<u>C</u>	<u>SO</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>X RLRA & metals</u>
<u>02</u>	<u>-11</u>		<u>1240</u>			<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>X PAH 8270</u>
<u>03</u>	<u>-12</u>		<u>1250</u>			<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
<u>04</u>	<u>-13</u>		<u>1300</u>			<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
<u>05</u>	<u>-14</u>		<u>1310</u>			<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
<u>06</u>	<u>Stream-15</u>	<u>8/19/10</u>	<u>0850</u>	<u>C</u>	<u>SO</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	

Relinquished by: _____

Received by: _____

Date: _____

Time: _____

Temp °C: _____

DEED Form TRR MS Excel
E-mail to cmpr@cedetatech.com

Ambient Iced Refrigerated Fridge temp _____ °C Freezer temp _____ °C

SB10930

Report Date:
24-Aug-10 16:18



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB17077-01	Downstream-7	Soil	20-Aug-10 10:29	23-Aug-10 16:10

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 2.1 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 1.2 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8270C/D

Calibration:

S006741-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Naphthalene (69%)

This affected the following samples:

Downstream-7

S007822-CCV1

Sample Identification

Downstream-7

SB17077-01

Client Project #
127-55410

Matrix
Soil

Collection Date/Time
20-Aug-10 10:29

Received
23-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	158	1	SW846 8270C/D	23-Aug-10	24-Aug-10	ML	1017883	
208-96-8	Acenaphthylene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	158	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	158	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	73			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	69			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.80	1	SW846 6010B	23-Aug-10	24-Aug-10	LR	1017988	
7440-38-2	Arsenic	5.42		mg/kg dry	1.80	1	"	"	"	"	"	"
7440-39-3	Barium	37.7		mg/kg dry	1.20	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.599	1	"	"	"	"	"	"
7440-47-3	Chromium	259		mg/kg dry	1.20	1	"	"	"	"	"	"
7439-97-6	Mercury	0.432		mg/kg dry	0.0366	1	SW846 7471B	"	24-Aug-10	HB	1017989	
7439-92-1	Lead	15.8		mg/kg dry	1.80	1	SW846 6010B	"	24-Aug-10	LR	1017988	
7782-49-2	Selenium	BRL		mg/kg dry	1.80	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		80.4		%		1	SM2540 G Mod.	23-Aug-10	23-Aug-10	BD	1017992	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit
Batch 1017988 - SW846 3050B										
<u>Blank (1017988-BLK1)</u>				<u>Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Lead	BRL		mg/kg wet	1.38						
Selenium	BRL		mg/kg wet	1.38						
Arsenic	BRL		mg/kg wet	1.38						
Cadmium	BRL		mg/kg wet	0.461						
Chromium	BRL		mg/kg wet	0.923						
Silver	BRL		mg/kg wet	1.38						
Barium	BRL		mg/kg wet	0.923						
<u>Matrix Spike (1017988-MS1)</u>				<u>Source: SB17077-01 Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Lead	140		mg/kg dry	1.60	133	15.8	93	75-125		
Selenium	131		mg/kg dry	1.60	133	0.468	98	75-125		
Cadmium	124		mg/kg dry	0.534	133	0.408	93	75-125		
Arsenic	135		mg/kg dry	1.60	133	5.42	97	75-125		
Silver	136		mg/kg dry	1.60	133	0.360	102	75-125		
Chromium	371		mg/kg dry	1.07	133	259	84	75-125		
Barium	194		mg/kg dry	1.07	133	37.7	117	75-125		
<u>Matrix Spike Dup (1017988-MSD1)</u>				<u>Source: SB17077-01 Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Lead	161		mg/kg dry	1.80	150	15.8	96	75-125	14	20
Selenium	150		mg/kg dry	1.80	150	0.468	99	75-125	13	20
Silver	157		mg/kg dry	1.80	150	0.360	104	75-125	14	20
Arsenic	154		mg/kg dry	1.80	150	5.42	99	75-125	13	20
Cadmium	144		mg/kg dry	0.601	150	0.408	96	75-125	15	20
Chromium	421		mg/kg dry	1.20	150	259	108	75-125	13	20
Barium	214		mg/kg dry	1.20	150	37.7	117	75-125	10	20
<u>Post Spike (1017988-PS1)</u>				<u>Source: SB17077-01 Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Selenium	151		mg/kg dry	1.75	146	0.468	103	80-120		
Lead	163		mg/kg dry	1.75	146	15.8	101	80-120		
Arsenic	155		mg/kg dry	1.75	146	5.42	103	80-120		
Cadmium	145		mg/kg dry	0.585	146	0.408	99	80-120		
Silver	150		mg/kg dry	1.75	146	0.360	102	80-120		
Barium	193		mg/kg dry	1.17	146	37.7	106	80-120		
<u>Reference (1017988-SRM1)</u>				<u>Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Selenium	106		mg/kg wet	1.50	103		103	80-120		
Lead	71.8		mg/kg wet	1.50	74.1		97	81.3-118.8		
Silver	24.0		mg/kg wet	1.50	23.2		103	66.3-133.7		
Arsenic	72.5		mg/kg wet	1.50	71.0		102	82.6-117.4		
Cadmium	34.9		mg/kg wet	0.500	36.6		95	82.9-116.9		
Chromium	54.9		mg/kg wet	1.00	54.1		102	80.3-119		
Barium	137		mg/kg wet	1.00	138		99	79.2-120.8		
<u>Reference (1017988-SRM2)</u>				<u>Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Selenium	103		mg/kg wet	1.50	102		101	80-120		
Lead	82.9		mg/kg wet	1.50	73.6		113	81.3-118.8		
Chromium	53.6		mg/kg wet	1.00	53.7		100	80.3-119		
Cadmium	33.7		mg/kg wet	0.500	36.3		93	82.9-116.9		
Silver	23.8		mg/kg wet	1.50	23.0		103	66.3-133.7		
Arsenic	70.0		mg/kg wet	1.50	70.5		99	82.6-117.4		
Barium	133		mg/kg wet	1.00	137		97	79.2-120.8		
Batch 1017989 - EPA200/SW7000 Series										
<u>Blank (1017989-BLK1)</u>				<u>Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Mercury	BRL		mg/kg wet	0.0265						
<u>Matrix Spike (1017989-MS1)</u>				<u>Source: SB17077-01 Prepared: 23-Aug-10 Analyzed: 24-Aug-10</u>						
Mercury	0.972		mg/kg dry	0.0361	0.501	0.432	108	75-125		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1017989 - EPA200/SW7000 Series										
<u>Matrix Spike Dup (1017989-MSD1)</u>										
Mercury	0.919		mg/kg dry	0.0322	0.447	0.432	109	75-125	6	20
<u>Reference (1017989-SRM1)</u>										
Mercury	6.39		mg/kg wet	0.600	6.51		98	71.5-128.1		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Leja

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB17077-01			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
Affirmative responses to questions A through F are required for "Presumptive Certainty" status						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
Responses to questions G, H and I below are required for "Presumptive Certainty" status						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				✓ Yes	No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
All negative responses are addressed in a case narrative on the cover page of this report.						
<p><i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i></p> <div style="text-align: right; margin-top: 20px;">  Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/24/2010 </div>						

Report Date:
01-Sep-10 17:20



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55412-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB17478-01	Down Stream-12	Soil	30-Aug-10 12:28	31-Aug-10 14:35

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

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Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.0 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at .7 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 6010B

Duplicates:

1018623-DUP1 *Source: SB17478-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Selenium

SW846 8270C/D

Samples:

S008105-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Chrysene (25.6%)

This affected the following samples:

- 1018556-BLK1
- 1018556-BS1
- 1018556-MS2
- 1018556-MSD2
- Down Stream-12

Sample Identification

Down Stream-12

SB17478-01

Client Project #
127-55412-10001

Matrix
Soil

Collection Date/Time
30-Aug-10 12:28

Received
31-Aug-10

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	181	1	SW846 8270C/D	31-Aug-10	01-Sep-10	DS	1018556	
208-96-8	Acenaphthylene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	181	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	181	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	70			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	67			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.94	1	SW846 6010B	31-Aug-10	01-Sep-10	JB/TB	1018623	
7440-38-2	Arsenic	7.15		mg/kg dry	1.94	1	"	"	"	"	"	"
7440-39-3	Barium	91.8		mg/kg dry	1.30	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.648	1	"	"	"	"	"	"
7440-47-3	Chromium	358		mg/kg dry	1.30	1	"	"	"	"	"	"
7439-97-6	Mercury	0.589		mg/kg dry	0.198	5	SW846 7471B	"	01-Sep-10	ARF	1018624	
7439-92-1	Lead	39.1		mg/kg dry	1.94	1	SW846 6010B	"	01-Sep-10	JB/TB	1018623	
7782-49-2	Selenium	BRL		mg/kg dry	1.94	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids		72.8		%		1	SM2540 G Mod.	31-Aug-10	31-Aug-10	BD	1018590	
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018556 - SW846 3545A										
<u>Blank (1018556-BLK1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	468		µg/kg wet		833		56	30-130		
<i>Surrogate: Terphenyl-dl4</i>	488		µg/kg wet		833		59	30-130		
<u>LCS (1018556-BS1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Acenaphthene	1330		µg/kg wet	33.2	1670		80	40-140		
Acenaphthylene	1340		µg/kg wet	33.2	1670		81	40-140		
Anthracene	1300		µg/kg wet	33.2	1670		78	40-140		
Benzo (a) anthracene	1270		µg/kg wet	33.2	1670		76	40-140		
Benzo (a) pyrene	1280		µg/kg wet	33.2	1670		77	40-140		
Benzo (b) fluoranthene	1200		µg/kg wet	33.2	1670		72	40-140		
Benzo (g,h,i) perylene	1010		µg/kg wet	33.2	1670		61	40-140		
Benzo (k) fluoranthene	1510		µg/kg wet	33.2	1670		91	40-140		
Chrysene	1680		µg/kg wet	33.2	1670		101	40-140		
Dibenzo (a,h) anthracene	1140		µg/kg wet	33.2	1670		68	40-140		
Fluoranthene	1290		µg/kg wet	33.2	1670		77	40-140		
Fluorene	1680		µg/kg wet	33.2	1670		101	40-140		
Indeno (1,2,3-cd) pyrene	1070		µg/kg wet	33.2	1670		64	40-140		
1-Methylnaphthalene	1250		µg/kg wet	33.2	1670		75	40-140		
2-Methylnaphthalene	1360		µg/kg wet	33.2	1670		82	40-140		
Naphthalene	1380		µg/kg wet	33.2	1670		83	40-140		
Phenanthrene	1570		µg/kg wet	33.2	1670		94	40-140		
Pyrene	1410		µg/kg wet	33.2	1670		85	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1610		µg/kg wet		1670		97	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1490		µg/kg wet		1670		89	30-130		
<u>Matrix Spike (1018556-MS2)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Acenaphthene	3320		µg/kg dry	90.0	4510	BRL	74	40-140		
Acenaphthylene	3390		µg/kg dry	90.0	4510	BRL	75	40-140		
Anthracene	3040		µg/kg dry	90.0	4510	BRL	67	40-140		
Benzo (a) anthracene	3040		µg/kg dry	90.0	4510	BRL	67	40-140		
Benzo (a) pyrene	3190		µg/kg dry	90.0	4510	BRL	71	40-140		
Benzo (b) fluoranthene	3020		µg/kg dry	90.0	4510	BRL	67	40-140		
Benzo (g,h,i) perylene	2730		µg/kg dry	90.0	4510	BRL	61	40-140		
Benzo (k) fluoranthene	3370		µg/kg dry	90.0	4510	BRL	75	40-140		
Chrysene	3960		µg/kg dry	90.0	4510	BRL	88	30-130		

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* Reportable Detection Limit BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018556 - SW846 3545A										
Matrix Spike (1018556-MS2)			Source: SB17478-01		Prepared: 31-Aug-10		Analyzed: 01-Sep-10			
Dibenzo (a,h) anthracene	3050		µg/kg dry	90.0	4510	BRL	68	30-130		
Fluoranthene	3320		µg/kg dry	90.0	4510	BRL	74	40-140		
Fluorene	4130		µg/kg dry	90.0	4510	BRL	91	40-140		
Indeno (1,2,3-cd) pyrene	2810		µg/kg dry	90.0	4510	BRL	62	40-140		
1-Methylnaphthalene	3130		µg/kg dry	90.0	4510	BRL	69	40-140		
2-Methylnaphthalene	3260		µg/kg dry	90.0	4510	BRL	72	40-140		
Naphthalene	3240		µg/kg dry	90.0	4510	BRL	72	40-140		
Phenanthrene	3810		µg/kg dry	90.0	4510	BRL	84	40-140		
Pyrene	3320		µg/kg dry	90.0	4510	BRL	74	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	3780		µg/kg dry		4510		84	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3230		µg/kg dry		4510		72	30-130		
Matrix Spike Dup (1018556-MSD2)			Source: SB17478-01		Prepared: 31-Aug-10		Analyzed: 01-Sep-10			
Acenaphthene	3520		µg/kg dry	89.5	4490	BRL	78	40-140	6	30
Acenaphthylene	3570		µg/kg dry	89.5	4490	BRL	79	40-140	6	30
Anthracene	3330		µg/kg dry	89.5	4490	BRL	74	40-140	9	30
Benzo (a) anthracene	2960		µg/kg dry	89.5	4490	BRL	66	40-140	2	30
Benzo (a) pyrene	2790		µg/kg dry	89.5	4490	BRL	62	40-140	13	30
Benzo (b) fluoranthene	3380		µg/kg dry	89.5	4490	BRL	75	40-140	12	30
Benzo (g,h,i) perylene	2000		µg/kg dry	89.5	4490	BRL	45	40-140	30	30
Benzo (k) fluoranthene	2990		µg/kg dry	89.5	4490	BRL	67	40-140	11	30
Chrysene	3870		µg/kg dry	89.5	4490	BRL	86	30-130	2	30
Dibenzo (a,h) anthracene	2490		µg/kg dry	89.5	4490	BRL	56	30-130	20	30
Fluoranthene	3430		µg/kg dry	89.5	4490	BRL	76	40-140	4	30
Fluorene	4270		µg/kg dry	89.5	4490	BRL	95	40-140	4	30
Indeno (1,2,3-cd) pyrene	2160		µg/kg dry	89.5	4490	BRL	48	40-140	26	30
1-Methylnaphthalene	3370		µg/kg dry	89.5	4490	BRL	75	40-140	8	30
2-Methylnaphthalene	3570		µg/kg dry	89.5	4490	BRL	79	40-140	9	30
Naphthalene	3590		µg/kg dry	89.5	4490	BRL	80	40-140	11	30
Phenanthrene	4160		µg/kg dry	89.5	4490	BRL	93	40-140	9	30
Pyrene	3300		µg/kg dry	89.5	4490	BRL	74	40-140	0.1	30
<i>Surrogate: 2-Fluorobiphenyl</i>	4070		µg/kg dry		4490		91	30-130		
<i>Surrogate: Terphenyl-dl4</i>	3500		µg/kg dry		4490		78	30-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018623 - SW846 3050B										
<u>Blank (1018623-BLK1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Selenium	BRL		mg/kg wet	1.31						
Lead	BRL		mg/kg wet	1.31						
Arsenic	BRL		mg/kg wet	1.31						
Cadmium	BRL		mg/kg wet	0.438						
Chromium	BRL		mg/kg wet	0.876						
Silver	BRL		mg/kg wet	1.31						
Barium	BRL		mg/kg wet	0.876						
<u>Duplicate (1018623-DUP1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Selenium	0.794	J,QR8	mg/kg dry	1.87		0.979			21	20
Lead	37.8		mg/kg dry	1.87		39.1			3	20
Chromium	365		mg/kg dry	1.25		358			2	20
Cadmium	0.519	J	mg/kg dry	0.625		0.499			4	20
Silver	0.700	J	mg/kg dry	1.87		0.778			11	20
Arsenic	7.08		mg/kg dry	1.87		7.15			1	20
Barium	87.3		mg/kg dry	1.25		91.8			5	20
<u>Matrix Spike (1018623-MS1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Lead	161		mg/kg dry	1.78	148	39.1	82	75-125		
Selenium	132		mg/kg dry	1.78	148	0.979	88	75-125		
Cadmium	129		mg/kg dry	0.594	148	0.499	87	75-125		
Silver	134		mg/kg dry	1.78	148	0.778	90	75-125		
Chromium	472		mg/kg dry	1.19	148	358	77	75-125		
Arsenic	136		mg/kg dry	1.78	148	7.15	87	75-125		
Barium	228		mg/kg dry	1.19	148	91.8	92	75-125		
<u>Matrix Spike Dup (1018623-MSD1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Lead	160		mg/kg dry	1.77	147	39.1	82	75-125	0.5	20
Selenium	130		mg/kg dry	1.77	147	0.979	87	75-125	2	20
Cadmium	127		mg/kg dry	0.590	147	0.499	86	75-125	1	20
Silver	132		mg/kg dry	1.77	147	0.778	89	75-125	1	20
Arsenic	136		mg/kg dry	1.77	147	7.15	87	75-125	0.7	20
Chromium	517		mg/kg dry	1.18	147	358	108	75-125	9	20
Barium	236		mg/kg dry	1.18	147	91.8	98	75-125	3	20
<u>Post Spike (1018623-PS1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Selenium	144		mg/kg dry	1.85	154	0.979	93	80-120		
Lead	173		mg/kg dry	1.85	154	39.1	87	80-120		
Arsenic	148		mg/kg dry	1.85	154	7.15	92	80-120		
Chromium	514		mg/kg dry	1.23	154	358	101	80-120		
Cadmium	141		mg/kg dry	0.617	154	0.499	91	80-120		
Silver	145		mg/kg dry	1.85	154	0.778	93	80-120		
Barium	237		mg/kg dry	1.23	154	91.8	94	80-120		
<u>Reference (1018623-SRM1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Lead	60.6		mg/kg wet	1.50	74.2		82	81.3-118.8		
Selenium	90.6		mg/kg wet	1.50	103		88	80-120		
Cadmium	31.3		mg/kg wet	0.500	36.6		86	82.9-116.9		
Chromium	49.9		mg/kg wet	1.00	54.1		92	80.3-119		
Silver	20.5		mg/kg wet	1.50	23.2		88	66.3-133.7		
Arsenic	60.9		mg/kg wet	1.50	71.1		86	82.6-117.4		
Barium	116		mg/kg wet	1.00	139		84	79.2-120.8		
<u>Reference (1018623-SRM2)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Lead	64.0		mg/kg wet	1.50	74.5		86	81.3-118.8		
Selenium	96.8		mg/kg wet	1.50	104		93	80-120		
Cadmium	34.1		mg/kg wet	0.500	36.8		93	82.9-116.9		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018623 - SW846 3050B										
<u>Reference (1018623-SRM2)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Arsenic	65.8		mg/kg wet	1.50	71.4		92	82.6-117.4		
Silver	22.0		mg/kg wet	1.50	23.3		94	66.3-133.7		
Chromium	52.0		mg/kg wet	1.00	54.4		96	80.3-119		
Barium	124		mg/kg wet	1.00	139		89	79.2-120.8		
Batch 1018624 - EPA200/SW7000 Series										
<u>Blank (1018624-BLK1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	BRL		mg/kg wet	0.0282						
<u>Duplicate (1018624-DUP1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	0.533		mg/kg dry	0.185		0.589			10	20
<u>Matrix Spike (1018624-MS1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	1.12		mg/kg dry	0.194	0.540	0.589	98	75-125		
<u>Matrix Spike Dup (1018624-MSD1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	1.05		mg/kg dry	0.184	0.510	0.589	90	75-125	6	20
<u>Post Spike (1018624-PS1)</u>					<u>Source: SB17478-01 Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	1.18		mg/kg dry	0.200	0.555	0.589	106	80-120		
<u>Reference (1018624-SRM1)</u>					<u>Prepared: 31-Aug-10 Analyzed: 01-Sep-10</u>					
Mercury	6.43		mg/kg wet	0.600	6.63		97	71.5-128.1		

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* Reportable Detection Limit

BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018590 - General Preparation										
<u>Duplicate (1018590-DUP1)</u>				<u>Source: SB17478-01</u>		<u>Prepared & Analyzed: 31-Aug-10</u>				
% Solids	72.6		%			72.8			0.3	20

Notes and Definitions

QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Leja

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55412-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB17478-01			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				Yes	✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 9/1/2010						

Report Date:
07-Sep-10 16:50



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 127-55410-10001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB17704-01	MBTA Culuert	Soil	02-Sep-10 12:57	03-Sep-10 15:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received. All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please note that this report contains 7 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.8 degrees Celsius. The condition of these samples was further noted as received on ice. The samples were transported on ice to the laboratory facility and the temperature was recorded at 3.8 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8270C/D

Calibration:

S006741-ICV1

Analyte percent recovery is outside individual acceptance criteria (70-130).

Naphthalene (69%)

This affected the following samples:

- 1018950-BLK1
- 1018950-BS1
- MBTA Culvert
- S008230-CCV1

Sample Identification

MBTA Culvert

SB17704-01

Client Project #
127-55410-10001Matrix
SoilCollection Date/Time
02-Sep-10 12:57Received
03-Sep-10

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMSPAHs by SW846 8270CPrepared by method SW846 3545A

83-32-9	Acenaphthene	BRL		µg/kg dry	152	1	SW846 8270C/D	07-Sep-10	07-Sep-10	ML	1018950	
208-96-8	Acenaphthylene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/kg dry	152	1	"	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/kg dry	152	1	"	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	114			30-130 %		"	"	"	"	"	"
1718-51-0	Terphenyl-dl4	97			30-130 %		"	"	"	"	"	"

Total Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/kg dry	1.70	1	SW846 6010B	03-Sep-10	07-Sep-10	JB	1018932	
7440-38-2	Arsenic	2.82		mg/kg dry	1.70	1	"	"	"	"	"	"
7440-39-3	Barium	20.3		mg/kg dry	1.13	1	"	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/kg dry	0.566	1	"	"	"	"	"	"
7440-47-3	Chromium	27.6		mg/kg dry	1.13	1	"	"	"	"	"	"
7439-97-6	Mercury	0.0907		mg/kg dry	0.0317	1	SW846 7471B	"	07-Sep-10	ARF	1018933	
7439-92-1	Lead	4.76		mg/kg dry	1.70	1	SW846 6010B	"	07-Sep-10	JB	1018932	
7782-49-2	Selenium	BRL		mg/kg dry	1.70	1	"	"	"	"	"	"

General Chemistry Parameters

% Solids	86.0			%		1	SM2540 G Mod.	03-Sep-10	03-Sep-10	BD	1018937	
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This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit

BRL = Below Reporting Limit

Page 3 of 7

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018950 - SW846 3545A										
<u>Blank (1018950-BLK1)</u>					<u>Prepared & Analyzed: 07-Sep-10</u>					
Acenaphthene	BRL		µg/kg wet	33.2						
Acenaphthylene	BRL		µg/kg wet	33.2						
Anthracene	BRL		µg/kg wet	33.2						
Benzo (a) anthracene	BRL		µg/kg wet	33.2						
Benzo (a) pyrene	BRL		µg/kg wet	33.2						
Benzo (b) fluoranthene	BRL		µg/kg wet	33.2						
Benzo (g,h,i) perylene	BRL		µg/kg wet	33.2						
Benzo (k) fluoranthene	BRL		µg/kg wet	33.2						
Chrysene	BRL		µg/kg wet	33.2						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	33.2						
Fluoranthene	BRL		µg/kg wet	33.2						
Fluorene	BRL		µg/kg wet	33.2						
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	33.2						
1-Methylnaphthalene	BRL		µg/kg wet	33.2						
2-Methylnaphthalene	BRL		µg/kg wet	33.2						
Naphthalene	BRL		µg/kg wet	33.2						
Phenanthrene	BRL		µg/kg wet	33.2						
Pyrene	BRL		µg/kg wet	33.2						
<i>Surrogate: 2-Fluorobiphenyl</i>	1650		µg/kg wet		1670		99	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1500		µg/kg wet		1670		90	30-130		
<u>LCS (1018950-BS1)</u>					<u>Prepared & Analyzed: 07-Sep-10</u>					
Acenaphthene	1480		µg/kg wet	33.2	1670		89	40-140		
Acenaphthylene	1360		µg/kg wet	33.2	1670		82	40-140		
Anthracene	1730		µg/kg wet	33.2	1670		104	40-140		
Benzo (a) anthracene	1290		µg/kg wet	33.2	1670		77	40-140		
Benzo (a) pyrene	1410		µg/kg wet	33.2	1670		85	40-140		
Benzo (b) fluoranthene	1350		µg/kg wet	33.2	1670		81	40-140		
Benzo (g,h,i) perylene	1170		µg/kg wet	33.2	1670		70	40-140		
Benzo (k) fluoranthene	1810		µg/kg wet	33.2	1670		109	40-140		
Chrysene	1830		µg/kg wet	33.2	1670		110	40-140		
Dibenzo (a,h) anthracene	1400		µg/kg wet	33.2	1670		84	40-140		
Fluoranthene	1410		µg/kg wet	33.2	1670		85	40-140		
Fluorene	1590		µg/kg wet	33.2	1670		95	40-140		
Indeno (1,2,3-cd) pyrene	1360		µg/kg wet	33.2	1670		81	40-140		
1-Methylnaphthalene	1330		µg/kg wet	33.2	1670		80	40-140		
2-Methylnaphthalene	1280		µg/kg wet	33.2	1670		77	40-140		
Naphthalene	1310		µg/kg wet	33.2	1670		79	40-140		
Phenanthrene	1310		µg/kg wet	33.2	1670		78	40-140		
Pyrene	1520		µg/kg wet	33.2	1670		91	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1700		µg/kg wet		1670		102	30-130		
<i>Surrogate: Terphenyl-dl4</i>	1640		µg/kg wet		1670		98	30-130		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1018932 - SW846 3050B										
<u>Blank (1018932-BLK1)</u>					<u>Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Lead	BRL		mg/kg wet	1.45						
Selenium	BRL		mg/kg wet	1.45						
Cadmium	BRL		mg/kg wet	0.484						
Arsenic	BRL		mg/kg wet	1.45						
Silver	BRL		mg/kg wet	1.45						
Chromium	BRL		mg/kg wet	0.967						
Barium	BRL		mg/kg wet	0.967						
<u>Reference (1018932-SRM1)</u>					<u>Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Lead	72.8		mg/kg wet	1.50	73.6		99	81.3-118.8		
Selenium	105		mg/kg wet	1.50	102		102	80-120		
Arsenic	68.4		mg/kg wet	1.50	70.6		97	82.6-117.4		
Chromium	53.5		mg/kg wet	1.00	53.7		100	80.3-119		
Silver	24.2		mg/kg wet	1.50	23.1		105	66.3-133.7		
Cadmium	37.0		mg/kg wet	0.500	36.3		102	82.9-116.9		
Barium	132		mg/kg wet	1.00	138		96	79.2-120.8		
<u>Reference (1018932-SRM2)</u>					<u>Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Lead	69.4		mg/kg wet	1.50	73.4		95	81.3-118.8		
Selenium	96.9		mg/kg wet	1.50	102		95	80-120		
Cadmium	34.0		mg/kg wet	0.500	36.2		94	82.9-116.9		
Arsenic	64.0		mg/kg wet	1.50	70.3		91	82.6-117.4		
Silver	21.6		mg/kg wet	1.50	23.0		94	66.3-133.7		
Chromium	50.6		mg/kg wet	1.00	53.5		95	80.3-119		
Barium	122		mg/kg wet	1.00	137		89	79.2-120.8		
Batch 1018933 - EPA200/SW7000 Series										
<u>Blank (1018933-BLK1)</u>					<u>Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	BRL		mg/kg wet	0.0278						
<u>Duplicate (1018933-DUP1)</u>					<u>Source: SB17704-01 Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	0.101		mg/kg dry	0.0319		0.0907			10	20
<u>Matrix Spike (1018933-MS1)</u>					<u>Source: SB17704-01 Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	0.524		mg/kg dry	0.0333	0.463	0.0907	94	75-125		
<u>Matrix Spike Dup (1018933-MSD1)</u>					<u>Source: SB17704-01 Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	0.541		mg/kg dry	0.0339	0.470	0.0907	96	75-125	3	20
<u>Post Spike (1018933-PS1)</u>					<u>Source: SB17704-01 Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	0.547		mg/kg dry	0.154	0.429	0.0907	106	80-120		
<u>Reference (1018933-SRM1)</u>					<u>Prepared: 03-Sep-10 Analyzed: 07-Sep-10</u>					
Mercury	6.10		mg/kg wet	0.600	6.49		94	71.5-128.1		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Kimberly Wisk
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 127-55410-10001			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB17704-01			
Matrices: Soil						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓ Yes	No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓ Yes	No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓ Yes	No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓ Yes	No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)?				Yes	No
	b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓ Yes	No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				Yes	✓ No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				✓ Yes	No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 9/7/2010						

Report Date:
30-Sep-10 15:56



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY
Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Ron Myrick

Project: Organix - 240 Salem St - Woburn, MA
Project #: 12755410

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB18355-01	MW-3	Ground Water	16-Sep-10 10:02	17-Sep-10 16:20
SB18355-02	MW-2	Ground Water	16-Sep-10 10:48	17-Sep-10 16:20

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Pennsylvania # 68-04426/68-02924
Rhode Island # 98
USDA # S-51435



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.
Please note that this report contains 11 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The sample temperature upon receipt by Spectrum Analytical courier was recorded as 4.2 degrees Celsius. The condition of these samples was further noted as refrigerated. The samples were transported on ice to the laboratory facility and the temperature was recorded at 1.2 degrees Celsius upon receipt at the laboratory. Please refer to the Chain of Custody for details specific to sample receipt times.

An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

There is no relevant protocol-specific QC and/or performance standards non-conformances to report.

Sample Identification

MW-3 Client Project # 12755410 Matrix Ground Water Collection Date/Time 16-Sep-10 10:02 Received 17-Sep-10
 SB18355-01

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3510C

83-32-9	Acenaphthene	BRL		µg/l	5.26	1	SW846 8270C/D	21-Sep-10	23-Sep-10	SM	1019880	
208-96-8	Acenaphthylene	BRL		µg/l	5.26	1	"	"	"	"	"	
120-12-7	Anthracene	BRL		µg/l	5.26	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL		µg/l	5.26	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL		µg/l	5.26	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	5.26	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	5.26	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	5.26	1	"	"	"	"	"	
218-01-9	Chrysene	BRL		µg/l	5.26	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	5.26	1	"	"	"	"	"	
206-44-0	Fluoranthene	BRL		µg/l	5.26	1	"	"	"	"	"	
86-73-7	Fluorene	BRL		µg/l	5.26	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.26	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	BRL		µg/l	5.26	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL		µg/l	5.26	1	"	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/l	5.26	1	"	"	"	"	"	
85-01-8	Phenanthrene	BRL		µg/l	5.26	1	"	"	"	"	"	
129-00-0	Pyrene	BRL		µg/l	5.26	1	"	"	"	"	"	

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	57			30-130 %		"	"	"	"	"	
1718-51-0	Terphenyl-dl4	61			30-130 %		"	"	"	"	"	

Soluble Metals by EPA 200/6000 Series Methods

Filtration	Field Filtered			N/A		1	EPA 200.7/3005A/6020			WGP	1019843	
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Soluble Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/l	0.0050	1	SW846 6010B	28-Sep-10	29-Sep-10	TBG	1020285	
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	"	"	"	
7440-39-3	Barium	0.0492		mg/l	0.0050	1	"	"	"	"	"	
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	"	"	"	
7440-47-3	Chromium	BRL		mg/l	0.0050	1	"	"	"	"	"	
7439-92-1	Lead	BRL		mg/l	0.0075	1	"	"	"	"	"	
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"	

Soluble Metals by EPA 200 Series Methods

7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	28-Sep-10	30-Sep-10	HB	1020286	X
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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification

MW-2 Client Project # 12755410 Matrix Ground Water Collection Date/Time 16-Sep-10 10:48 Received 17-Sep-10
 SB18355-02

CAS No. Analyte(s) Result Flag Units *RDL Dilution Method Ref. Prepared Analyzed Analyst Batch Cert.

Semivolatile Organic Compounds by GCMS

PAHs by SW846 8270C

Prepared by method SW846 3510C

83-32-9	Acenaphthene	BRL		µg/l	5.32	1	SW846 8270C/D	21-Sep-10	23-Sep-10	SM	1019880
208-96-8	Acenaphthylene	BRL		µg/l	5.32	1	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/l	5.32	1	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/l	5.32	1	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/l	5.32	1	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	5.32	1	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	5.32	1	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	5.32	1	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/l	5.32	1	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	5.32	1	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/l	5.32	1	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/l	5.32	1	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	5.32	1	"	"	"	"	"
90-12-0	1-Methylnaphthalene	BRL		µg/l	5.32	1	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/l	5.32	1	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	5.32	1	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/l	5.32	1	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/l	5.32	1	"	"	"	"	"

Surrogate recoveries:

321-60-8	2-Fluorobiphenyl	45			30-130 %		"	"	"	"	"
1718-51-0	Terphenyl-dl4	54			30-130 %		"	"	"	"	"

Soluble Metals by EPA 200/6000 Series Methods

Filtration	Field Filtered			N/A		1	EPA 200.7/3005A/6020			WGP	1019843
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Soluble Metals by EPA 6000/7000 Series Methods

7440-22-4	Silver	BRL		mg/l	0.0050	1	SW846 6010B	28-Sep-10	29-Sep-10	TBG	1020285
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	"	"	"
7440-39-3	Barium	0.0142		mg/l	0.0050	1	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	"	"	"
7440-47-3	Chromium	BRL		mg/l	0.0050	1	"	"	"	"	"
7439-92-1	Lead	BRL		mg/l	0.0075	1	"	"	"	"	"
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"

Soluble Metals by EPA 200 Series Methods

7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	28-Sep-10	30-Sep-10	HB	1020286 X
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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1019880 - SW846 3510C										
<u>Blank (1019880-BLK1)</u>					<u>Prepared: 21-Sep-10 Analyzed: 22-Sep-10</u>					
Acenaphthene	BRL		µg/l	2.50						
Acenaphthylene	BRL		µg/l	2.50						
Anthracene	BRL		µg/l	2.50						
Benzo (a) anthracene	BRL		µg/l	2.50						
Benzo (a) pyrene	BRL		µg/l	2.50						
Benzo (b) fluoranthene	BRL		µg/l	2.50						
Benzo (g,h,i) perylene	BRL		µg/l	2.50						
Benzo (k) fluoranthene	BRL		µg/l	2.50						
Chrysene	BRL		µg/l	2.50						
Dibenzo (a,h) anthracene	BRL		µg/l	2.50						
Fluoranthene	BRL		µg/l	2.50						
Fluorene	BRL		µg/l	2.50						
Indeno (1,2,3-cd) pyrene	BRL		µg/l	2.50						
1-Methylnaphthalene	BRL		µg/l	2.50						
2-Methylnaphthalene	BRL		µg/l	2.50						
Naphthalene	BRL		µg/l	2.50						
Phenanthrene	BRL		µg/l	2.50						
Pyrene	BRL		µg/l	2.50						
<i>Surrogate: 2-Fluorobiphenyl</i>	34.5		µg/l		50.0		69	30-130		
<i>Surrogate: Terphenyl-dl4</i>	34.3		µg/l		50.0		69	30-130		
<u>LCS (1019880-BS1)</u>					<u>Prepared & Analyzed: 21-Sep-10</u>					
Acenaphthene	30.1		µg/l	2.50	50.0		60	40-140		
Acenaphthylene	30.5		µg/l	2.50	50.0		61	40-140		
Anthracene	31.1		µg/l	2.50	50.0		62	40-140		
Benzo (a) anthracene	29.4		µg/l	2.50	50.0		59	40-140		
Benzo (a) pyrene	29.0		µg/l	2.50	50.0		58	40-140		
Benzo (b) fluoranthene	30.1		µg/l	2.50	50.0		60	40-140		
Benzo (g,h,i) perylene	20.2		µg/l	2.50	50.0		40	40-140		
Benzo (k) fluoranthene	32.0		µg/l	2.50	50.0		64	40-140		
Chrysene	31.4		µg/l	2.50	50.0		63	40-140		
Dibenzo (a,h) anthracene	23.4		µg/l	2.50	50.0		47	40-140		
Fluoranthene	31.0		µg/l	2.50	50.0		62	40-140		
Fluorene	34.7		µg/l	2.50	50.0		69	40-140		
Indeno (1,2,3-cd) pyrene	24.4		µg/l	2.50	50.0		49	40-140		
1-Methylnaphthalene	29.3		µg/l	2.50	50.0		59	40-140		
2-Methylnaphthalene	25.9		µg/l	2.50	50.0		52	40-140		
Naphthalene	24.6		µg/l	2.50	50.0		49	40-140		
Phenanthrene	29.9		µg/l	2.50	50.0		60	40-140		
Pyrene	31.4		µg/l	2.50	50.0		63	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	28.7		µg/l		50.0		57	30-130		
<i>Surrogate: Terphenyl-dl4</i>	29.1		µg/l		50.0		58	30-130		
<u>LCS Dup (1019880-BSD1)</u>					<u>Prepared & Analyzed: 21-Sep-10</u>					
Acenaphthene	33.6		µg/l	2.50	50.0		67	40-140	11	20
Acenaphthylene	33.9		µg/l	2.50	50.0		68	40-140	11	20
Anthracene	34.5		µg/l	2.50	50.0		69	40-140	10	20
Benzo (a) anthracene	32.5		µg/l	2.50	50.0		65	40-140	10	20
Benzo (a) pyrene	32.5		µg/l	2.50	50.0		65	40-140	11	20
Benzo (b) fluoranthene	32.6		µg/l	2.50	50.0		65	40-140	8	20
Benzo (g,h,i) perylene	23.5		µg/l	2.50	50.0		47	40-140	15	20
Benzo (k) fluoranthene	35.8		µg/l	2.50	50.0		72	40-140	11	20
Chrysene	34.9		µg/l	2.50	50.0		70	40-140	10	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1019880 - SW846 3510C										
<u>LCS Dup (1019880-BSD1)</u>					<u>Prepared & Analyzed: 21-Sep-10</u>					
Dibenzo (a,h) anthracene	26.7		µg/l	2.50	50.0		53	40-140	13	20
Fluoranthene	34.4		µg/l	2.50	50.0		69	40-140	10	20
Fluorene	38.5		µg/l	2.50	50.0		77	40-140	11	20
Indeno (1,2,3-cd) pyrene	28.1		µg/l	2.50	50.0		56	40-140	14	20
1-Methylnaphthalene	32.8		µg/l	2.50	50.0		66	40-140	11	20
2-Methylnaphthalene	28.5		µg/l	2.50	50.0		57	40-140	10	20
Naphthalene	27.1		µg/l	2.50	50.0		54	40-140	9	20
Phenanthrene	33.2		µg/l	2.50	50.0		66	40-140	10	20
Pyrene	34.6		µg/l	2.50	50.0		69	40-140	10	20
Surrogate: 2-Fluorobiphenyl	30.6		µg/l		50.0		61	30-130		
Surrogate: Terphenyl-dl4	30.7		µg/l		50.0		61	30-130		

Soluble Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1020285 - SW846 3010A										
<u>Blank (1020285-BLK1)</u>				<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>						
Selenium	BRL		mg/l	0.0150						
Lead	BRL		mg/l	0.0075						
Chromium	BRL		mg/l	0.0050						
Silver	BRL		mg/l	0.0050						
Arsenic	BRL		mg/l	0.0040						
Barium	BRL		mg/l	0.0050						
Cadmium	BRL		mg/l	0.0025						
<u>LCS (1020285-BS1)</u>				<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>						
Lead	1.21		mg/l	0.0075	1.25		97	85-115		
Selenium	1.30		mg/l	0.0150	1.25		104	85-115		
Chromium	1.24		mg/l	0.0050	1.25		99	85-115		
Cadmium	1.30		mg/l	0.0025	1.25		104	85-115		
Barium	1.24		mg/l	0.0050	1.25		99	85-115		
Arsenic	1.27		mg/l	0.0040	1.25		102	85-115		
Silver	1.24		mg/l	0.0050	1.25		99	85-115		
<u>LCS Dup (1020285-BSD1)</u>				<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>						
Lead	1.17		mg/l	0.0075	1.25		93	85-115	4	20
Selenium	1.24		mg/l	0.0150	1.25		99	85-115	4	20
Silver	1.19		mg/l	0.0050	1.25		95	85-115	4	20
Chromium	1.20		mg/l	0.0050	1.25		96	85-115	4	20
Arsenic	1.22		mg/l	0.0040	1.25		98	85-115	4	20
Barium	1.19		mg/l	0.0050	1.25		96	85-115	4	20
Cadmium	1.25		mg/l	0.0025	1.25		100	85-115	4	20
<u>Duplicate (1020285-DUP1)</u>				<u>Source: SB18355-01</u>			<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>			
Lead	BRL		mg/l	0.0075		BRL				20
Selenium	BRL		mg/l	0.0150		BRL				20
Chromium	0.0048	J	mg/l	0.0050		0.0044			9	20
Barium	0.0500		mg/l	0.0050		0.0492			2	20
Arsenic	BRL		mg/l	0.0040		BRL				20
Silver	0.0014	J	mg/l	0.0050		0.0015			3	20
Cadmium	0.0002	J	mg/l	0.0025		0.0002			0	20
<u>Matrix Spike (1020285-MS1)</u>				<u>Source: SB18355-02</u>			<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>			
Lead	1.22		mg/l	0.0075	1.25	BRL	98	75-125		
Selenium	1.29		mg/l	0.0150	1.25	BRL	103	75-125		
Arsenic	1.27		mg/l	0.0040	1.25	BRL	102	75-125		
Chromium	1.25		mg/l	0.0050	1.25	BRL	100	75-125		
Silver	1.25		mg/l	0.0050	1.25	BRL	100	75-125		
Cadmium	1.29		mg/l	0.0025	1.25	0.0002	104	75-125		
Barium	1.25		mg/l	0.0050	1.25	0.0142	99	75-125		
<u>Matrix Spike Dup (1020285-MSD1)</u>				<u>Source: SB18355-02</u>			<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>			
Selenium	1.32		mg/l	0.0150	1.25	BRL	105	75-125	2	20
Lead	1.26		mg/l	0.0075	1.25	BRL	101	75-125	3	20
Barium	1.30		mg/l	0.0050	1.25	0.0142	102	75-125	3	20
Cadmium	1.33		mg/l	0.0025	1.25	0.0002	106	75-125	3	20
Arsenic	1.31		mg/l	0.0040	1.25	BRL	105	75-125	3	20
Silver	1.28		mg/l	0.0050	1.25	BRL	102	75-125	3	20
Chromium	1.30		mg/l	0.0050	1.25	BRL	104	75-125	3	20
<u>Post Spike (1020285-PS1)</u>				<u>Source: SB18355-02</u>			<u>Prepared: 28-Sep-10 Analyzed: 29-Sep-10</u>			
Selenium	1.29		mg/l	0.0150	1.25	BRL	103	80-120		
Lead	1.24		mg/l	0.0075	1.25	BRL	99	80-120		
Silver	1.26		mg/l	0.0050	1.25	BRL	101	80-120		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Soluble Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1020286 - EPA200/SW7000 Series										
<u>Blank (1020286-BLK1)</u>					<u>Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	BRL		mg/l	0.00020						
<u>LCS (1020286-BS1)</u>					<u>Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	0.00480		mg/l	0.00020	0.00500		96	85-115		
<u>Duplicate (1020286-DUP1)</u>					<u>Source: SB18355-02 Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	BRL		mg/l	0.00020		BRL				20
<u>Matrix Spike (1020286-MS1)</u>					<u>Source: SB18355-01 Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	0.00517		mg/l	0.00020	0.00500	BRL	103	75-125		
<u>Matrix Spike Dup (1020286-MSD1)</u>					<u>Source: SB18355-01 Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	0.00507		mg/l	0.00020	0.00500	BRL	101	75-125	2	20
<u>Post Spike (1020286-PS1)</u>					<u>Source: SB18355-01 Prepared: 28-Sep-10 Analyzed: 30-Sep-10</u>					
Mercury	0.00494		mg/l	0.00020	0.00500	BRL	99	85-115		

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

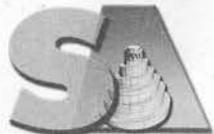
Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic

Validated by:
Hanibal C. Tayeh, Ph.D.
Kimberly Wisk
Nicole Leja
Rebecca Merz

MassDEP Analytical Protocol Certification Form

Laboratory Name: Spectrum Analytical, Inc.			Project #: 12755410			
Project Location: Organix - 240 Salem St - Woburn, MA			RTN:			
This form provides certifications for the following data set:			SB18355-01 through SB18355-02			
Matrices: Ground Water						
CAM Protocol						
8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A	
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B	
✓ 6010 Metals CAM III A	✓ 6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B		
<i>Affirmative responses to questions A through F are required for "Presumptive Certainty" status</i>						
A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?				✓	Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?				✓	Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?				✓	Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				✓	Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?				Yes	No No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?				✓	Yes No
<i>Responses to questions G, H and I below are required for "Presumptive Certainty" status</i>						
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?				✓	Yes No
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.						
H	Were all QC performance standards specified in the CAM protocol(s) achieved?				✓	Yes No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?				Yes	✓ No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<i>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</i>						
 Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 9/30/2010						



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

8818355

Special Handling:
 Standard TAT - 7 to 10 business days
 Rush TAT - Date Needed: _____
 · All TATs subject to laboratory approval.
 · Min. 24-hour notification needed for rushes.
 · Samples disposed of after 60 days unless otherwise instructed.

Report To: Tetra Tech R1220
One Grant
Framingham, MA

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 12755410

Site Name: Origin x

Location: Woburn State: MA

Sampler(s): UC

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
 7=CH₃OH 8=NaHSO₄ 9=_____ 10=_____

Containers: _____

Analyses: _____

QA Reporting Notes:
(check if needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
 O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
 X1=_____ X2=_____ X3=_____

Preservative: _____

Provide MA DEP MCP CAM Report
 Provide CT DPH RCP Report

G=Grab C=Composite

of VOA Vials
 # of Amber Glass
 # of Clear Glass
 # of Plastic

QA/QC Reporting Level
 Standard No QC
 Other _____

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic
8818355-01	MW-3	9/16/10	1002	G	bw	4		1		
↓ CA	MW-2	↓	1048	G	bw	4		1		

RCRA 8
 Dissolved Metals
 PAHs (8276)

State specific reporting standards:
RC GW-1
Metals samples were field-filtered

Fax results when available to (_____)
 E-mail to lan.cannan@tetratech.com
 EDD Format Excel/PDF
 Condition upon receipt: Iced Ambient 4, 2

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/17/10 Time: 11:02
9/17/10 16:00

1.2

Appendix C

**Documentation for Representativeness Evaluation and Data Usability
Assessment**

Appendix C - Representativeness and Data Usability Worksheet

A. Representativeness Evaluation	Response or References in Report
<p>A-1 Provide a succinct summary of the Conceptual Site Model for the disposal site</p>	<p>See Section 2.0 of the RAO Statement report</p>
<p>A-2 Discuss use of Field/Screening Data in response action decision making.</p>	<p>The Phase II analytical data set as well as visual observations and field screening (portable XRF analyzer) were utilized to establish the initial horizontal and vertical extent of contamination at the Site and to direct the excavation of contaminated soil/waste materials that contributed significantly to risk at the Site. Confirmatory soil sampling data were also used to further direct decision making. Additional information regarding the use of the XRF and the data used to delineate the Disposal Site were provided in the Phase IV Final Inspection Report and Completion Statement.</p>
<p>A-3 Discuss and justify sampling locations and depths collected in support of RAO regarding: delineation of disposal site boundaries, elimination/control of OHM sources, characterization of risk, achievement of No Significant Risk</p>	<p>The source of OHM at the Site was attributed to a deposit of tannery-related waste and contaminated soil located upon a hillside slope. Sampling locations and depths collected in support of the RAO were based on the data that was developed a described above (Section A-2) and was used to delineate the final Disposal Site boundaries during remedial actions. A comprehensive confirmatory sampling program was also implemented to demonstrate elimination/control of OHM sources, characterize residual risk at the Site and to demonstrate No Significant Risk. A sampling grid comprised of 400 ft² composite samples collected from individual 10 ft. by 10 ft. grids was utilized to provide coverage across the Disposal Site limits. The depths selected for analysis were at the limit of excavation to remove contaminated soil/waste materials that contributed significantly to risk. The sampling program supporting the Phase II Report included soil borings and test pit explorations which provided evidence that OHM impacts attributable to RTN 3-25734 do not extend beyond the locations and depths sampled in support of this RAO Statement.</p>

Appendix C - Representativeness and Data Usability Worksheet

<p>A-4 Discuss and justify the density, spatial distribution, collection methods, and handling of samples collected in support of RAO</p>	<p>Sampling conducted in support of this RAO Statement was performed at an approximate spatial distribution of 400 ft². Composite soil samples were utilized to provide coverage of the limits of the Disposal Site. Individual 10 ft. by 10 ft. grids were screened using the XRF analyzer to demonstrate that no individual aliquot used in the composite sample contained significantly higher concentrations of OHM compared with other grid cells in the composite. Soil were otherwise collected, handled and analyzed in accordance with standard industry practice and the MCP CAM protocols</p>
<p>A-5 Identify disposal site conditions, if any, that warrant the collection and analysis of temporal samples. For disposal sites that require monitoring over an extended time period, discuss and justify the number and time interval for sampling rounds conducted in support of the RAO.</p>	<p>No conditions were identified that warrant the collection and analysis of temporal samples, and temporal sampling was not used in support of this RAO Statement.</p>
<p>A-6 Field Completeness of Data: Discuss data gaps identified in sampling and analytical information used to support RAO and their significance.</p>	<p>No data gaps were identified which significantly affect the facts or opinions supporting this RAO Statement. Laboratory analysis was performed on a sub-set of compounds/elements specified under the MCP CAM protocols. This is not a data gap since previous investigations presented in the Phase II Report provided sufficient data to rule out other compounds/elements as not relevant to RTN 3-25734.</p>
<p>A-7 Identify any inconsistent information or uncertainty and justify disregarding such information or uncertainty in rendering the RAO Opinion.</p>	<p>No inconsistent information or uncertainty was identified related to RTN 3-25734.</p>
<p>A-8 Where it is not otherwise apparent or discussed in previous sections, identify/discuss information generated during the course of response actions that was not used to support the RAO because it was determined to be unrepresentative or no longer representative of disposal site conditions.</p>	<p>Some of the data presented in the Phase II Report and some of the data obtained during preliminary sampling during remedial actions was not used to support the RAO because it is no longer representative of Disposal Site conditions. Soils represented by these data were excavated and removed for off-site disposal. Confirmatory samples that are representative of the underlying soils in these areas were used rather than samples representing soils that has been removed during remedial actions.</p>
<p>B. Data Usability Assessment</p>	
<p>B-1 List all MCP activities that provided the analytical data reviewed in the course of conducting the Data Usability Assessment in support of the RAO. Include the media sampled and the month and year the data were acquired.</p>	<p>The analytical data used in support of this RAO Statement were gathered during confirmatory soil sampling at the limit of excavation for remedial actions completed during the Comprehensive Remedial Actions implemented under the Phase IV RIP.</p>
<p>B-2 Discuss appropriateness of selected analytical methods to quantitatively support the RAO.</p>	<p>MCP CAM analytical methods 8270 SVOC CAM IIB, 6010 Metals CAM III A, and 7470/7471 Hg CAM III B were utilized in support of this RAO Statement. These analytical methods include all of the COCs attributable to RTN 3-25734 and are appropriate for an evaluation of a condition of No Significant Risk at the Site.</p>

Appendix C - Representativeness and Data Usability Worksheet

<p>B-3 Discuss the appropriateness of selected analytical methods' Reporting Limits to quantitatively support the RAO.</p>	<p>All analytical method reporting limits were reviewed and determined to be appropriate for comparison to the applicable MCP Method 1 standards. None of the method reporting limits exceeded the MCP Method 1 standards that were applicable to the data set. As a more conservative estimation of risk at the Site, we utilized one-half of the method reporting limit in the calculation of EPCs for compounds that were not detected.</p>
<p>B-4 Discuss laboratory performance criteria and data quality indicators used to assess overall Analytical Accuracy and Analytical Precision. For CAM data, see MCP Analytical Method Report Certification form and Laboratory Case Narrative.</p>	<p>See attached summary in Table G-1 for a review of the laboratory performance criteria and data quality indicators.</p>
<p>B-5 Discuss the performance criteria and data quality indicators used to assess overall Field Data Usability.</p>	<p>QA/QC samples were collected at a frequency of approximately 10.6%. In addition, matrix spike analysis for metals was requested at a frequency of 20% per the MCP CAM protocol. See attached summary of field QA/QC in Table G-2</p>
<p>B-6 Discuss any data rejected</p>	<p>None of the confirmatory soil sampling data were rejected. All data collected from the final limit of excavation during the remedial actions was utilized in support of this RAO Statement.</p>
<p>C. Representativeness Evaluation and Data Usability Assessment Summary and Conclusions</p>	
<p>Provide a summary declaration regarding the data set that is relied upon to support the RAO.</p>	<p>The results of our evaluation of the data used to support this Class A-2 RAO Statement suggest that the data are usable and adequately represent the existing Site conditions. Based on the findings of our evaluation, we conclude that the data set reviewed satisfies the broad QA/QC requirements of 310 CMR 40.0017, and 310 CMR 40.0191(2)(c) regarding scientific defensibility, precision, accuracy, and reporting of analytical data and the reported results are deemed suitable for their intended use in support of rendering a waste site cleanup opinion under the MCP for this Disposal Site.</p>

Appendix C - Table C-1 - Data Usability Assessment Summary Table

Sample ID or Series	Parameters	Date Sampled	Soil	Groundwater	Surface Water	Sediment	Air	Site Char.	Background	EPCs	Hazard Elimination	CAM Compliant (Y/N)	Sample Receipt OK? (Y/N)	Method QA/QC Procedures Followed? (Y/N)	QA/QC Requirements Achieved? (Y/N)	Trip Blanks OK? (Y/N) or NA	Field Duplicate OK? (Y/N) or NA	Relative Percent Difference (RPD)	Appropriate Reporting Limits? (Y/N)	Data Qualifications	Data Usability Decision
SB15912-01 through SB15912-18	PAHs and RCRA 8 metals	29-Jul-10	X						X			Y	Y	Y	N	NA	Y	0.4% to 219%	N	The samples were delivered to the laboratory on ice and were received at the laboratory at a temperature of 1.9 C. However, the laboratory answered No to Question A of the MassDEP Analytical Protocol Certification Form. When asked about their answer the laboratory reported that they answered no because the courier who picked up the samples from the field recorded a temperature outside of the acceptance criteria. Our field staff who collected the samples reported that the samples were collected on the same day and were placed on ice in the field prior to pickup by the courier. Based on the temperature the samples were received at the laboratory, the samples were also transported on ice by the courier to the laboratory. Therefore, there is no data quality issue with the samples.	The data are considered usable and we believe that the answer to question A should have been recorded as "yes".
																				The RPD for chromium exceeded the laboratory QC control limits; however precision was demonstrated by the laboratory with acceptable RPD values for the MS/MSD. This is not expected to affect the usability of the data set.	Data are usable
																				The RPD for PAHs in sample 1016151-DUP1 is above the control limit. The laboratory noted that the sample matrix was non-homogeneous. Furthermore, analysis of field blind duplicate samples reported a wide range of RPD values, also suggesting a non-homogeneous sample matrix. The duplicate results reported by the laboratory were generally below the source results. However, the % recovery of the MS/MSD samples for PAHs were within acceptable limits.	Data are usable, a non-homogeneous soil matrix is known at the Site due to the nature of the release
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
SB16045-01 through SB16045-03	PAHs and RCRA 8 metals	30-Jul-10	X						X			Y	Y	Y	N	NA	NA	NA	N	The RPD for mercury exceeded the QC control limits; however the laboratory indicated that precision is demonstrated with acceptable RPD values for MS/MSD. This is not expected to affect usability of the data set.	Data are usable
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB16389-01 through SB16389-05	PAHs and RCRA 8 metals	9-Aug-10	X						X			Y	Y	Y	N	NA	NA	NA	N	The matrix spike recovery for barium and chromium was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery. This is not expected to affect the usability of the data.	Data are usable
																				For the laboratory duplicate sample, silver analysis was not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit. This did not affect the usability of the data set.	Data are usable
																				For the laboratory duplicate sample, the RPD for barium, chromium and mercury exceed the QC control limits; however the laboratory indicated that precision is demonstrated with acceptable RPD values for MS/MSD. This did not affect the usability of the data set.	Data are usable
																				For sample SB16389-02 (Hillside-18) and SB16389-03 (Hillside-19) sample dilution require for high concentrations of target analytes to be within the instrument calibration range which affected analysis of mercury. However, mercury was detected above the laboratory reporting limit so this did not affect the usability of the data set.	Data are usable
																				The analyte percent difference for benzo(g,h,i)perylene is below the individual acceptance criteria suggesting potential low bias. The laboratory indicated that it is within the overall method allowances. Considering the entire data set reviewed in support of this RAO Statement, this potential low bias is unlikely to substantially affect the usability of the data set. Analysis for this compound in other separate laboratory data sets did not indicate low bias and the maximum reported concentration of benzo(g,h,i)perylene (0.464 mg/kg) is several orders of magnitude below the MCP Method 1 S-1 standard (1,000 mg/kg).	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
SB16513-01 through SB16513-03	PAHs and RCRA 8 metals	10-Aug-10	X						X			Y	Y	Y	N	NA	NA	NA	N	For the laboratory duplicate sample analysis for selenium was not controlled on RPD values from concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit. This is not expected to affect the usability of the data set.	Data are usable
																				The analyte percent recovery for naphthalene is slightly below the individual acceptance criteria. Considering that this qualification could affect 3 of 47 samples supporting the RAO Statement and considering that naphthalene was not detected in any of the 47 samples reviewed, this potential low bias is not expected to affect the usability of the data set.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				The analyte percent difference for benzo(b)fluoranthene is above the individual acceptance criteria. The laboratory noted that this is within the overall method allowances. This potential high bias is not expected to affect the usability of the data set and will provide a more conservative estimation of risk at the Site.	Data are used in consideration of potential high bias, which is likely to overestimate potential risks attributable to the Site.
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB16577-01	PAHs and RCRA 8 metals	12-Aug-10	X						X			Y	Y	Y	N	NA	NA	NA	Y	The samples were delivered to the laboratory on ice and were received at a temperature of 0.2 C. However, the laboratory answered No to Question A of the MassDEP Analytical Protocol Certification Form. When asked about their answer the laboratory reported that they answered no because the courier who picked up the samples from the field recorded a temperature outside of the acceptance criteria. Our field staff who collected the samples reported that the samples were collected on the same day and were placed on ice in the field prior to pickup by the courier. Based on the temperature the samples were received at the laboratory, the samples were also transported on ice by the courier to the laboratory. Therefore, there is no data quality issue with the samples.	The data are considered usable and we believe that the answer to question A should have been recorded as "yes".
																				The laboratory duplicate sample for selenium and silver indicated that the analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit. This is not expected to affect the usability of the data set.	Data are usable
																				In the evaluation of the laboratory duplicate sample the RPD for barium and chromium exceed the QC control limits; however the laboratory reported that precision is demonstrated with acceptable RPD values for MS/MSD. This is not expected to affect the usability of the data set.	Data are usable
																				The spike recovery for mercury is outside acceptance limits for the MS and/or MSD. The laboratory indicated that the batch was accepted based on acceptable LCS recovery. This is not expected to affect the usability of the data set.	Data are usable
																				The analyte percent difference is outside individual acceptance criteria, but within overall method allowances for benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene, suggesting potential low bias. However, this qualification has affected 1 of 47 soil samples and most of the other 46 soil samples do not show low bias. Furthermore, these compounds were only rarely detected in the entire 47 sample data set. Therefore, this is not expected to substantially affect the usability of the data set overall.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				The analyte percent difference is outside individual acceptance criteria, but within overall method allowances for benzo(k)fluoranthene, indicating potential high bias. This is not expected to affect the usability of the data set since this would provide a more conservative analysis of risk at the Site.	Data are used in consideration of potential high bias, which is likely to overestimate potential risks attributable to the Site.
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
SB16706-01 through SB16706-04	PAHs and RCRA 8 metals	13-Aug-10	X						X			Y	Y	Y	Y	NA	NA	NA	N	Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB16784-01 through SB16784-11	PAHs and RCRA 8 metals	17-Aug-10	X						X			Y	Y	Y	N	NA	Y	11.1% to 48.8%	N	The spike recovery for barium exceeded the QC control limits for the MS and/or MSD. The laboratory reported that the batch was accepted based upon acceptable PS and/or LCS recovery. This is not expected to affect the usability of the data.	Data are usable
																				The spike recovery for chromium was outside of QC acceptance limits for the MS, MSD and/or PS due to analyte concentration at 4 times or greater than the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance range. This is not expected to affect the usability of the data.	Data are usable
																				In the laboratory duplicate sample the RPD exceeded the QC control limits for chromium; however, the laboratory reported that precision is demonstrated with acceptable RPD values for MS/MSD. This is not expected to affect the usability of the data set.	Data are usable
																				In the laboratory duplicate sample the spike recovery for selenium exceeded the QC control limits for the MS and/or MSD. The laboratory reported that the batch was accepted based upon acceptable PS and/or LCS recovery.	Data are usable
																				Dilution of the SB16784-06 (Downstream-07) sample was required due to high concentrations of target analytes in order to be within the instrument calibration range, which affected the reporting limit for chromium. Since chromium was detected in the sample, this is not expected to affect the usability of the data set.	Data are usable
																				The analyte percent recovery for naphthalene is slightly below the individual acceptance criteria. Considering that this qualification could affect 8 of 47 samples supporting the RAO Statement and considering that naphthalene was not detected in any of the 47 samples reviewed, this potential low bias is not expected to affect the usability of the data set.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO

Appendix C - Table C-1 - Data Usability Assessment Summary Table

Sample ID or Series	Parameters	Date Sampled	Soil	Groundwater	Surface Water	Sediment	Air	Site Char.	Background	EPCs	Hazard Elimination	CAM Compliant (Y/N)	Sample Receipt OK? (Y/N)	Method QA/QC Procedures Followed? (Y/N)	QA/QC Requirements Achieved? (Y/N)	Trip Blanks OK? (Y/N) or NA	Field Duplicate OK? (Y/N) or NA	Relative Percent Difference (RPD)	Appropriate Reporting Limits? (Y/N)	Data Qualifications	Data Usability Decision
																				The analyte percent difference for benzo(b)fluoranthene is above the individual acceptance criteria. The laboratory noted that this is within the overall method allowances. This potential high bias is not expected to affect the usability of the data set and will provide a more conservative analysis of potential risk at the Site.	Data are used in consideration of potential high bias, which is likely to overestimate potential risks attributable to the Site.
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB16930-01 through SB16930-06	PAHs and RCRA 8 metals	18-Aug-10	X						X			Y	Y	Y	N	NA	NA	NA	N	For the laboratory duplicate sample, the RPD for lead exceeded the QC control limit; however the laboratory reported that precision is demonstrated with acceptable RPD values for MS/MSD. This is not expected to affect the usability of the data set.	Data are usable
																				The SB16930-02 (Downstream-11), SB16930-03 (Downstream-12) and SB16930-04 (Downstream-13) samples required dilution for high concentrations of target analytes to be within the instrument calibration range. Although this may have affected reporting limits, all reporting limits for non-detected compounds/elements were below MCP Method 1 S-1 standards, making them appropriate for our evaluation.	Data are usable
																				The analyte percent difference for benzo(k)fluoranthene is slightly below the individual acceptance criteria. The laboratory indicated that it is within the overall method allowances. This compound was only detected in 13 of 47 samples and the highest concentration in the entire site-wide data set is below the MCP Method 1 S-1 standard. Therefore, this potential low bias is unlikely to affect the usability of the data set.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB17077-01	PAHs and metals	20-Aug-10	X						X			Y	Y	Y	Y	NA	NA	NA	N	The analyte percent recovery for naphthalene is slightly outside of the individual acceptance criteria. However, naphthalene was not detected in this sample and naphthalene was not detected in any of the 47 samples supporting this RAO Statement. Therefore this potential low bias is not expected to affect the usability of the data set.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB17478-01	PAHs and RCRA 8 metals	30-Aug-10	X						X			Y	Y	Y	N	NA	NA	NA	N	In the laboratory duplicate sample, analysis for selenium was not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit. Selenium was not detected in any of the 47 samples comprising this data set and therefore this is not expected to affect the usability of the data set.	Data are usable
																				The analyte percent difference from chrysene is above the individual acceptance criteria. The laboratory indicated that this is within the overall method allowances. Chrysene was detected in only 13 of 47 samples used to support this RAO Statement and none of the detected concentrations exceeded the MCP Method 1 S-1 standard. This potential high bias is not expected to adversely affect the usability of this data set and should provide a more conservative estimation of risk.	Data are used in consideration of potential high bias, which is likely to overestimate potential risks attributable to the Site.
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB17704-01	PAHs and RCRA 8 metals	2-Sep-10	X						X			Y	Y	Y	Y	NA	NA	NA	N	The analyte percent recovery for naphthalene was slightly below the individual acceptance criteria. Since naphthalene was not detected in any of the 47 samples supporting this RAO Statement this potential low bias is not expected to adversely affect the usability of the data set.	Data are used in consideration of potential low bias, which is considered unlikely to impact decisions regarding the RAO
																				Although the reporting limits were not below all CAM reporting limits specified in the CAM protocols, the reporting limits are below all MCP Method 1 S-1 standards, making the data usable for comparison to the applicable Method 1 risk standards.	Data are usable
																				Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable
SB18355-01 and SB18355-02	PAHs and RCRA 8 metals	16-Sep-10	X						X			Y	Y	Y	Y	NA	NA	NA	Y	Although the results of the complete analyte list specified in the selected CAM protocols were not reported, previous laboratory analysis during the Phase II Report reduced the list of COCs attributable to RTN 3-25734. The sub-set of the compounds/elements reported in this data set include all COCs attributable to RTN 3-25734.	Data are usable

Table C-2									
	QA/QC Data (mg/kg)						QA/QC Data (mg/kg)		
Location:	Duplicate Sample	Actual Sample		Duplicate Sample	Actual Sample		Duplicate Sample	Actual Sample	
Sample Name:	Dup-1	Hillside-05	QA/QC Review	Dup-2	Hillside-10	QA/QC Review	Dup-3	Swale-09	QA/QC Review
Laboratory:	Spectrum	Spectrum	Relative %	Spectrum	Spectrum	Relative %	Spectrum	Spectrum	Relative %
Laboratory I.D.:	SB15912-17	SB15912-05	Difference	SB15912-18	SB15912-10	Difference	SB16784-09	SB16784-01	Difference
Sample Date:	7/29/2010	7/29/2010		7/29/2010	7/29/2010		8/17/2010	8/17/2010	
Consultant:	Tetra Tech	Tetra Tech		Tetra Tech	Tetra Tech		Tetra Tech	Tetra Tech	
Acenaphthene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Acenaphthylene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Anthracene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Benzo(a)anthracene	<.137	<.133	NC	<.129	<.127	NC	0.229	0.412	-44.4%
Benzo(a)pyrene	<.137	<.133	NC	<.129	<.127	NC	0.229	0.429	-46.6%
Benzo(b)fluoranthene	<.137	<.133	NC	<.129	<.127	NC	0.293	0.409	-28.4%
Benzo(g,h,i)perylene	<.137	<.133	NC	<.129	<.127	NC	<.135	0.294	NC
Benzo(k)fluoranthene	<.137	<.133	NC	<.129	<.127	NC	0.195	0.353	-44.8%
Chrysene	<.137	<.133	NC	<.129	<.127	NC	0.264	0.454	-41.9%
Dibenzo(a,h)anthracene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Fluoranthene	0.217	0.158	37.3%	<.129	<.127	NC	0.600	1.060	-43.4%
Fluorene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Indeno(1,2,3-cd)pyrene	<.137	<.133	NC	<.129	<.127	NC	<.135	0.288	NC
Methylnaphthalene, 1-	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Methylnaphthalene, 2-	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Naphthalene	<.137	<.133	NC	<.129	<.127	NC	<.135	<.136	NC
Phenanthrene	0.141	<.133	NC	<.129	<.127	NC	0.337	0.658	-48.8%
Pyrene	0.177	<.133	NC	<.129	<.127	NC	0.454	0.871	-47.9%
Arsenic, Total	13.6	13.3	2.3%	9.92	9.65	2.8%	5.61	6.31	-11.1%
Barium, Total	23.4	23.3	0.4%	39.5	25.9	52.5%	86.1	155	-44.5%
Cadmium, Total	<0.508	<0.482	NC	0.558	0.520	7.31%	0.688	0.825	-16.6%
Chromium, Total (as Cr ⁺⁺⁺)	57.3	33.4	72%	90.2	94.7	-4.75%	165	123	34.1%
Lead, Total	35.2	35.4	-0.6%	40.5	27.4	47.8%	41.4	52.9	-21.7%
Mercury, Total	0.3450	0.1080	219%	0.2970	0.1480	101%	0.1040	0.1280	-18.8%
Selenium, Total	<1.52	<1.45	NC	<1.43	<1.32	NC	<1.40	<1.37	NC
Silver, Total	<1.52	<1.45	NC	1.56	<1.32	NC	<1.40	<1.37	NC

Notes: NC indicates that Relative % Difference value not calculated since one or more results is reported as non-detect by laborator
 < indicates that compound not detected above laboratory analytical reporting limi

Table C-2

Location: Sample Name: Laboratory: Laboratory I.D.: Sample Date: Consultant:	Duplicate Sample Dup-4 Spectrum SB16784-10 8/17/2010 Tetra Tech	Actual Sample Down Stream-5 Spectrum SB16784-04 8/17/2010 Tetra Tech	QA/QC Review Relative % Difference	Duplicate Sample Dup-5 Spectrum SB16784-11 8/17/2010 Tetra Tech	Actual Sample Down Stream-6 Spectrum SB16784-05 8/17/2010 Tetra Tech	QA/QC Review Relative % Difference
Acenaphthene	<.155	<.149	NC	<.165	<.171	NC
Acenaphthylene	<.155	<.149	NC	<.165	<.171	NC
Anthracene	<.155	<.149	NC	<.165	<.171	NC
Benzo(a)anthracene	<.155	<.149	NC	<.165	<.171	NC
Benzo(a)pyrene	<.155	<.149	NC	<.165	<.171	NC
Benzo(b)fluoranthene	<.155	<.149	NC	<.165	<.171	NC
Benzo(g,h,i)perylene	<.155	<.149	NC	<.165	<.171	NC
Benzo(k)fluoranthene	<.155	<.149	NC	<.165	<.171	NC
Chrysene	<.155	<.149	NC	<.165	<.171	NC
Dibenzo(a,h)anthracene	<.155	<.149	NC	<.165	<.171	NC
Fluoranthene	<.155	<.149	NC	<.165	<.171	NC
Fluorene	<.155	<.149	NC	<.165	<.171	NC
Indeno(1,2,3-cd)pyrene	<.155	<.149	NC	<.165	<.171	NC
Methylnaphthalene, 1-	<.155	<.149	NC	<.165	<.171	NC
Methylnaphthalene, 2-	<.155	<.149	NC	<.165	<.171	NC
Naphthalene	<.155	<.149	NC	<.165	<.171	NC
Phenanthrene	<.155	<.149	NC	<.165	<.171	NC
Pyrene	<.155	<.149	NC	<.165	<.171	NC
Arsenic, Total	2.09	1.76	18.8%	5.29	4.57	15.8%
Barium, Total	22.20	19.00	16.8%	48.60	54	-10.2%
Cadmium, Total	<0.572	<0.523	NC	<0.579	<0.617	NC
Chromium, Total (as Cr ⁶⁺)	71.8	35.1	104.6%	88.0	108	-18.5%
Lead, Total	8.77	6.29	39.4%	13.0	13.5	-3.7%
Mercury, Total	0.0419	0.0471	-11.0%	0.1200	0.0992	21.0%
Selenium, Total	<1.72	<1.57	NC	<1.74	<1.85	NC
Silver, Total	<1.72	<1.57	NC	<1.74	<1.85	NC

Notes: NC indicates that Relative % Difference value not calculated since one or more results is reported as non-detect by laborator
 < indicates that compound not detected above laboratory analytical reporting limi

Appendix D
Copies of Public Notifications



TETRA TECH

January 27, 2011

Mayor Scott Galvin
City Hall
10 Common Street
Woburn, MA 01801

**Re: Notice of Availability of a Class A-2 Response Action Outcome Statement
Former John J. Riley Tannery
240 Salem Street
Woburn, MA
RTN 3-25734**

Dear Mayor Galvin:

On behalf of Organix, LLC, Tetra Tech, Inc. is herein providing notice of the availability of a Class A-2 Response Action Outcome (RAO) Statement for the above-referenced Disposal Site. This notice is provided in accordance with the Massachusetts Contingency Plan under 310 CMR 40.1403(3)(f).

The RAO Statement is available for review using the MassDEP Waste Site / Reportable Release File Viewer website at http://public.dep.state.ma.us/wsc_viewer/main.aspx under RTN 3-25734. If you have any questions or would like to obtain a copy of the report from the person conducting response actions, please contact the undersigned at (508) 903-2000.

Very truly yours,

Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

C: Dr. David Fitzpatrick, Chairman, Board of Health

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One Grant Street
Framingham, MA 01701
Tel 508.903.2000 Fax 508.903.2001



TETRATECH

January 27, 2011

Dr. David Fitzpatrick
Chairman, Board of Health
City Hall
10 Common Street
Woburn, MA 01801

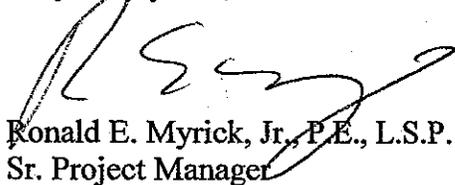
**Re: Notice of Availability of a Class A-2 Response Action Outcome Statement
Former John J. Riley Tannery
240 Salem Street
Woburn, MA
RTN 3-25734**

Dear Dr. Fitzpatrick:

On behalf of Organix, LLC, Tetra Tech, Inc. is herein providing notice of the availability of a Class A-2 Response Action Outcome (RAO) Statement for the above-referenced Disposal Site. This notice is provided in accordance with the Massachusetts Contingency Plan under 310 CMR 40.1403(3)(f).

The RAO Statement is available for review using the MassDEP Waste Site / Reportable Release File Viewer website at http://public.dep.state.ma.us/wsc_viewer/main.aspx under RTN 3-25734. If you have any questions or would like to obtain a copy of the report from the person conducting response actions, please contact the undersigned at (508) 903-2000.

Very truly yours,


Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

C: Mayor Scott Galvin

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One Grant Street
Framingham, MA 01701
Tel 508.903.2000 Fax 508.903.2001

Appendix A

LSP Statement of Limitations and Conditions

Statement of Limitations and Conditions

Attachment to Opinion of Massachusetts Licensed Site Professional

Tetra Tech Rizzo, Inc.

Name of Licensed Site Professional:	Ronald E. Myrick, Jr., P.E., L.S.P.
LSP Registration Number:	2715
Date of Opinion:	March 15, 2009
Client to Whom Opinion was Rendered:	Organix, LLC
Date of Agreement between Tetra Tech Rizzo and Client pursuant to which Opinion was Rendered:	October 1, 2008
Response Tracking No./Site No.:	3-25734

This Statement of Limitations and Conditions is an integral part of, and is incorporated by reference into, the Opinion of Massachusetts Licensed Site Professional referenced above.

Limitations

1. Purpose of Opinion

- A. This Opinion is being provided in compliance with the requirements set forth in the Massachusetts Contingency Plan (“MCP”), 310 CMR 40.0000 et seq. Specifically, the LSP has prepared this Opinion at the request of the Client identified above as part of a Massachusetts Contingency Plan Phase II and Phase III Report Submittal. This stated purpose has been a significant factor in determining the scope and level of services required to render this Opinion.
- B. Should the purpose for which this Opinion is to be used change, this Opinion shall no longer be valid.

2. General

- A. This Opinion was prepared for the sole and exclusive use of the Client, subject to the provisions of the MCP. No other party is entitled to rely in any way on the conclusions, observations, specifications, or data contained herein without the express written consent of Tetra Tech Rizzo, Inc. and the LSP who rendered this opinion. Any use of this Opinion by anyone other than Client, or any use of this Opinion by Client or others for any purpose other than the stated purpose set forth above, without the LSP's review and the written authorization of Tetra Tech Rizzo, Inc. and the LSP, shall be at the user's sole

risk, and neither Tetra Tech Rizzo, Inc. nor the LSP shall have any liability or responsibility therefor.

- B. This Opinion was prepared pursuant to an Agreement between Tetra Tech Rizzo, Inc. and the Client referenced above which defines the scope of work and sets out agreements regarding waivers of consequential damages, limitations on liability, and other important conditions and restrictions pursuant to which the Opinion is rendered. All uses of the Opinion are subject to and deemed acceptance of the conditions and restrictions contained in such Agreement. A copy of the Agreement or relevant excerpts from the Agreement will be made available upon requests to any authorized person seeking to use the Opinion.

3. Scope of Services

The observations and conclusions described in this Opinion are based solely on the Services provided pursuant to the Agreement with the Client and any approved additional services authorized by Client. Without limitation of any other applicable limitations or conditions, neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable for the existence of any condition, the discovery of which would have required the performance of services not authorized under the Agreement. To the best of the knowledge and belief of Tetra Tech Rizzo, Inc. and the LSP who signed this Opinion, no inquiry of an attorney-at-law having being made, no laws, regulations, orders, permits or approvals are applicable to the response actions to which this opinion relates except, if and to the extent applicable, M.G.L. c. 21A, Sections 19-19J, 309 CMR, M.G.L. c. 21 E and 310 CMR 40.0000. Accordingly, this opinion is not intended to and does not address compliance with any other laws, regulation, orders, permits or approvals.

4. Changed Circumstances

The passage of time may result in changes in technology, economic conditions or regulatory standards, manifestations of latent conditions, or the occurrence of future events which would render this Opinion inaccurate or otherwise inapplicable. Neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable or responsible for the consequences of any such changed circumstances or conditions on the accuracy of this Opinion. In addition, under no circumstances shall the Client nor any other person or entity rely on the information or conclusions contained in this Opinion after six months from its date of submission without the express written consent of Tetra Tech Rizzo, Inc. and the LSP. Reliance on the Opinion after such period of time shall be at the user's sole risk.

- 5. Should Tetra Tech Rizzo, Inc. or the LSP be required or requested to review or authorize others to use this Opinion after its date of submission, Tetra Tech Rizzo, Inc. shall be entitled to additional compensation at then existing rates or such other terms as may be agreed upon between Tetra Tech Rizzo, Inc. and the Client. Nothing herein contained shall be deemed to require Tetra Tech Rizzo, Inc. or the LSP to undertake any such review or authorize others to use this Opinion.

6. The conclusions stated in this Opinion are based upon:

- Visual inspection of existing physical conditions;
- Review and interpretation of site history and site usage information which was made available or obtained within the scope of work authorized by the Client;
- Information provided by the Client;
- Information and/or analyses for designated substances or parameters provided by an independent testing service or laboratory on a limited number of samples; and
- A limited number of subsurface explorations made on dates indicated in documentation supporting this Opinion;

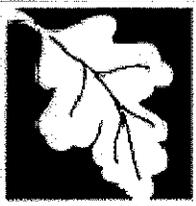
upon which the LSP has relied and presumed accurate, and upon which the LSP is entitled to reasonably rely. The LSP was not authorized and did not attempt to independently verify the accuracy or completeness of information or materials received from the Client and/or from laboratories and other third parties during the performance of its services. Neither Tetra Tech Rizzo, Inc. nor the LSP shall be liable for any condition, information, or conclusion, the discovery of which required information not available to the LSP or for independent investigation of information provided to the LSP by the Client and/or independent third parties.

7. This Opinion is rendered for the limited purpose stated above, and is not and should not be deemed to be an opinion concerning the compliance of any past or present owner or operator of the site with any federal, state or local law or regulation. No warranty or guarantee, whether express or implied, is made by this opinion, and any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. Without limiting the generality of the foregoing, no warranty or guarantee is made that all contamination at a site or sources or contamination has been detected or identified, that any action or recommended action will achieve all of its objectives, or that this Opinion or any action as to which this Opinion relates will be upheld by any audit conducted by the DEP or any other party.

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Appendix B

Copy of MassDEP Transmittal Form



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 25734

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

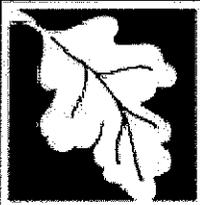
A. SITE LOCATION:

- 1. Site Name: **ORGANIX LLC**
- 2. Street Address: **240 SALEM ST**
- 3. City/Town: **WOBURN**
- 4. ZIP Code: **01801-2029**
- 5. UTM Coordinates: a. UTM N: **4706416** b. UTM E: **324608**
- 6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
 - a. Tier IA
 - b. Tier IB
 - c. Tier IC
 - d. Tier II
- 7. If applicable, provide the Permit Number:

B. THIS FORM IS BEING USED TO: (check all that apply)

- 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
- 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
- 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
- 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
- 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
 - Specify the outcome of Phase IV activities: (check one)
 - a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.
 - b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
 - c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
 - d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

(All sections of this transmittal form must be filled out unless otherwise noted above)



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 25734

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
- a. Type of Report: (check one) i. Initial Report ii. Interim Report iii. Final Report
- b. Frequency of Submittal: (check all that apply)
- i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
- ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
- iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.
- c. Status of Site: (check one) i. Phase V ii. Remedy Operation Status iii. Class C RAO
- d. Number of Remedial Systems and/or Monitoring Programs:

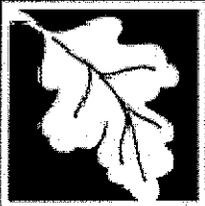
A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
19. Submit a **Modification of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(5).
20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).
21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

- a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.
- b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

(All sections of this transmittal form must be filled out unless otherwise noted above)



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 25734

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that a **Phase II Scope of Work or a Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report, a Remedy Operation Status, a Phase IV, Phase V or Post-Class C RAO Status Report, a Status Report to Maintain a Remedy Operation Status and/or a Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 2715

2. First Name: RONALD E

3. Last Name: MYRICK JR

4. Telephone: (508) 903-2363

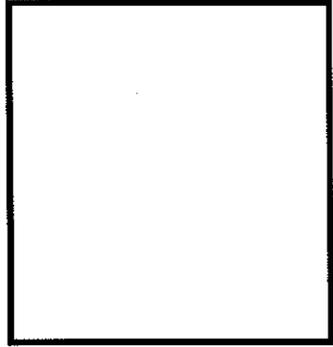
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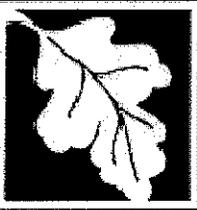
6. FAX:

7. Signature:

8. Date: (mm/dd/yyyy)

9. LSP Stamp:





**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 25734

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: a. change in contact name b. change of address c. change in the person undertaking response actions

2. Name of Organization: **ORGANIX LLC**

3. Contact First Name: **PETER** 4. Last Name: **MELTZER**

5. Street: **240 SALEM ST** 6. Title:

7. City/Town: **WOBURN** 8. State: **MA** 9. ZIP Code: **01801-0000**

10. Telephone: **(781) 932-4142** 11. Ext.: 12. FAX:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. RP or PRP a. Owner b. Operator c. Generator d. Transporter
 e. Other RP or PRP Specify:

2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

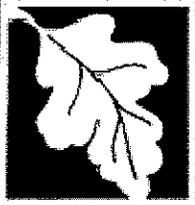
5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

6. If submitting a Modification of a Remedy Operation Status, check here to certify that a statement detailing the compliance history, as per 310 CMR 40.0893(5), for the person making this submittal is attached.

7. If submitting a Modification of a Remedy Operation Status, check here to certify that written consent of the person who submitted the Remedy Operation Status submittal, as per 310 CMR 40.0893(5), is attached.

8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to the DEP Regional Office.

9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 25734

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: _____ 3. Title: _____
Signature

4. For: **ORGANIX LLC** 5. Date: _____
(Name of person or entity recorded in Section D) (mm/dd/yyyy)

6. Check here if the address of the person providing certification is different from address recorded in Section D.

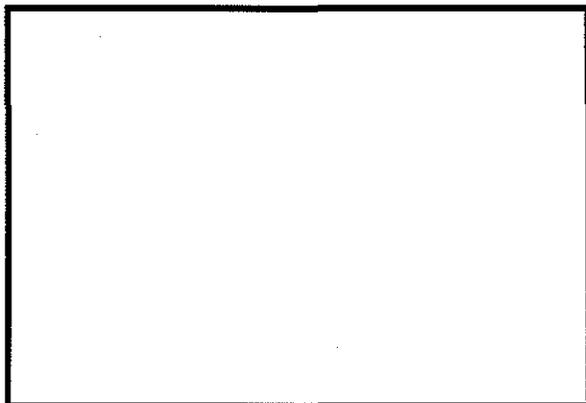
7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)



Appendix C
MassGIS Site Scoring Map

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

SITE NAME:

Organix LLC
240 Salem Street
Woburn, MA 01801
915589n 230082ew



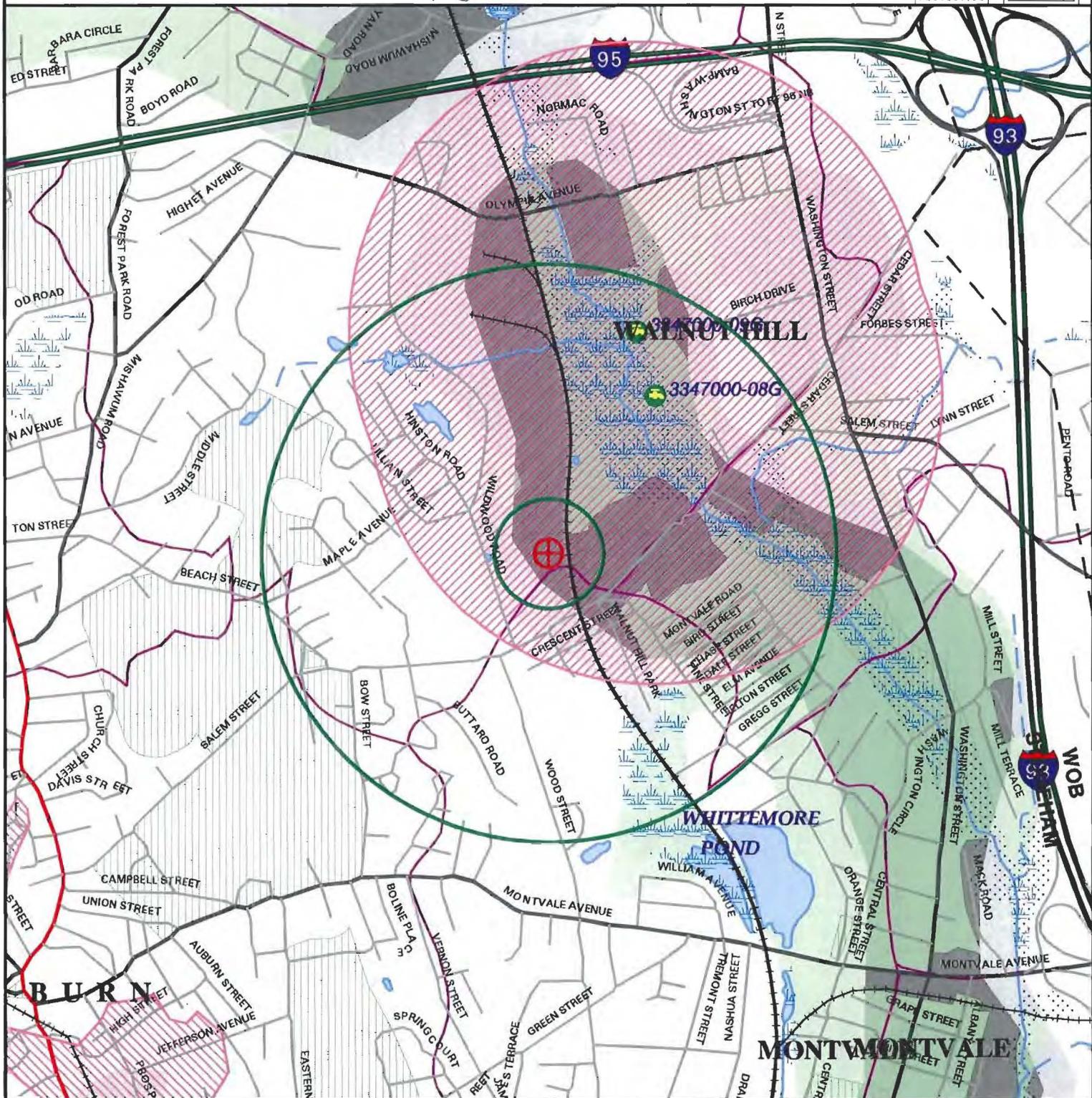
The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.



Office of Geographic and Environmental Information

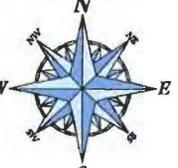


Massachusetts Executive Office of Environmental Affairs - 2007

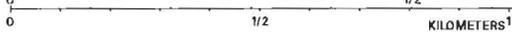


- Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail
- Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
- Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams
- Potentially Productive Aquifers: Medium, High Yield
- Non-Potential Drinking Water Source Area: Medium, High Yield

- EPA Sole Source Aquifer; FEMA 100-year floodplain
- Public Water Supplies: Ground, Surface, Non Community Approved Zone2; IWPA; Surface Water Supply Zone A
- Hydrography: Water Features, Public Surface Water Supply
- Wetlands: Fresh, Salt, NHESP Wetlands Habitat
- Protected Open Space; ACEC
- DEP Permitted Solid Waste Facilities; Certified Vernal Pools



SCALE 1:15000



February 20, 2007

NRS (21e) SCORING MAP DATA SOURCES

AQUIFERS: USGS-WRD/MassGIS, 1:48,000. Automated by MassGIS from the USGS Water Resources Div. Hydrologic Atlas series manuscripts. The definitions of high and medium yield vary among basins. Source dates 1977-1988.

SOLE SOURCE AQUIFERS: US EPA/MA DEP/MassGIS, various scales. EPA defines them as aquifers that are the 'sole or principal source' of drinking water for a given aquifer service area. Last updated May 1996.

NON-POTENTIAL DRINKING WATER SOURCE AREAS: DEP-BWSC (Bureau of Waste Site Cleanup). Those portions of high and medium yield aquifers, which may not be considered as areas of groundwater conducive to the locations of public water supplies. Please refer to the MCP guidelines for the definitions of these areas. Last updated November 2003.

DEP APPROVED ZONE II's: MA DEP, 1:25,000. As stated in 310 CMR 22.02 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated.' Digitized from data provided to DEP in approved hydrologic engineering reports. Data are updated continually.

INTERIM WELLHEAD PROTECTION AREAS: DEP-DWS (Division of Water Supply), 1:25,000. These polygons represent an interim Zone II for a groundwater source until an actual one is approved by the DEP Division of Water Supply. The radius of an IWPA varies according to the approved pumping rate. Updated in parallel with the Public Water Supplies data.

PUBLIC WATER SUPPLIES: DEP-DWS, 1:25,000. Community and non-community surface and withdrawal points were field collected using Global Positioning System receivers. The attributes were added from the DEP Division of Water Supply database. Continually updated.

HYDROGRAPHY: USGS/MassGIS. 1:25,000 USGS Digital Line Graph (DLG) data modified by MassGIS. Approximately 40% of the data was provided by USGS and MassGIS created the remainder to USGS specifications. Source dates 1977-1997. Last updated February 2005.

DRAINAGE BASINS: USGS-WRD/MassGIS, 1:24,000. Automated by MassGIS from USGS Water Resources Division manuscripts with approximately 2400 sub-basins as interpreted from 1:24,000 USGS quadrangle contour lines. 1987-1993. Last update March 2003.

WETLANDS: UMass Amherst RMP/MassGIS, 1:25,000. Includes nonforested wetlands extracted from the 1999 Land Use datalayer, which was photointerpreted from summer CIR photography. Interpretation was not done in stereo. Also includes, in most areas, forested wetlands from USGS Digital Line Graph (DLG) data.

PROTECTED OPEN SPACE: EOE (Executive Office of Environmental Affairs) MassGIS, 1:25,000. Includes federal, state, county, municipal, non-profit and protected private conservation and outdoor recreation lands. Ongoing updates.

ACECs: DEM, 1:25,000. Areas of Critical Environmental Concern are areas designated by the Secretary of EOE as having a number of valuable environmental features coexisting. Projects in ACECs are subject to the highest standards of review and performance. Last updated December 2003.

ROADS: USGS/MassGIS/MHD, 1:100,000. MassGIS extracted roads from the USGS Transportation DLG files. MA Highway Dept. updated roads through July 2004. MassGIS and MA DEP GIS group further edited this layer. Numbered routes are part of the state, U.S. or Interstate highway systems.

POLITICAL BOUNDARIES: MassGIS/USGS, 1:25,000. This datalayer was digitized by MassGIS from mylar USGS quads. Source date is approximately 1985.

DEP PERMITTED SOLID WASTE FACILITIES: DEP-DWS (Division of Solid Waste), 1:25,000. Includes only facilities regulated since 1971. Data includes sanitary landfills, transfer stations and recycling or composting facilities. Facility boundaries were compiled or approximate facility point locations drafted onto USGS quadrangles and automated by the DEP Division of Solid Waste. Last updated November 2003.

NHESP ESTIMATED HABITATS OF RARE WETLANDS WILDLIFE: Polygons show estimated habitats for all processed occurrences of rare wetlands wildlife. Data collected by Natural Heritage & Endangered Species Program and compiled at 1:24,000 or 1:25,000 scale. For use with Wetlands Protection Act Only. Effective 2005-2007.

NHESP CERTIFIED VERNAL POOLS: Points show all vernal pools certified by NHESP/MADFW (Fisheries and Wildlife) as of June 30, 1999. Data compiled at 1:24,000 or 1:25,000 scale. Effective 2005-2007.

Appendix D
Previous Environmental Reports

**REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR THE
JOHN J RILEY SITE
WOBURN, MASSACHUSETTS
AUGUST 11, 2005**

Prepared By:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
1 Congress Street, Suite 1100
Boston, MA 02114-2023

February 2006



TABLE OF CONTENTS

- I. Preliminary Assessment Form
- II. Site Investigation Form
- III. Appendices
 - Appendix A - Figures
 - Appendix B - Tables and Spreadsheets
 - Appendix C - Photodocumentation Log
 - Appendix D - Chain-of-Custody Record
 - Appendix E - Analytical Data

I. Preliminary Assessment Form



**EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT**

Site Name and Location

Name: John J Riley Site **Location:** Salem Street
Town: Woburn **County:** Middlesex **State:** Massachusetts

Site Status: NPL NON-NPL RCRA TSCA
 ACTIVE ABANDONED OTHER

Attached USGS Map of Location Site I.D. No.: MAD001035872

Latitude: 42° 29' 26.1" North **Longitude:** 71° 07' 37.6" West

Referral

Citizen City/Town State Preremedial
RCRA Other:

Name of referring party: Nancy Smith **Telephone:** (617) 918-1436
Address: USEPA Region 1, 1 Congress Street, Suite 1100, Boston, MA 02114-2023

Contacts Identified

1) Joe Lemay, RPM **Telephone:** (617) 918-1323
2) **Telephone:** ()

Source of Information

Verbal:
 Report: *Expanded Trip Report*, prepared by Weston Solutions, Inc., 21 September 2004.
 Other:

Potential Responsible Parties

Owner: Organix, Inc. **Telephone:** (781) 932-4142
Address: 240 Salem Street, Woburn, MA 01801

REMOVAL PRELIMINARY ASSESSMENT

Site Access

Authorizing Person: Peter Meltzer, President, Organix, Inc.

Date: May 17, 2005

Obtained

Verbal

Telephone: (781) 932-4142

Not Obtained

Written

Physical Site Characterization

Background Information: The site is the location of the former Riley Company tannery, which operated at the site from 1915 to 1989. In 1994, the property was subdivided and redeveloped for commercial and industrial use. The Site is now defined as Lots 1, 2, 7, and 8 on the Woburn Tax Assessor's Map 37. This removal site investigation focuses on the rear portion of Lot 7, currently owned by Organix, Inc. Possible tannery-related waste and high levels of chromium in surface soils have been identified in this particular area.

Description of Substances Possibly Present, Known or Alleged:

Solid waste, leather scraps, and soils bearing a bluish-gray material have been observed in and adjacent to a drainage swale in the northern (rear) portion of Lot 7.

Existing Analytical Data

Real-Time Monitoring Data:

Sampling Data: Soil sampling conducted by Weston Solutions, Inc. on June 22, 2004 documented chromium concentrations up to 49,000 mg/kg in surface soils in this area.

Potential Threat

Description of potential hazards to environment and/or population-identify any of the criteria for a Removal Action (from NCP) that may be met by the site under 40 CFR 300.415 [b] [2].

- i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.

REMOVAL PRELIMINARY ASSESSMENT

Potential Threat (Concluded)

- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

Prior Response Activities

PRP STATE FEDERAL OTHER

Brief Description: Site investigation and cleanup activities were conducted under the Massachusetts 21E program when the property was being redeveloped in the 1990s.

Priority for Site Investigation

High Medium Low None

Comments:

Report Generation

Originator: Frank Gardner, On-Scene Coordinator

Date: February 6, 2006

Affiliation: USEPA Region 1, EPRB

Telephone: 617-918-1278

II. Site Investigation Form



**EPA REGION I
REMOVAL SITE INVESTIGATION**

Inspection Information

Site Name: John J Riley Site **Address:** Salem Street
Town: Woburn **County:** Middlesex **State:** Massachusetts
Date of Inspection: August 11, 2005 **Time of Inspection:** 1430-1530 hours
Weather Conditions: 85°F, calm, clear
Site Status at Time of Inspection: ACTIVE INACTIVE
Comments:

Agencies/Personnel Performing Inspection

EPA: Frank Gardner, On-Scene Coordinator and Joe Lemay, Remedial Project Manager
 EPA Contractor:
 State: Anna Mayer, Massachusetts Department of Environmental Protection
 Other:

Current Owner Based on Field Interview: Organix, Inc.

Physical Site Characteristics

Parameter	Quantities/Extent
<input type="checkbox"/> Cylinders:	
<input type="checkbox"/> Drums:	
<input type="checkbox"/> Lagoons:	
<input type="checkbox"/> Tanks:	
<input type="checkbox"/> Asbestos:	
<input type="checkbox"/> Piles:	
<input checked="" type="checkbox"/> Stained Soil:	A bluish-gray layer of soil was observed on the north slope of the drainage swale in the northern (rear) portion of the Site.
<input type="checkbox"/> Sheens:	
<input type="checkbox"/> Stressed Vegetation:	
<input type="checkbox"/> Landfill:	
<input checked="" type="checkbox"/> Population in Vicinity:	9,806 people live within 1 mile, and access to the site is unrestricted. A worn footpath through the drainage swale and discarded beverage containers indicate that unauthorized individuals are accessing the Site.

REMOVAL SITE INVESTIGATION

Physical Site Characteristics (Concluded)

Parameter	Quantities/Extent
<input type="checkbox"/> Wells: <input type="checkbox"/> Drinking: <input type="checkbox"/> Monitoring:	
<input type="checkbox"/> Other:	

Field Quality Control Procedures

<input checked="" type="checkbox"/> SOP Followed	<input type="checkbox"/> Deviation From SOP
--	---

Description of Sampling Conducted

Three surface (0-3") soil samples were collected and transported to EPA's New England Regional Laboratory (NERL) for analysis.

Analyses

Analytical Parameter	Media	Laboratory
<input type="checkbox"/> VOC	<input type="checkbox"/> AIR	<input checked="" type="checkbox"/> NERL
<input checked="" type="checkbox"/> PCB	<input type="checkbox"/> WATER	<input type="checkbox"/> CLP
<input checked="" type="checkbox"/> PESTICIDE	<input checked="" type="checkbox"/> SOIL	<input type="checkbox"/> PRIVATE
<input checked="" type="checkbox"/> METALS	<input checked="" type="checkbox"/> SOURCE	<input type="checkbox"/> SAS
<input type="checkbox"/> CYANIDE	<input type="checkbox"/> SEDIMENT	<input type="checkbox"/> SOW
<input type="checkbox"/> SVOC		<input type="checkbox"/> Field
<input type="checkbox"/> TOXICITY		
<input type="checkbox"/> DIOXIN		
<input type="checkbox"/> ASBESTOS		
<input type="checkbox"/> OTHER		

Surface Soil Sample Locations and Results

Sample ID	Date	Latitude	Longitude	Total Cr (mg/kg)	Total Pb (mg/kg)
jjr-050811-01	8/11/2005	42.49037	71.1342	86000	530
jjr-050811-02	8/11/2005	42.49065	71.13362	2100	260
jjr-050811-03	8/11/2005	42.49037	71.13417	3800	2500

REMOVAL SITE INVESTIGATION

Receptors

Receptor Types

Drinking Water

Private:

Municipal:

Groundwater:

Unrestricted Access: Access to the Site is unrestricted. A worn footpath through the drainage swale and discarded beverage containers indicate that unauthorized individuals are accessing the Site.

Population in Proximity: 10,256 people live within 1 mile.

Sensitive Ecosystem:

Other:

Comments

Site Determination

Depending on further information, criteria that may be met by the site include 40 CFR 300.415 [b] [2], parts:

- i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.
- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- vii. The availability of other appropriate federal or state response mechanisms to respond to the release.

Report Generation

Originator: Frank Gardner, On-Scene Coordinator

Date: February 21, 2006

Affiliation: USEPA Region 1, EPRB

Telephone: 617-918-1278

III. Appendices

Appendix A

Figures

John J. Riley Site

Woburn, MA

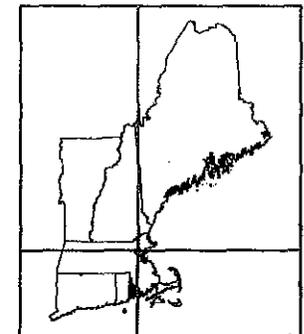
Latitude: 42° 29' 25.32" N

Longitude: 71° 8' 3.12" W

-  Site
-  Schools
-  County Boundary
-  Limited Access Highway
-  Secondary Highway
-  Local Thoroughfare
-  Local Road
-  Public Access Road
-  Road Approximation
-  Other Road
-  Open Space
-  Wellhead Protection Areas
-  Town Boundary
-  Surface Hydrography
-  Surface Water
-  Swamp/Marsh

People Per Square Mile

- 0
- < 100
- 101 - 1000
-  1001 - 2500
-  2501 - 5000
-  > 5000

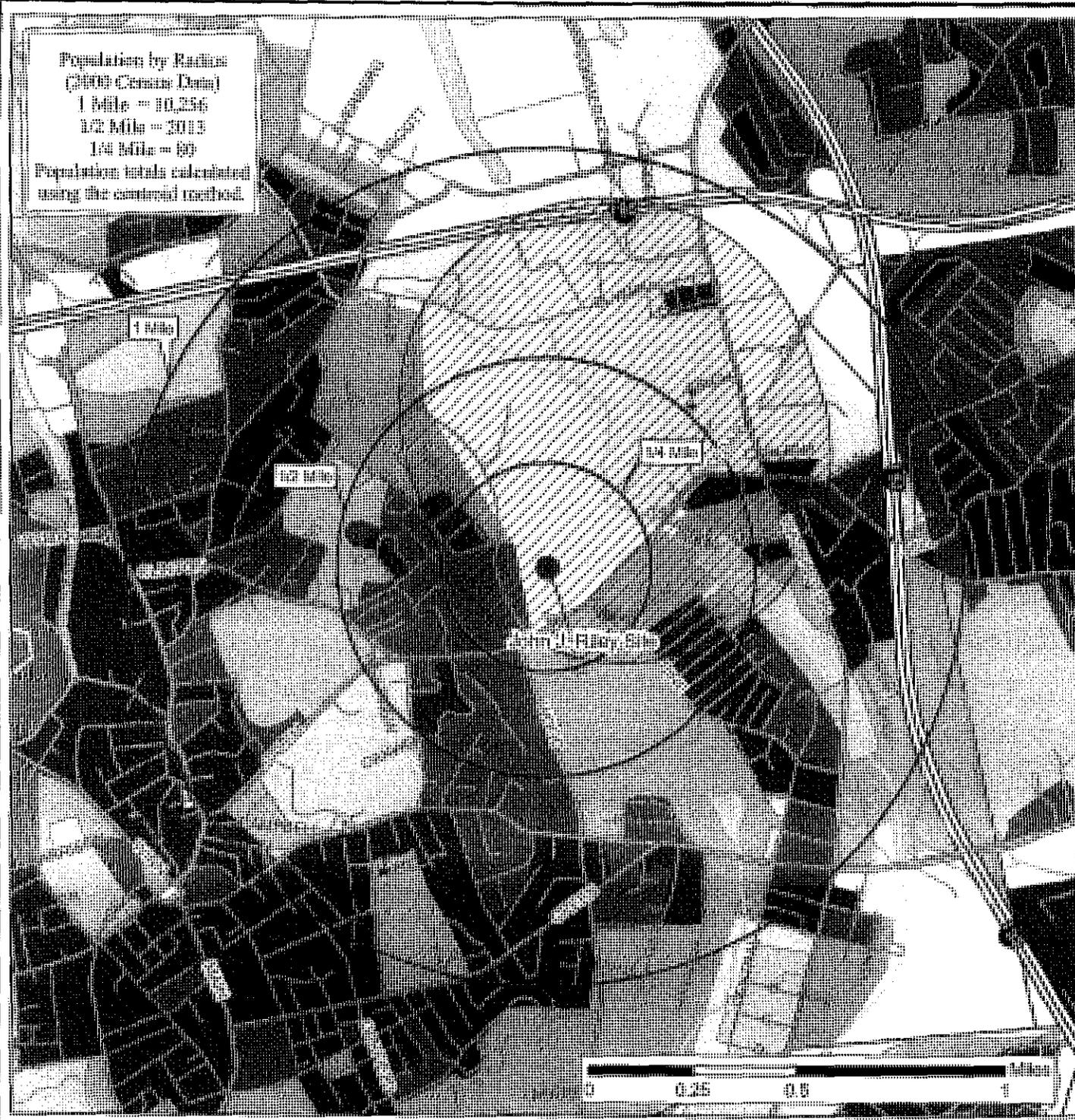


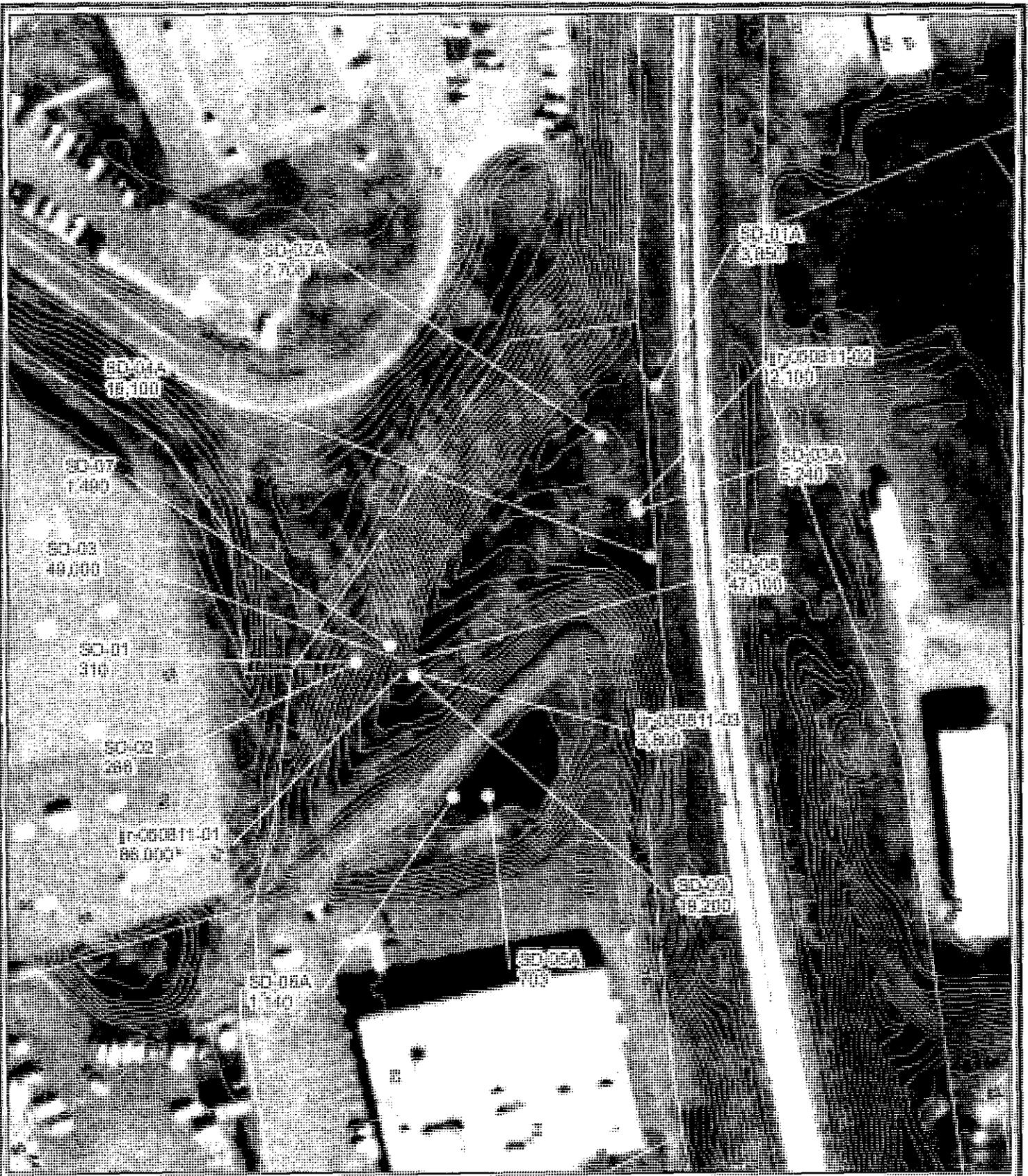
Albers Equal Area Projection

Created by EPA New England GIS Center
L:\Projects\Clean-up\Feb06\JRiley.mxd



Population by Radius
(2000 Census Data)
1 Mile = 10,256
1/2 Mile = 3013
1/4 Mile = 69
Population totals calculated
using the centroid method.



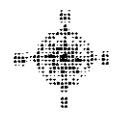


Legend

Chronicle Sampling Results (mg/kg)

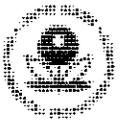
- 000 - 22,000
- 22,000 - 40,000
- 40,000 - 60,000
- 60,000 - 80,000
- 80,000 - 100,000

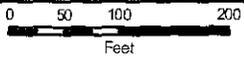
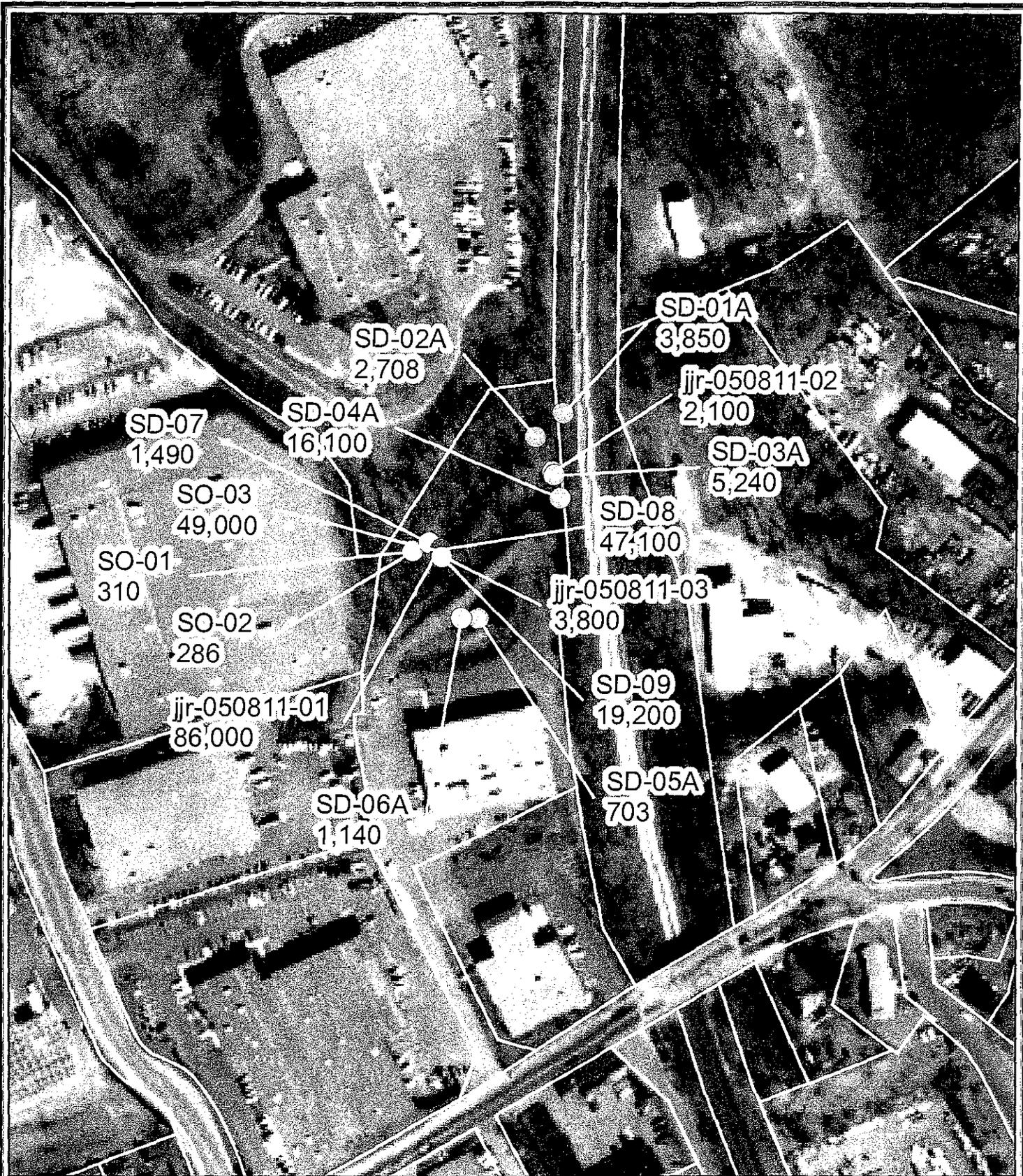
Boundary Contour



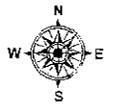
**John J. Riley Site
Sediment/Soil Sampling Locations And Elevation**

This map created by the EPA New England OS-Contam on 10/26/2006, updated 07-Feb-2008
 Environmental program/contam.J.Riley@epa.gov/sampling and customers of our system





- Legend**
- Chromium Sampling Results (mg/kg)**
- 286 - 22,000
 - 22,000 - 43,000
 - 43,000 - 65,000
 - 65,000 - 86,000



**John J. Riley Site
Sediment/Soil Sampling Locations**

This map created by the EPA New England GIS Center on 14-Dec-2005, updated 15-Feb-2006
 L:\projects\lemer_respsites\John J. Riley\soil_sediment_sampling.mxd



Appendix B

Tables and Spreadsheets

John J Riley Site
Woburn, MA

Surface Soil Sample Locations and Results

Sample ID	Date	Lat. deg	Lat. min	Lat. sec	Long. deg	Long. min	Long. sec	Total Cr (mg/kg)	Total Pb (mg/kg)
<i>Soil Samples Collected on August 11, 2005 for Removal Site Investigation</i>									
✓ jjr-050811-01	8/11/2005	42	29	25.32	71	8.000	3.120	86000	530
✓ jjr-050811-02	8/11/2005	42	29	26.34	71	8.000	1.020	2100	260
✓ jjr-050811-03	8/11/2005	42	29	25.32	71	8.000	3.000	3800	2500
<i>Soil Samples Collected on June 22, 2004 for "Expanded Trip Report"</i>									
✓ SO-01	6/22/2004	42	29	25.4	71	8.000	3.500	310	151
✓ SO-02	6/22/2004	42	29	25.4	71	8.000	3.500	286	10.4
✓ SO-03	6/22/2004	42	29	25.4	71	8.000	3.100	49000	637
SD-01A	6/22/2004	42	29	27.1	71	8.000	0.800	3850	317
SD-02A	6/22/2004	42	29	26.8	71	8.000	1.300	2708	220
SD-03A	6/22/2004	42	29	26.3	71	8.000	1.000	5240	235
SD-04A	6/22/2004	42	29	26	71	8.000	0.900	16100	508
SD-05A	6/22/2004	42	29	24.5	71	8.000	2.400	703	52.5
SD-06A	6/22/2004	42	29	24.5	71	8.000	2.700	1140	0.58
SD-07	6/22/2004	42	29	25.5	71	8.000	3.200	1490	3110
SD-08	6/22/2004	42	29	25.4	71	8.000	3.000	47100	254
SD-09	6/22/2004	42	29	25.3	71	8.000	3.000	19200	289

Appendix C

Photodocumentation Log

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



SCENE: Panorama of swale area and eroding slope. Note worn footpath on right. Photograph taken facing west.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1442 hours

CAMERA: Canon PowerShot A40



SCENE: View of worn footpath and hole in fence at top of slope. Photograph taken facing northwest.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1442 hours

CAMERA: Canon PowerShot A40

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



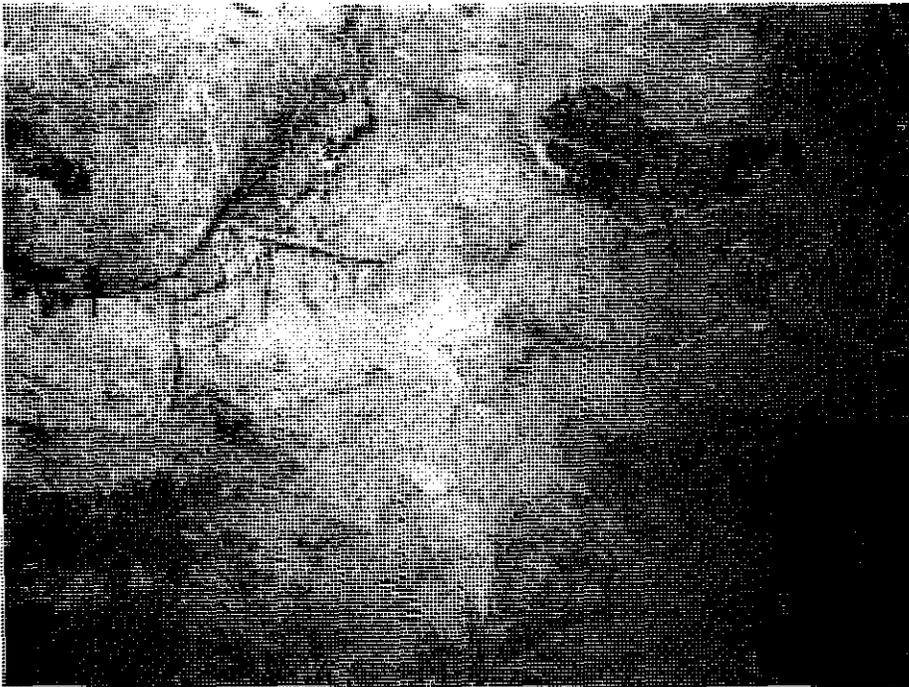
SCENE: View of leather scrap on face of slope. Photograph taken facing north.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1443 hours

CAMERA: Canon PowerShot A40



SCENE: View of exposed waste materials on face of slope. Photograph taken facing north.

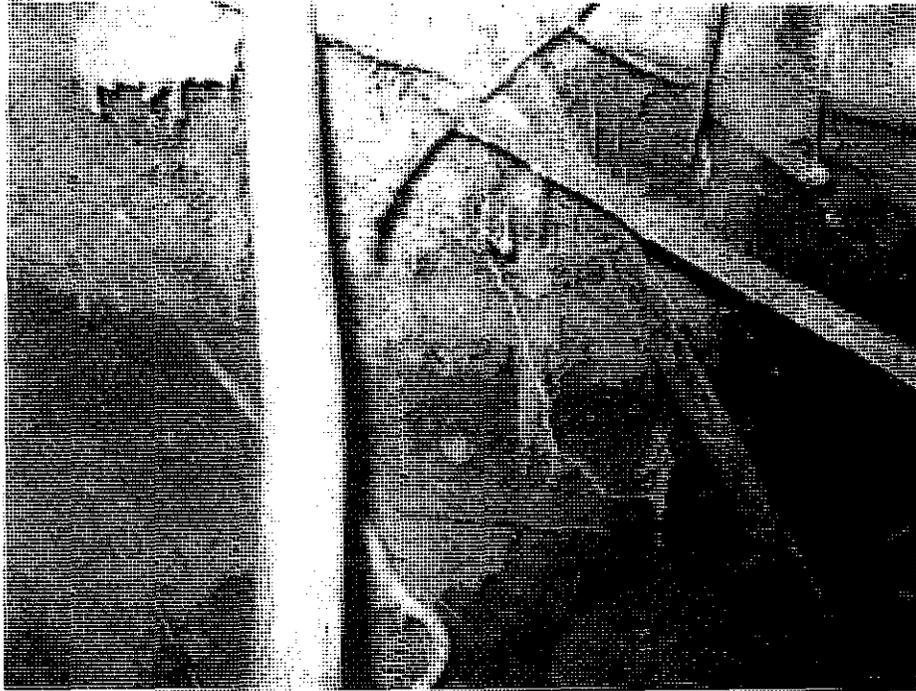
DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1444 hours

CAMERA: Canon PowerShot A40

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



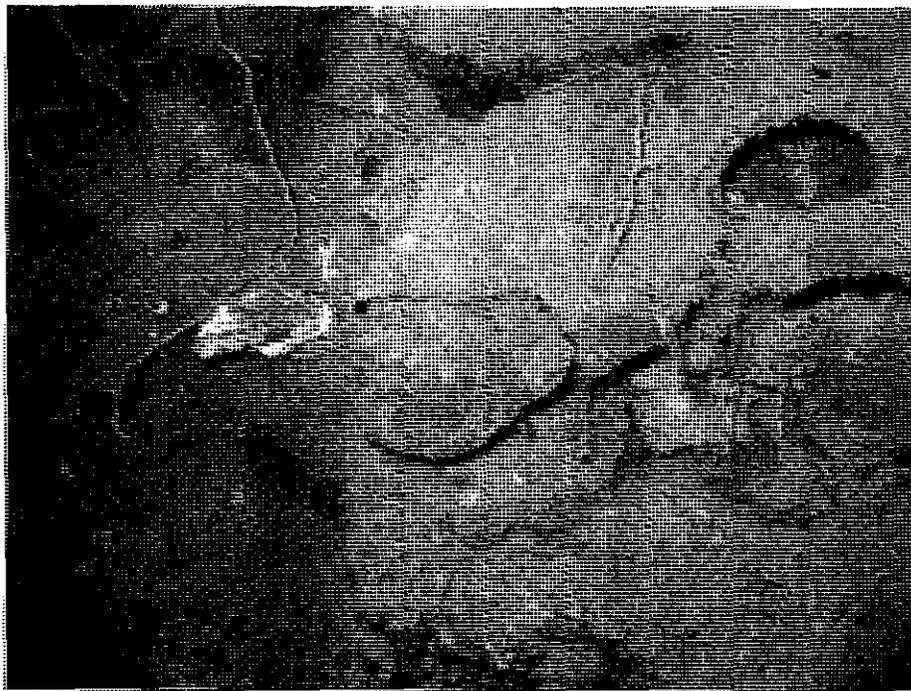
SCENE: View of bluish-gray waste material on face of slope. Photograph taken facing north.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1444 hours

CAMERA: Canon PowerShot A40



SCENE: View of leather scraps on face of slope. Photograph taken facing north.

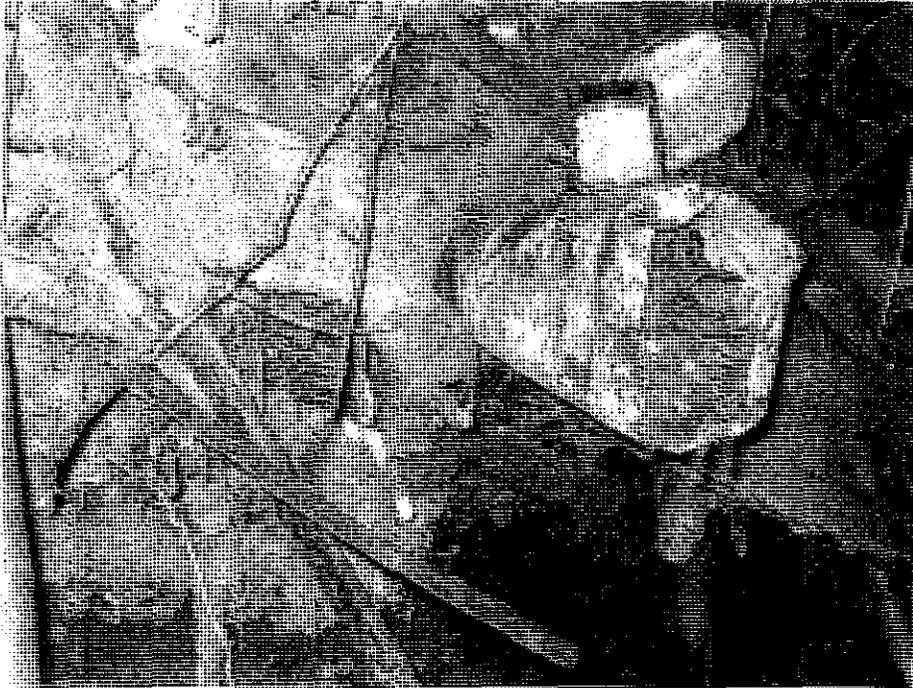
DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1444 hours

CAMERA: Canon PowerShot A40

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



SCENE: View of sample station jjr-050811-01. Photograph taken facing north.

DATE: August 11, 2005

TIME: 1448 hours

PHOTOGRAPHER: Frank Gardner

CAMERA: Canon PowerShot A40



SCENE: View of discarded beverage containers, chair, and worn footpath. Photograph taken facing north.

DATE: August 11, 2005

TIME: 1455 hours

PHOTOGRAPHER: Frank Gardner

CAMERA: Canon PowerShot A40

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



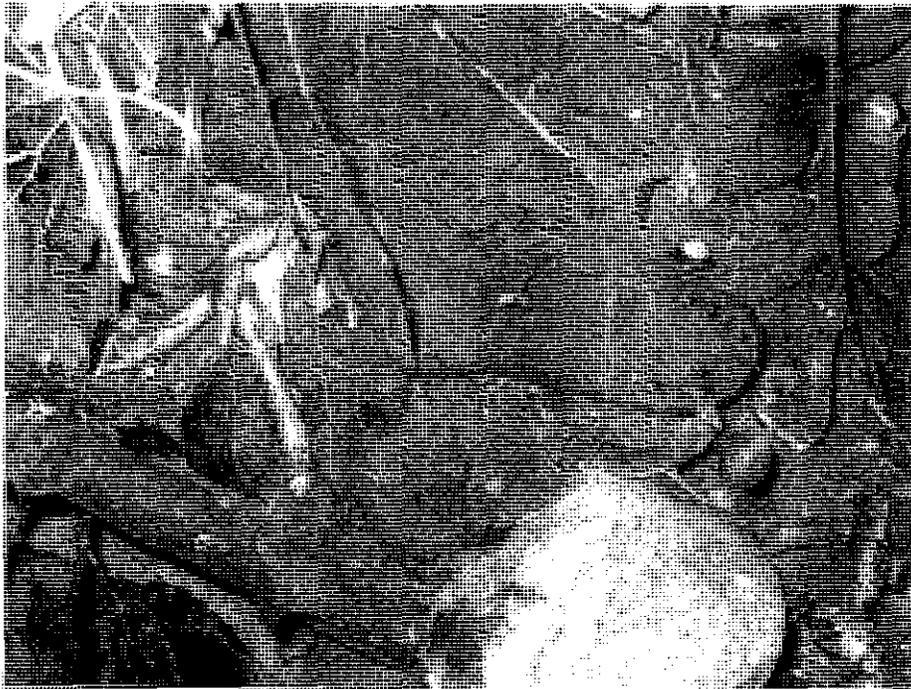
SCENE: View of sample station jjr-050811-02. Photograph taken facing east.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1503 hours

CAMERA: Canon PowerShot A40



SCENE: View of leather scraps on face of slope. Photograph taken facing west.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1505 hours

CAMERA: Canon PowerShot A40

PHOTOGRAPHY LOG SHEET
John J Riley Site • Woburn, Massachusetts



SCENE: View of sample station jjr-050811-03. Photograph taken facing east.

DATE: August 11, 2005

PHOTOGRAPHER: Frank Gardner

TIME: 1508 hours

CAMERA: Canon PowerShot A40

Appendix D

Chain-of-Custody Record

Appendix E
Analytical Data



United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

August 29, 2005

Frank Gardner - HBR
US EPA New England, Region 1
One Congress Street
Boston, MA 02114 - 2023

Project Number: 05080027

Project: John J. Riley - Woburn, MA

Analysis: Metals in Soil Medium Level by ICP

EPA Chemist: Mike Dowling *J.P. for M.D. 9/1/05*

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Samples were prepared following the EPA Region I SOP, INGMETALSPREP5.SOP.

Samples were analyzed following the EPA Region I SOP, EIASOP-INGICP6.

Samples were analyzed by inductively coupled plasma - atomic emission spectrometry using pneumatic nebulization. Preparation and analysis SOP's are based on "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Revision 2, Final Update III, Methods 3050B and 6010B," respectively.

Date Samples Received by the Laboratory: 8/11/05

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions, please call me at 617-918-8335.

Sincerely,

Nora J. Conlon 9/13/2005
Nora J. Conlon, Ph.D.
Chemistry Laboratory Services Coordinator

Qualifiers:

- RL** Reporting limit
- ND** Not Detected above reporting limit
- NA** Not Applicable
- NC** Not calculated since analyte concentration is ND
- J1** Estimated value due to MS recovery outside acceptance criteria
- J2** Estimated value due to LFB result outside acceptance criteria
- J3** Estimated value due to RPD result outside acceptance criteria
- J4** Estimated value due to LCS result outside acceptance criteria
- J5** Estimated value due to interference check recovery outside acceptance criteria
- B** Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
- R** No recovery was calculated since the analyte concentration is greater than four times the spike level.

Comments:

The samples were prepared and analyzed by ESAT contractors.

Sample results are in mg/Kg dry wt. units.

U.S. ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Metals in Soil Medium Level by ICP

Client Sample ID: JJR-050811-01
Date of Collection: 8/11/2005
Date of Digestion: 8/17/05
Date of Analysis: 8/23/05
Volume Digested: NA

Lab Sample ID: AA52247
Matrix: Soil/Sediment
Final Volume: 50 mL
Digestate Dilution: 1, 20
pH: NA

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	4400	21	
7440-36-0	Antimony	ND	210	
7440-38-2	Arsenic	ND	420	
7440-39-3	Barium	180	3.2	
7440-41-7	Beryllium	ND	1.1	
7440-43-9	Cadmium	ND	3.2	
7440-70-2	Calcium	66000	420	
7440-47-3	Chromium	86000	63	
7440-48-4	Cobalt	ND	63	
7440-50-8	Copper	140	3.2	J3
7439-89-6	Iron	26000	11	J3
7439-92-1	Lead	530	210	
7439-95-4	Magnesium	1700	420	
7439-96-5	Manganese	260	42	
7440-02-0	Nickel	12	6.3	
7782-49-2	Selenium	ND	11	
7440-22-4	Silver	ND	3.2	
7440-28-0	Thallium	ND	420	
7440-62-2	Vanadium	ND	63	
7440-66-6	Zinc	430	3.2	

Comments: Analytical results for the following elements were taken from the diluted sample: arsenic, calcium, cobalt, chromium, magnesium, manganese, lead, antimony, thallium, and vanadium.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Metals in Soil Medium Level by ICP

Client Sample ID: JJR-050811-02
Date of Collection: 8/11/2005
Date of Digestion: 8/17/05
Date of Analysis: 8/23/05
Volume Digested: NA

Lab Sample ID: AA52248
Matrix: Soil/Sediment
Final Volume: 50 mL
Digestate Dilution: 1
pH: NA

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	15000	19	
7440-36-0	Antimony	ND	9.7	J1
7440-38-2	Arsenic	ND	19	
7440-39-3	Barium	210	2.9	
7440-41-7	Beryllium	ND	0.97	
7440-43-9	Cadmium	ND	2.9	
7440-70-2	Calcium	4900	19	
7440-47-3	Chromium	2100	2.9	
7440-48-4	Cobalt	14	2.9	
7440-50-8	Copper	98	2.9	
7439-89-6	Iron	26000	9.7	
7439-92-1	Lead	260	9.7	J1
7439-95-4	Magnesium	5700	19	
7439-96-5	Manganese	590	1.9	
7440-02-0	Nickel	58	5.8	
7782-49-2	Selenium	ND	9.7	
7440-22-4	Silver	ND	2.9	
7440-28-0	Thallium	ND	53	J1
7440-62-2	Vanadium	180	2.9	
7440-66-6	Zinc	620	2.9	

Comments: Thallium RL raised due to matrix interference.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Metals in Soil Medium Level by ICP

Client Sample ID: JJR-050811-03
Date of Collection: 8/11/2005
Date of Digestion: 8/17/05
Date of Analysis: 8/23/05
Volume Digested: NA

Lab Sample ID: AA52249
Matrix: Soil/Sediment
Final Volume: 50 mL
Digestate Dilution: 1, 20
pH: NA

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	4600	19	
7440-36-0	Antimony	ND	190	
7440-38-2	Arsenic	ND	390	
7440-39-3	Barium	1600	58	
7440-41-7	Beryllium	ND	19	
7440-43-9	Cadmium	ND	58	
7440-70-2	Calcium	4300	19	
7440-47-3	Chromium	3800	2.9	
7440-48-4	Cobalt	30	2.9	
7440-50-8	Copper	230	58	
7439-89-6	Iron	270000	190	
7439-92-1	Lead	2500	190	
7439-95-4	Magnesium	1400	390	
7439-96-5	Manganese	1700	39	
7440-02-0	Nickel	51	5.8	
7782-49-2	Selenium	ND	190	
7440-22-4	Silver	ND	58	
7440-28-0	Thallium	ND	390	
7440-62-2	Vanadium	ND	58	
7440-66-6	Zinc	3300	58	

Comments: Analytical results for the following elements were taken from the undiluted sample: aluminum, calcium, cobalt, chromium, and nickel.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Laboratory Reagent Blank

Client Sample ID: N/A
Date of Collection: N/A
Date of Digestion: 8/17/05
Date of Analysis: 8/23/05
Volume Digested: 50 mL

Lab Sample ID: N/A
Matrix: Water
Final Volume: 50 mL
Digestate Dilution: 1
pH: NA

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	ND	200	
7440-36-0	Antimony	ND	100	
7440-38-2	Arsenic	ND	200	
7440-39-3	Barium	ND	30	
7440-41-7	Beryllium	ND	10	
7440-43-9	Cadmium	ND	30	
7440-70-2	Calcium	ND	200	
7440-47-3	Chromium	ND	30	
7440-48-4	Cobalt	ND	30	
7440-50-8	Copper	ND	30	
7439-89-6	Iron	ND	100	
7439-92-1	Lead	ND	100	
7439-95-4	Magnesium	ND	200	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	60	
7782-49-2	Selenium	ND	100	
7440-22-4	Silver	ND	30	
7440-28-0	Thallium	ND	200	
7440-62-2	Vanadium	ND	30	
7440-66-6	Zinc	ND	30	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

METALS MATRIX SPIKE (MS) RESULTS

John J. Riley - Woburn, MA

Sample ID: AA52248

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Antimony	99	ND	32.1	32	75 - 125
Arsenic	99	ND	104	105	75 - 125
Barium	99	210	292	83	75 - 125
Beryllium	39.6	ND	37.8	96	75 - 125
Cadmium	49.5	ND	44.7	90	75 - 125
Chromium	99	2100	2100	R	75 - 125
Cobalt	99	14	103	90	75 - 125
Copper	99	98	184	87	75 - 125
Lead	99	260	316	57	75 - 125
Manganese	99	590	646	R	75 - 125
Nickel	99	58	139	82	75 - 125
Selenium	99	ND	102	103	75 - 125
Silver	19.8	ND	18.6	94	75 - 125
Thallium	99	ND	58.0	59	75 - 125
Vanadium	99	180	254	75	75 - 125
Zinc	99	620	664	R	75 - 125

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

John J. Riley - Woburn, MA

Sample ID: AA52247

PARAMETER	SAMPLE RESULT	SAMPLE DUPLICATE RESULT	PRECISION RPD	QC LIMITS
	mg/Kg	mg/Kg	%	
Aluminum	4400	4800	9	30
Antimony	ND	ND	NC	30
Arsenic	ND	ND	NC	30
Barium	180	180	0	30
Beryllium	ND	ND	NC	30
Cadmium	ND	ND	NC	30
Calcium	66000	70000	6	30
Chromium	86000	87000	1	30
Cobalt	ND	ND	NC	30
Copper	140	100	33	30
Iron	26000	15000	54	30
Lead	530	520	2	30
Magnesium	1700	2100	21	30
Manganese	260	210	21	30
Nickel	12	10	18	30
Selenium	ND	ND	NC	30
Silver	ND	ND	NC	30
Thallium	ND	ND	NC	30
Vanadium	ND	ND	NC	30
Zinc	430	420	2	30

Comments: Analytical results for the following elements were taken from the diluted sample: arsenic, calcium, cobalt, chromium, magnesium, manganese, lead, antimony, thallium, and vanadium.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

John J. Riley - Woburn, MA

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Aluminum	1000	1000	100	85 - 115
Antimony	1000	924	92	85 - 115
Arsenic	1000	975	98	85 - 115
Barium	1000	1060	106	85 - 115
Beryllium	400	388	97	85 - 115
Cadmium	500	445	89	85 - 115
Calcium	10000	9550	96	85 - 115
Chromium	1000	970	97	85 - 115
Cobalt	1000	969	97	85 - 115
Copper	1000	998	100	85 - 115
Iron	1000	970	97	85 - 115
Lead	1000	920	92	85 - 115
Magnesium	10000	9940	99	85 - 115
Manganese	1000	972	97	85 - 115
Nickel	1000	944	94	85 - 115
Selenium	1000	994	99	85 - 115
Silver	200	193	96	85 - 115
Thallium	1000	937	94	85 - 115
Vanadium	1000	979	98	85 - 115
Zinc	1000	934	93	85 - 115

Comments:

Samples in Batch: AA52247, AA52248, AA52249

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Solid Laboratory Control Sample (LCS) Results

John J. Riley - Woburn, MA

PARAMETER	LCS RESULTS mg/Kg	CONTROL LIMITS mg/Kg
Aluminum	6080	3950 - 9710
Antimony	53.9	10.0 - 168
Arsenic	127	108 - 164
Barium	146	112 - 169
Beryllium	66.4	54.8 - 78.8
Cadmium	219	201 - 291
Calcium	3280	2680 - 4180
Chromium	93.8	75.0 - 116
Cobalt	43.3	36.2 - 53.1
Copper	66.2	51.2 - 81.4
Iron	10600	6920 - 17200
Lead	72.8	59.8 - 88.6
Magnesium	1940	1560 - 2520
Manganese	242	197 - 307
Nickel	69.2	59.3 - 86.1
Selenium	83.3	60.7 - 100
Silver	128	77.8 - 176
Thallium	101	90.7 - 149
Vanadium	99.8	80.0 - 134
Zinc	127	107 - 166

Comments:



United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

September 12, 2005

Frank Gardner - HBR
US EPA New England, Region 1
One Congress Street
Boston, MA 02114 - 2023

Project Number: 05080027
Project: John J. Riley - Woburn, MA
Analysis: Pesticides and PCBs Medium Level in Soil
Analyst: Paul Carroll *Maxwell 9.12.05*

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, PESTSOIL2.SOP.

The analysis was performed using high resolution capillary column chromatography on a Hewlett Packard 5890 Series II gas chromatograph equipped with dual electron capture detectors. The 30 meter dual capillary column system consists of a J&W DB-5 and J&W DB-1701, both with 0.25mm ID and 0.25 micron film thickness. The results are reported on a dry weight basis.

Date Samples Received by the Laboratory: 8/11/05

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8335 .

Sincerely,

Nora J. Conlon 9/13/2005

Nora Conlon, Ph.D.
Chemistry Laboratory Services Coordinator

Qualifiers: RL = Reporting limit
ND = Not Detected above Reporting limit
NA = Not Applicable due to high sample dilutions or sample interferences
J = Estimated value
E = Estimated value exceeds the calibration range
L = Estimated value is below the calibration range
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
C = The identification has been confirmed by GC/MS.
A = Suspected Aldol condensation product.
N = Tentatively identified compound.
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Pesticides and PCBs Medium Level in Soil

Client Sample ID: JJR-050811-01
Date of Collection: 8/11/2005
Date of Extraction: 8/15/05
Date of Analysis: 8/20/05
Dry Weight Extracted: 4.01 grams
Wet Weight Extracted: 5.12 grams
Volume Extracted: N/A

Lab Sample ID: AA52247
Matrix: Soil
Final Volume: 5.0 mL
Percent Solids: 78%
Extract Dilution: 1
pH: N/A
GPC Factor: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
72-54-8	4,4'-DDD	ND	6.0	
72-55-9	4,4'-DDE	ND	6.0	
50-29-3	4,4'-DDT	5.5	6.0	P, L
309-00-2	Aldrin	ND	6.0	
5103-71-9	Alpha Chlordane	ND	6.0	
319-84-6	Alpha-BHC	ND	6.0	
319-85-7	Beta-BHC	ND	6.0	
319-86-8	Delta-BHC	ND	6.0	
60-57-1	Dieldrin	ND	6.0	
959-98-8	Endosulfan I	ND	6.0	
33212-65-9	Endosulfan II	ND	6.0	
1031-07-8	Endosulfan Sulfate	ND	6.0	
72-20-8	Endrin	ND	6.0	
7421-93-4	Endrin Aldehyde	ND	6.0	
53494-70-5	Endrin Ketone	6.8	6.0	
5103-74-2	Gamma Chlordane	ND	6.0	
58-89-9	Gamma-BHC	ND	6.0	
76-44-8	Heptachlor	ND	6.0	
1024-57-3	Heptachlor Epoxide	ND	6.0	
72-43-5	Methoxychlor	ND	6.0	
12674-11-2	Aroclor-1016	ND	120	
11104-28-2	Aroclor-1221	ND	120	
11141-16-5	Aroclor-1232	ND	120	
53469-21-9	Aroclor-1242	ND	120	
12672-29-6	Aroclor-1248	ND	120	
11097-69-1	Aroclor-1254	ND	120	
11096-82-5	Aroclor-1260	ND	120	
11100-14-4	Aroclor-1262	ND	120	
37324-23-5	Aroclor-1268	ND	120	
57-74-9	Technical Chlordane	ND	120	
8001-35-2	Toxaphene	ND	120	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	91	18 - 130
Decachlorobiphenyl	94	64 - 122

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Pesticides and PCBs Medium Level in Soil

Client Sample ID:	JJR-050811-02	Lab Sample ID:	AA52248
Date of Collection:	8/11/2005	Matrix:	Sediment
Date of Extraction:	8/15/05	Final Volume:	5.0 mL
Date of Analysis:	8/19/05	Percent Solids:	70%
Dry Weight Extracted:	3.62 grams	Extract Dilution:	1
Wet Weight Extracted:	5.14 grams	pH:	N/A
Volume Extracted:	N/A	GPC Factor:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
72-54-8	4,4'-DDD	ND	7.0	
72-55-9	4,4'-DDE	8.2	7.0	
50-29-3	4,4'-DDT	41	7.0	P
309-00-2	Aldrin	ND	7.0	
5103-71-9	Alpha Chlordane	28	7.0	
319-84-6	Alpha-BHC	ND	7.0	
319-85-7	Beta-BHC	ND	7.0	
319-86-8	Delta-BHC	ND	7.0	
60-57-1	Dieldrin	ND	7.0	
959-98-8	Endosulfan I	ND	7.0	
33212-65-9	Endosulfan II	ND	7.0	
1031-07-8	Endosulfan Sulfate	ND	7.0	
72-20-8	Endrin	ND	7.0	
7421-93-4	Endrin Aldehyde	ND	7.0	
53494-70-5	Endrin Ketone	9.9	7.0	P
5103-74-2	Gamma Chlordane	ND	7.0	
58-89-9	Gamma-BHC	ND	7.0	
76-44-8	Heptachlor	ND	7.0	
1024-57-3	Heptachlor Epoxide	ND	7.0	
72-43-5	Methoxychlor	ND	7.0	
12674-11-2	Aroclor-1016	ND	140	
11104-28-2	Aroclor-1221	ND	140	
11141-16-5	Aroclor-1232	ND	140	
53469-21-9	Aroclor-1242	ND	140	
12672-29-6	Aroclor-1248	ND	140	
11097-69-1	Aroclor-1254	200	140	
11096-82-5	Aroclor-1260	140	140	L
11100-14-4	Aroclor-1262	ND	140	
37324-23-5	Aroclor-1268	ND	140	
57-74-9	Technical Chlordane	ND	140	
8001-35-2	Toxaphene	ND	140	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	60	18 - 130
Decachlorobiphenyl	74	64 - 122

Comments:

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Pesticides and PCBs Medium Level in Soil

Client Sample ID: JJR-050811-03
Date of Collection: 8/11/2005
Date of Extraction: 8/15/05
Date of Analysis: 8/20/05
Dry Weight Extracted: 3.84 grams
Wet Weight Extracted: 5.15 grams
Volume Extracted: N/A

Lab Sample ID: AA52249
Matrix: Soil
Final Volume: 5.0 mL
Percent Solids: 75%
Extract Dilution: 1
pH: N/A
GPC Factor: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
72-54-8	4,4'-DDD	ND	6.5	
72-55-9	4,4'-DDE	9.3	6.5	
50-29-3	4,4'-DDT	43	6.5	
309-00-2	Aldrin	ND	6.5	
5103-71-9	Alpha Chlordane	ND	6.5	
319-84-6	Alpha-BHC	ND	6.5	
319-85-7	Beta-BHC	ND	6.5	
319-86-8	Delta-BHC	ND	6.5	
60-57-1	Dieldrin	ND	6.5	
959-98-8	Endosulfan I	ND	6.5	
33212-65-9	Endosulfan II	ND	6.5	
1031-07-8	Endosulfan Sulfate	ND	6.5	
72-20-8	Endrin	ND	6.5	
7421-93-4	Endrin Aldehyde	ND	6.5	
53494-70-5	Endrin Ketone	ND	6.5	
5103-74-2	Gamma Chlordane	ND	6.5	
58-89-9	Gamma-BHC	ND	6.5	
76-44-8	Heptachlor	ND	6.5	
1024-57-3	Heptachlor Epoxide	ND	6.5	
72-43-5	Methoxychlor	ND	6.5	
12674-11-2	Aroclor-1016	ND	130	
11104-28-2	Aroclor-1221	ND	130	
11141-16-5	Aroclor-1232	ND	130	
53469-21-9	Aroclor-1242	ND	130	
12672-29-6	Aroclor-1248	ND	130	
11097-69-1	Aroclor-1254	ND	130	
11096-82-5	Aroclor-1260	ND	130	
11100-14-4	Aroclor-1262	ND	130	
37324-23-5	Aroclor-1268	ND	130	
57-74-9	Technical Chlordane	ND	130	
8001-35-2	Toxaphene	ND	130	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	94	18 - 130
Decachlorobiphenyl	690	64 - 122

Comments: The decachlorobiphenyl surrogate recovery is high. The tetrachloroxylene surrogate recovery is within QC limits.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

John J. Riley - Woburn, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Soil
Date of Extraction:	8/15/05	Final Volume:	5 mL
Date of Analysis:	8/20/05	Percent Solids:	100%
Dry Weight Extracted:	5.07 grams	Extract Dilution:	1
Wet Weight Extracted:	5.07 grams	pH:	N/A
Volume Extracted:	N/A	GPC Factor:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
72-54-8	4,4'-DDD	ND	5.0	
72-55-9	4,4'-DDE	ND	5.0	
50-29-3	4,4'-DDT	ND	5.0	
309-00-2	Aldrin	ND	5.0	
5103-71-9	Alpha Chlordane	ND	5.0	
319-84-6	Alpha-BHC	ND	5.0	
319-85-7	Beta-BHC	ND	5.0	
319-86-8	Delta-BHC	ND	5.0	
60-57-1	Dieldrin	ND	5.0	
959-98-8	Endosulfan I	ND	5.0	
33212-65-9	Endosulfan II	ND	5.0	
1031-07-8	Endosulfan Sulfate	ND	5.0	
72-20-8	Endrin	ND	5.0	
7421-93-4	Endrin Aldehyde	ND	5.0	
53494-70-5	Endrin Ketone	ND	5.0	
5103-74-2	Gamma Chlordane	ND	5.0	
58-89-9	Gamma-BHC	ND	5.0	
76-44-8	Heptachlor	ND	5.0	
1024-57-3	Heptachlor Epoxide	ND	5.0	
72-43-5	Methoxychlor	ND	5.0	
12674-11-2	Aroclor-1016	ND	100	
11104-28-2	Aroclor-1221	ND	100	
11141-16-5	Aroclor-1232	ND	100	
53469-21-9	Aroclor-1242	ND	100	
12672-29-6	Aroclor-1248	ND	100	
11097-69-1	Aroclor-1254	ND	100	
11096-82-5	Aroclor-1260	ND	100	
11100-14-4	Aroclor-1262	ND	100	
37324-23-5	Aroclor-1268	ND	100	
57-74-9	Technical Chlordane	ND	100	
8001-35-2	Toxaphene	ND	100	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	81	18 - 130
Decachlorobiphenyl	126	64 - 122

Comments: The decachlorobiphenyl (DCB) surrogate recovery is high. Surrogate recovery for tetrachloroxylene (TCX) is within QC limits.

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

PESTICIDES MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

John J. Riley - Woburn, MA

Sample ID: AA52248

PARAMETER	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC	QC LIMITS (% REC)
4,4'-DDD	55	ND	68	123	70 - 130
4,4'-DDE	55	8.2	62	98	70 - 130
4,4'-DDT	55	41	125	153	34 - 166
Aldrin	55	ND	53	96	36 - 119
Alpha Chlordane	55	28	84	102	70 - 130
Alpha-BHC	55	ND	61	111	70 - 130
Aroclor-1016	0	ND	ND	0	70 - 130
Aroclor-1254	0	200	ND	0	70 - 130
Aroclor-1260	0	140	ND	0	70 - 130
Beta-BHC	55	ND	61	111	70 - 130
Delta-BHC	55	ND	62	113	70 - 130
Dieldrin	55	ND	63	114	39 - 155
Endosulfan I	55	ND	56	102	70 - 130
Endosulfan II	55	ND	57	103	70 - 130
Endosulfan Sulfate	55	ND	58	105	70 - 130
Endrin	55	ND	62	113	52 - 139
Endrin Aldehyde	55	ND	49	89	70 - 130
Endrin Ketone	55	9.9	71	111	70 - 130
Gamma Chlordane	55	ND	73	133	70 - 130
Gamma-BHC	55	ND	65	118	34 - 137
Heptachlor	55	ND	54	98	47 - 143
Heptachlor Epoxide	55	ND	60	109	70 - 130
Methoxychlor	55	ND	76	138	70 - 130
Technical Chlordane	0	ND	ND	0	70 - 130
Toxaphene	0	ND	ND	0	70 - 130

Comments: Matrix spike recoveries for Gamma Chlordane and Methoxychlor exceed QC limits.

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/Kg	MSD % REC	RPD %	QC LIMITS RPD
4,4'-DDD	56	83	149	19	
4,4'-DDE	56	64	100	2	
4,4'-DDT	56	138	174	13	50
Aldrin	56	56	100	4	43
Alpha Chlordane	56	88	107	6	
Alpha-BHC	56	65	116	5	
Beta-BHC	56	67	120	8	
Delta-BHC	56	67	120	6	
Dieldrin	56	71	127	11	38
Endosulfan I	56	61	109	7	
Endosulfan II	56	63	113	9	
Endosulfan Sulfate	56	65	116	10	
Endrin	56	68	122	8	45
Endrin Aldehyde	56	33	59	40	
Endrin Ketone	56	61	91	19	
Gamma Chlordane	56	78	140	5	
Gamma-BHC	56	69	123	5	50
Heptachlor	56	56	100	2	31
Heptachlor Epoxide	56	66	118	8	
Methoxychlor	56	81	145	5	

Comments:

Samples in Batch: AA52247, AA52248, AA52249

US ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND LABORATORY

Laboratory Duplicate Results

John J. Riley - Woburn, MA

Sample ID: AA52248

PARAMETER	SAMPLE RESULT	SAMPLE DUPLICATE RESULT	PRECISION RPD	QC LIMITS
	ug/Kg	ug/Kg	%	
4,4'-DDD	ND	ND	ND	50
4,4'-DDE	8.2	10	19.8	50
4,4'-DDT	41	42	2.4	50
Aldrin	ND	ND	ND	50
Alpha Chlordane	28	29	3.5	50
Alpha-BHC	ND	ND	ND	50
Aroclor-1016	ND	ND	ND	50
Aroclor-1221	ND	ND	ND	50
Aroclor-1232	ND	ND	ND	50
Aroclor-1242	ND	ND	ND	50
Aroclor-1248	ND	ND	ND	50
Aroclor-1254	200	260	26	50
Aroclor-1260	140	170	19	50
Aroclor-1262	ND	ND	ND	50
Aroclor-1268	ND	ND	ND	50
Beta-BHC	ND	ND	ND	50
Delta-BHC	ND	ND	ND	50
Dieldrin	ND	ND	ND	50
Endosulfan I	ND	ND	ND	50
Endosulfan II	ND	ND	ND	50
Endosulfan Sulfate	ND	ND	ND	50
Endrin	ND	ND	ND	50
Endrin Aldehyde	ND	ND	ND	50
Endrin Ketone	9.9	11	10.5	50
Gamma Chlordane	ND	ND	ND	50
Gamma-BHC	ND	ND	ND	50
Heptachlor	ND	ND	ND	50
Heptachlor Epoxide	ND	ND	ND	50
Methoxychlor	ND	ND	ND	50
Technical Chlordane	ND	ND	ND	50
Toxaphene	ND	ND	ND	50

**EXPANDED TRIP REPORT
FOR
JOHN J RILEY
WOBURN, MASSACHUSETTS**

Prepared For:
U.S. Environmental Protection Agency
Region I
Office of Site Remediation and Restoration
1 Congress Street, Suite 1100
Boston, MA 02114-2023

CONTRACT NO. 68-W-00-097

CERCLIS NO. MAD001035872
STATE ID NOS. RTN 3-0013444
(JJ Riley/Beatrice)
& RTN 3-0000482
(John J. Riley Co. Beatrice)
TDD NO. 04-05-0149
TASK NO. 8152
DC NO. A-4683

Submitted By:
Weston Solutions, Inc.
Region I
Superfund Technical Assessment and Response Team 2000 (START)
37 Upton Drive
Wilmington, MA 01887

21 September 2004

21 September 2004



**EPA REGION I SUPERFUND PROGRAM
TRIP REPORT/CHECKLIST**

Inspection Information

Site Name: John J Riley

Address: Salem Street

Town: Woburn

State: Massachusetts

CERCLIS No. MAD001035872

TDD No.: 04-05-0149

State ID Nos.: RTN 3-0013444 (JJ Riley/Beatrice) and
RTN 3-0000482 (John J. Riley Co. Beatrice)

Date of On-Site Reconnaissance: 30 April 2004

Time of On-Site Reconnaissance: 0715 hours (hrs) to 1300 hrs

Weather Conditions: Sunny, mid-70s °Fahrenheit (°F)

Date of Sampling Trip: 22 June 2004

Time of Sampling Trip: 0705 hrs to 1715 hrs

Weather Conditions: Partly cloudy, mid-60s °F

Site Status at Time of Inspection:

- ACTIVE**
 INACTIVE
 ABANDONED

Introduction/Trip Objective: The John J Riley (JJ Riley) site is located in the Aberjona River watershed and just west of the Wells G & H National Priority List (NPL) Site. In 2003, as part of on-going remedial investigations of the Wells G & H NPL Site, the U.S. Environmental Protection Agency (EPA) conducted an ecological risk assessment of the watershed. Part of the risk assessment included the collection of sediment samples from wetlands downstream of the JJ Riley site. Analysis of these sediment samples documented the presence of elevated concentrations of metals in the sediment, such as arsenic and chromium. The objective of the JJ Riley Site Reassessment (SR) sampling event was to collect appropriate analytical data to confirm or identify hazardous substances/source areas on the JJ Riley property.

Comments: The JJ Riley site is located along Salem Street in the Town of Woburn, Middlesex County, Massachusetts (MA). The geographic coordinates of the site, as measured from its approximate center, are 42° 29' 26.1" north latitude and 71° 07' 37.6" west longitude (Figure 1).

The JJ Riley site comprises 15.8 acres and is located approximately 2,500 feet (ft) west of the Aberjona River, 3,350 ft northeast of Woburn High School, and 2,700 ft northwest of Whittenmore Pond. In June 1994, the Maggiore Companies (a property developer), subdivided the site into six lots, which were identified by the Town of Woburn Tax Assessor's as Lot Nos. 11 through 16.



BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15' U.S.G.S. QUADRANGLE(S):

Boston North, MA Provisional Edition 1985; Reading, MA Provisional Edition 1987

0.2 0 0.2 0.4 0.6 0.8 1 1.2 1.4 Miles

1000 0 1000 2000 3000 4000 5000 6000 7000 Feet

0.5 0 0.5 1 1.5 2 Kilometers



QUADRANGLE LOCATION

SITE LOCATION MAP

JOHN J RILEY
SALEM STREET
WOBURN, MASSACHUSETTS



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE
04-05-0149	T. Benton	12/29/2003

FILE NAME:	FIGURE 1
E:\ARC_APRS\START2\WJ Riley.APR	

Inspection Information (Concluded)

In 2003, the Woburn Tax Assessors's office revised their tax maps, and the former JJ Riley site is now depicted on Woburn Tax Assessors Map No. 37 as Lot Nos. 3, 4, 7 and 8. These four lots (Nos. 3, 4, 7, and 8) are all currently owned by separate commercial businesses. Lot No. 3 is owned by the Robert M. Duffy Trust and is operated under the name of Kraft Power. Lot No. 4 is currently owned by the Robert B. Krueger Trust and is operated under the name of New England Industrial Truck. Lot No. 7 is owned and operated by Organix LLC (Organix). Lot No. 8 is currently owned by Beryl E. Rotondo and is operated under the name of Charl's Ice Cream (Figure 2 and Figure 3).

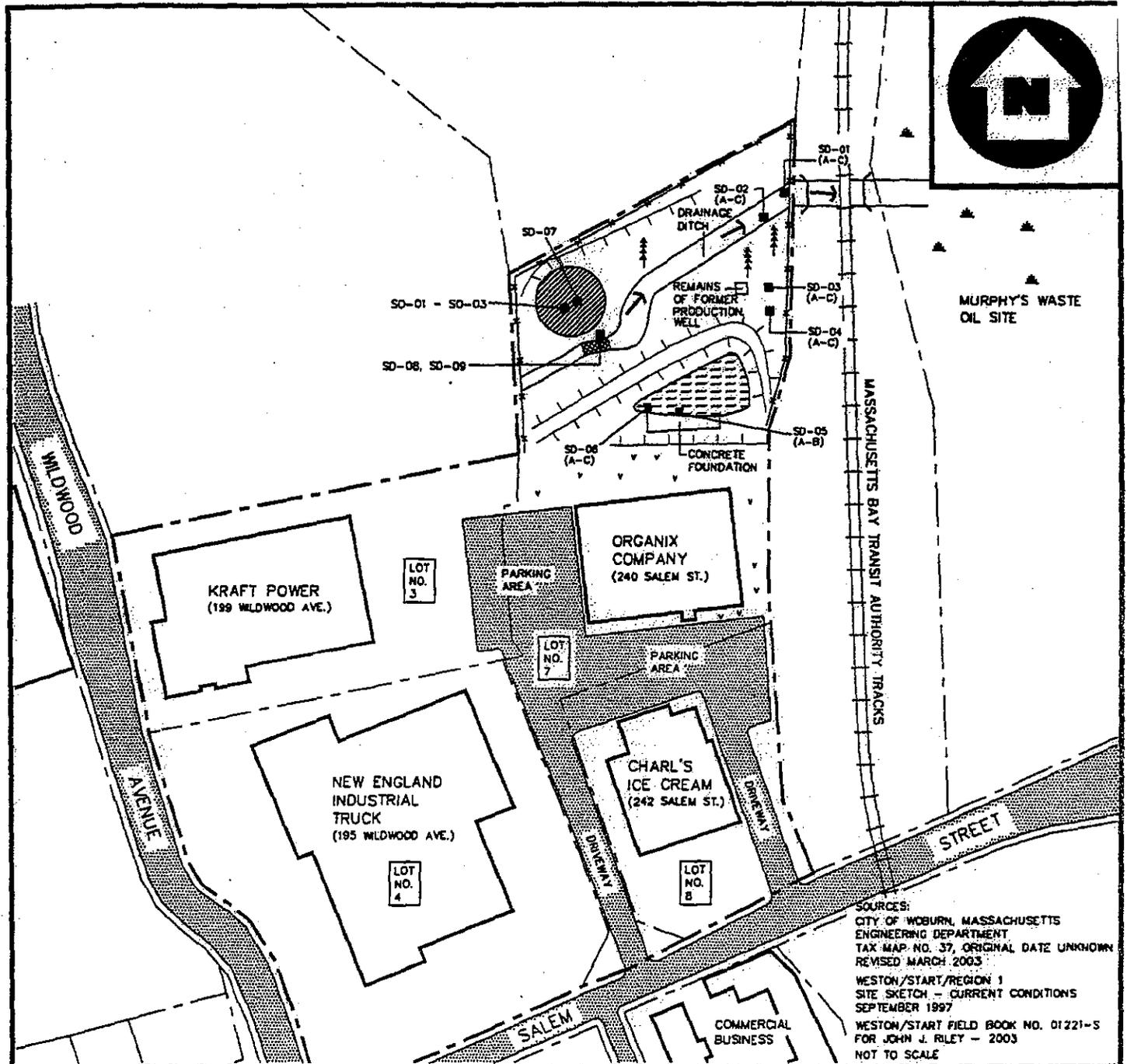
Located to the east of the JJ Riley site are railroad tracks operated by the Massachusetts Bay Transit Authority (MBTA). A portion of the property east of the MBTA tracks was owned/operated by previous owners of the JJ Riley site. However, that land is currently owned by the Wildwood Conservation Trust and is considered part of the Wells G & HNPL Site.

It is unknown to the Weston Solutions, Inc. Superfund Technical Assessment and Response Team 2000 (START) what the JJ Riley site was used for prior to 1915. From 1915 to 1989, the Riley Company, owned by Mr. John J. Riley, operated a tannery on the site. From December 1978 to January 1982, the company continued operations on site but was owned by Beatrice Foods, Inc. Mr. Riley reacquired the business from Beatrice Foods, Inc. in 1983. Tannery operations continued until 1989, at which time all equipment was removed and operations ceased. In June 1994, the Maggiore Companies, a property developer, subdivided the site into six lots, which were later subdivided into the current four lots of the site.

Personnel Performing Inspection

<u>Agency/Organization</u>	<u>Names</u>	<u>Program</u>
(✓) EPA Region I:	Mr. Joseph LeMay ^{1,2}	Remedial Project Manager
(✓) EPA Region I Contractor:	Mr. Timothy Benton ^{1,2}	START 2000*
	Mr. John Kelly ^{1,2}	START 2000
	Mr. Paul Schrot ²	START 2000
	Mr. Ryan Manderbach ²	START 2000
	Ms. Jessica Burkhamer ²	START 2000
	Mr. Craig Trimbur ²	START 2000
() State:		
(✓) Other:	Mr. David Sullivan ¹	TRC Companies, Inc. (Project Manager)
	Mr. Jim Merrill ¹	Massachusetts Bay Commuter Railroad Company (Project Engineer)

¹ Personnel present for the 30 April 2004 on-site reconnaissance.
² Personnel present for the 22 June 2004 source and sediment sampling event.
 * START 2000 = Weston Solutions, Inc., Superfund Technical Assessment and Response Team.



**SITE SKETCH AND START
SAMPLE LOCATION SKETCH**

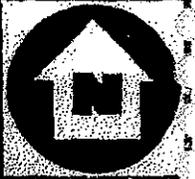
JOHN J RILEY
 228 SALEM STREET
 WOBURN, MASSACHUSETTS



REGION 1 SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD # 04-05-0149	DRAWN BY: W. SHAW	DATE 6/1/04
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FILE NAME: S:\04050149\FIG2.DWG	FIGURE 2
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BASE AERIAL PHOTOGRAPH IS PART OF THE FOLLOWING 0.5-METER RESOLUTION DIGITAL ORTHOGRAPHIC QUARTER QUADRANGLE: MASSACHUSETTS 233914

0.02 0 0.02 0.04 0.06 0.08 0.1 0.12 0.14 Miles

0.05 0 0.05 0.1 0.15 0.2 Kilometers

100 0 100 200 300 400 500 600 700 Feet



QUADRANGLE LOCATION

START SAMPLE
LOCATION MAP

JOHN J RILEY
SALEM STREET
WOBURN, MASSACHUSETTS



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE:
04-05-0149	T. BENTON	14 JULY 2004

FILE NAME:	FIGURE 3
E:\ARC_APRSWA GIS\JOHN J RILEY.APR	

TRIP REPORT

21 September 2004

Site Ownership-Current Owner

Name: Organix LLC* **Telephone:** (781) 932-4142
Contact: Mr. Peter Meltzer
Address: 240 Salem Street (Lot No. 7)
 Woburn, Massachusetts 01801

Name: W.A. Kraft Corporation **Telephone:** (781) 938-9100
 (Robert M. Duffy Trust)
Address: 199 Wildwood Avenue (Lot No. 3)
 Woburn, Massachusetts 01801

Name: New England Industrial Truck **Telephone:** (508) 752-0107
 (Robert B. Krueger Trustee)
Address: 195 Wildwood Avenue (Lot No. 4)
 Woburn, Massachusetts 01801

Name: Charl's Ice Cream **Telephone:** (617) 935-6611
 (Mr. Beryl E. Rotondo)
Address: 242 Salem Street (Lot No. 8)
 Woburn, Massachusetts 01801

* Property on which sampling was conducted.

On-Site Sampling Trip: Brief Chronology

Details of the site visit are included in the site observations/concerns section.

On-Site Reconnaissance: 30 April 2004

- 0715 hrs START personnel Mr. Timothy Benton and Mr. John Kelly arrived at the JJ Riley site.
- 0730 hrs START personnel arrived at the Murphy's Waste Oil site, which is located east and downgradient of the JJ Riley site, and met Mr. Joseph LeMay, EPA Remedial Project Manager (RPM); Mr. David Sullivan of TRC Companies, Inc. (TRC); and Mr. Jim Merrill of the Massachusetts Bay Commuter Railroad Company (MBCR). START personnel spoke with Mr. LeMay and Mr. Sullivan about the history of the Murphy's Waste Oil site, including sampling activities conducted to date.
- 0740 hrs Mr. Kelly, START Site Health and Safety Coordinator (SHSC), completed calibration checks and established site ambient background conditions with air monitoring instruments.
- 0750 hrs Mr. Kelly, START SHSC, conducted a tailgate health and safety meeting with START personnel.

TRIP REPORT

21 September 2004

On-Site Sampling Trip: Brief Chronology (Continued)

- 0755 hrs A Murphy's Waste Oil representative let personnel conducting the site reconnaissance onto the Murphy's Waste Oil site. Mr. LeMay showed START personnel where sediment samples had been previously collected in wetlands on the northern portion of the Murphy's Waste Oil site.
- 0840 hrs START personnel, accompanied by Mr. LeMay, Mr. Sullivan, and Mr. Merrill, departed the Murphy's Waste Oil site.
- 0850 hrs START personnel, Mr. LeMay, Mr. Sullivan, and Mr. Merrill arrived at the Organix portion of the JJ Riley site. Once on site, all involved conducted a walkthrough of the northern, wooded portion of the Organix property.
- 0940 hrs Mr. LeMay, Mr. Sullivan, and Mr. Merrill departed the JJ Riley site. START personnel remained on site to take photographs and record Global Positioning System (GPS) points of proposed sample locations.
- 1130 hrs START personnel departed the site. The GPS unit was not working properly, so START personnel traveled back to the START office in Wilmington, MA to obtain another unit.
- 1230 hrs START personnel arrived at the JJ Riley site to record proposed sample locations and other pertinent points on the property with a GPS unit.
- 1300 hrs START personnel completed the on-site reconnaissance and departed the site.

Sampling Trip: 22 June 2004

- 0705 hrs START personnel Mr. Benton, Mr. Kelly, Mr. Paul Schrot, Mr. Ryan Manderbach, Mr. Craig Trimbur, and Ms. Jessica Burkhamer arrived at the JJ Riley site to conduct source and sediment sampling activities.
- 0710 hrs Mr. Schrot, START SHSC, conducted a tailgate health and safety meeting with all START personnel.
- 0715 hrs START personnel began preparing the decontamination area and the appropriate sampling equipment.
- 0720 hrs START personnel Mr. Benton and Mr. Trimbur completed calibration checks and documented site ambient background conditions with air monitoring instruments.
- 0740 hrs EPA RPM Mr. LeMay arrived on site.

On-Site Sampling Trip: Brief Chronology (Continued)

- 0745 hrs EPA RPM Mr. LeMay discussed the site history and proposed sampling activities with representatives of Organix.
- 0805 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-01A from a depth of 0 to 1 ft below ground surface (bgs) from the northeastern portion of the Organix property. The sample was collected from the easternmost section of the drainage ditch.
- 0825 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-01B from a depth of 1 to 2 ft bgs from the northeastern portion of the Organix property. The sample was collected from the easternmost section of the drainage ditch. In addition, Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-02A from a depth of 0 to 1 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 50 ft southwest of samples SD-01A through SD-01C.
- 0835 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-01C from a depth of 2 to 3 ft bgs from the northeastern portion of the Organix property. The sample was collected from the easternmost section of the drainage ditch. In addition, Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-02B from a depth of 1 to 1.5 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 50 ft southwest of samples SD-01A through SD-01C.
- 0845 hrs EPA RPM Mr. LeMay departed the site.
- 0850 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-02C from a depth of 2 to 3 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 50 ft southwest of samples SD-01A through SD-01C.
- 0935 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-04A from a depth of 0 to 1 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 40 ft south of samples SD-03A through SD-03C.
- 0945 hrs The pre-preserved vials for the volatile organic compound (VOC) fraction of some of the sediment samples effervesced. Consequently, START personnel collected two 5-gram Encore[®] samplers for the VOC fraction, where appropriate.
- 0950 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-03A from a depth of 0 to 1 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 20 ft east of the former production well remains on the property.

TRIP REPORT

21 September 2004

On-Site Sampling Trip: Brief Chronology (Continued)

- 0955 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-04B from a depth of 1 to 2 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 40 ft south of samples SD-03A through SD-03C.
- 1000 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-03B from a depth of 1 to 2 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 20 ft east of the former production well remains on the property.
- 1020 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-04C from a depth of 2 to 3 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 40 ft south of samples SD-03A through SD-03C.
- 1100 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-03C from a depth of 2 to 3 ft bgs from the northeastern portion of the Organix property. The sample was collected approximately 20 ft east of the former production well remains on the property.
- 1200 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-06A from a depth of 0 to 1 ft bgs from the southwest side of the stormwater detention pond in the area of the former tannery building foundation.
- 1210 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-05A from a depth of 0 to 1 ft bgs from the south side of the stormwater detention pond in the area of the former tannery building foundation.
- 1225 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-06B from a depth of 1 to 2 ft bgs from the southwest side of the stormwater detention pond in the area of the former tannery building foundation.
- 1240 hrs START personnel Mr. Trimbur and Ms. Burkhamer collected sediment sample SD-05B from a depth of 1 to 2 ft bgs from the south side of the stormwater detention pond in the area of the former tannery building foundation.
- 1302 hrs START personnel Mr. Kelly and Mr. Manderbach collected sediment sample SD-06C from a depth of 2 to 2.6 ft bgs from the southwest side of the stormwater detention pond in the area of the former tannery building foundation.
- 1355 hrs START member Mr. Manderbach collected sediment sample SD-07 from a depth of 0 to 0.5 ft bgs from an area of exposed solid waste located on the northwestern portion of the Organix property.

TRIP REPORT

21 September 2004

On-Site Sampling Trip: Brief Chronology (Concluded)

- 1410 hrs START member Mr. Trimbur collected sediment sample SD-09 from a depth of 0 to 0.5 ft bgs from the edge of the area of exposed solid waste located on the northwestern portion of the Organix property.
- 1415 hrs START member Ms. Burkhamer collected sediment sample SD-08 from a depth of 0 to 0.5 ft bgs from the edge of the area of exposed solid waste located on the northwestern portion of the Organix property.
- 1431 hrs START member Mr. Kelly collected source sample SO-01 from a black sludge material located in the area of exposed solid waste in the northwestern section of the Organix property.
- 1441 hrs START member Mr. Kelly collected source sample SO-02 from a black sludge material located on the edge of the waste pile in the northwestern section of the Organix property.
- 1523 hrs START personnel Mr. Kelly and Mr. Manderbach collected SO-03 from leather scraps observed throughout the area of exposed solid waste on the northwestern portion of the Organix property.
- 1715 hrs START personnel departed the site.

Site Characteristics Quantities/Extent/Details

Cylinders:

Drums: START personnel observed two 55-gallon drum carcasses on the northeastern portion of the property. In addition, 55-gallon drum and 5-gallon drum carcasses were observed in the area of exposed solid waste located on the northwestern portion of the Organix property.

Lagoons: A stormwater detention pond was observed by START personnel in the central portion of the Organix property. The stormwater detention pond is located adjacent to (north of) the remains of a pre-existing building foundation. START assumes that the foundation was part of a former tannery building. The stormwater detention pond has culverts that presumably drain into the drainage ditch, located on the northern portion of the property, during heavy periods of rain.

Tanks:

Aboveground:

Belowground:

Asbestos:

Piles:

Stained Soil: START personnel observed an approximately 12-inch layer of bluish-gray-stained soil on the edge of the area of exposed waste, located on the northwestern portion of the Organix property.

Site Characteristics
Quantities/Extent/Details (Concluded)

- Sheens:**
- Stressed Vegetation:**
- Landfill:**
- Leachate seeps**
- Population in Vicinity:** Four active commercial businesses currently operate on the JJ Riley site. START personnel assume that approximately 100 workers are working within the four active businesses at any given time. There are no on-site residents associated with the JJ Riley site.
- Distance to nearest residence:** The nearest private residence is located at 250 Salem Street, which is approximately 200 ft south of the property.
- Land use:** Industrial Commercial Residential
 Rural Agricultural
- Wells:**
- Drinking:**
- Monitoring:** A number of monitoring wells have been installed on the JJ Riley site as part of previous investigations. However, due to the development of the property, no monitoring wells are known by START personnel to still exist.
- Other:** Two production wells were used on the site during tannery operations. The remains of one of the production wells are present in the northeastern portion of the Organix property. The remains of the other production well are located east of the MBTA railroad tracks on the Wildwood Conservation Trust property.

START personnel observed an area of exposed waste located on the northwestern portion of the Organix property. The area of exposed waste contained leather scraps, broken bottles, empty canisters, and a black sludge/hardened tar-like material. In addition, on the edge of the area of exposed waste, which abuts the drainage ditch, START personnel observed metal piping, drum carcasses, and various metal scraps protruding from the area of exposed solid waste. The drums were deteriorating and observed protruding out of the edge of the exposed waste pile. One drum was releasing the black sludge/hardened tar material.

On-site/Off-site Receptors
Comments/Details

- Drinking Water:** **Private:** Equal distribution calculations of 1990 U.S. Census CENTRACTS data indicate that an estimated population of 15 people rely on private drinking water supply wells within 1 radial mile of the JJ Riley site. No private drinking water supply wells are suspected by START to be located within 0.25 radial miles of the JJ Riley site.

**On-site/Off-site Receptors
Comments/Details (Concluded)**

- (✓) **Municipal:** There are no active public groundwater drinking water sources located within 1 radial mile of the JJ Riley site. Woburn municipal Wells G & H are located approximately 3,100 ft northeast of the site. These wells were closed in 1979 due to VOC contamination. The nearest source of public drinking water is a surface water intake located at Horn Pond, which is approximately 2.2 to 2.5 miles southwest of the property. Horn Pond is not located along the surface water pathway.
- (✓) **Groundwater:** Based on topography and previous investigations of the area, groundwater is assumed to flow in an easterly direction toward the Aberjona River.
- (✓) **Unrestricted Access:** The site is open to the public for business purposes, and there are no forms of restricted access.
- (✓) **Population in Proximity:** An estimated 446 people live within 0.25 radial miles of the JJ Riley site, and an estimated 9,806 people live within 1 radial mile of the site.
- (✓) **Sensitive Ecosystem:** There are no sensitive environments located on the JJ Riley site. Sensitive environments located within 0.25 radial miles of the site include approximately 23 acres of wetlands and a Clean Water Act (CWA)-protected water body. Sensitive environments located within 1 radial mile of the site include approximately 128 acres of wetlands. Sensitive environments located along the downstream surface water pathway include a CWA-protected water body, a fishery, and approximately 2.9 miles of wetland frontage. Approximately 0.5 miles of wetland frontage is located in the northern portion of the Murphy's Waste Oil property.
- (✓) **Other:** Woburn High School is located approximately 3,350 ft southwest of the JJ Riley site. The nearest perennial surface water body is the Aberjona River, located approximately 2,500 ft east of the site.

Site Observations/Concerns

On-Site Reconnaissance: 30 April 2004

On 30 April 2004, as part of this Site Reassessment (SR), START personnel conducted an on-site reconnaissance of the JJ Riley site. START personnel were met by Mr. Joe LeMay of EPA, Mr. David Sullivan of TRC (a contractor to EPA), and Mr. Jim Merrill of the MBTA (associated with MBTA). START personnel walked along the northern portion of the Murphy's Waste Oil property (part of the Wells G & H NPL site) located east of the JJ Riley site. Wetlands on the Murphy's Waste Oil property abut the MBTA railroad tracks to the west. Mr. LeMay and Mr. Sullivan pointed out to START personnel the location of previous wetland sediment sample locations on the Murphy's Waste Oil property collected as part of EPA's ecological risk assessment as part of its Baseline Risk Assessment for the Southwest Properties (Murphy Waste Oil property, former Whitney Barrel property, and former Aberjona Auto Parts property). Mr. LeMay stated that analysis of the sediment samples documented elevated concentrations of chromium, lead, arsenic, and polychlorinated biphenyls (PCBs). Mr. LeMay also stated that the reason for the proposed sampling on the JJ Riley site was to assist EPA with evaluating how the JJ Riley site's historical tannery operations may be impacting wetlands on the Murphy's Waste Oil property.

Site Observations/Concerns (Continued)

After walking through the Murphy's Waste Oil property, all involved in the site reconnaissance walked through the northern portion of the Organix property, which is part of the JJ Riley site. For the purposes of this SR, the Organix property was the only property involved with the site reconnaissance. While on the northern portion of the Organix property, START personnel observed a culvert where a stormwater drainage ditch flowed underneath the MBTA railroad tracks and into the wetlands located on the Murphy's Waste Oil property. The drainage ditch begins on the western-central section of the Organix property and continues in a northeasterly manner along the entire length of the property until it reaches the culvert just west of the MBTA railroad property. The drainage ditch follows a relatively steep grade down a ridge, where the ditch and surrounding area flatten out into a low-lying area prior to the culvert located just west of the MBTA railroad tracks. START personnel observed flowing water in the initial approximately 100 ft of the drainage ditch, after which the flowing water terminated.

START personnel observed an area of exposed solid waste located north of the drainage ditch. Scattered throughout the area of exposed solid waste were glass bottles, leather scraps, and a black sludge/hardened tar-like material. Mr. Sullivan stated that he had observed a similar material during the investigation of the Murphy's Waste Oil site. Underneath the exposed solid waste area, adjacent to (north of) the drainage ditch, START personnel observed an approximately 12-inch layer of bluish-gray soil. This layer of bluish-gray soil was located at approximately 2 to 3 feet below the ground surface and for a distance of approximately 75 feet.

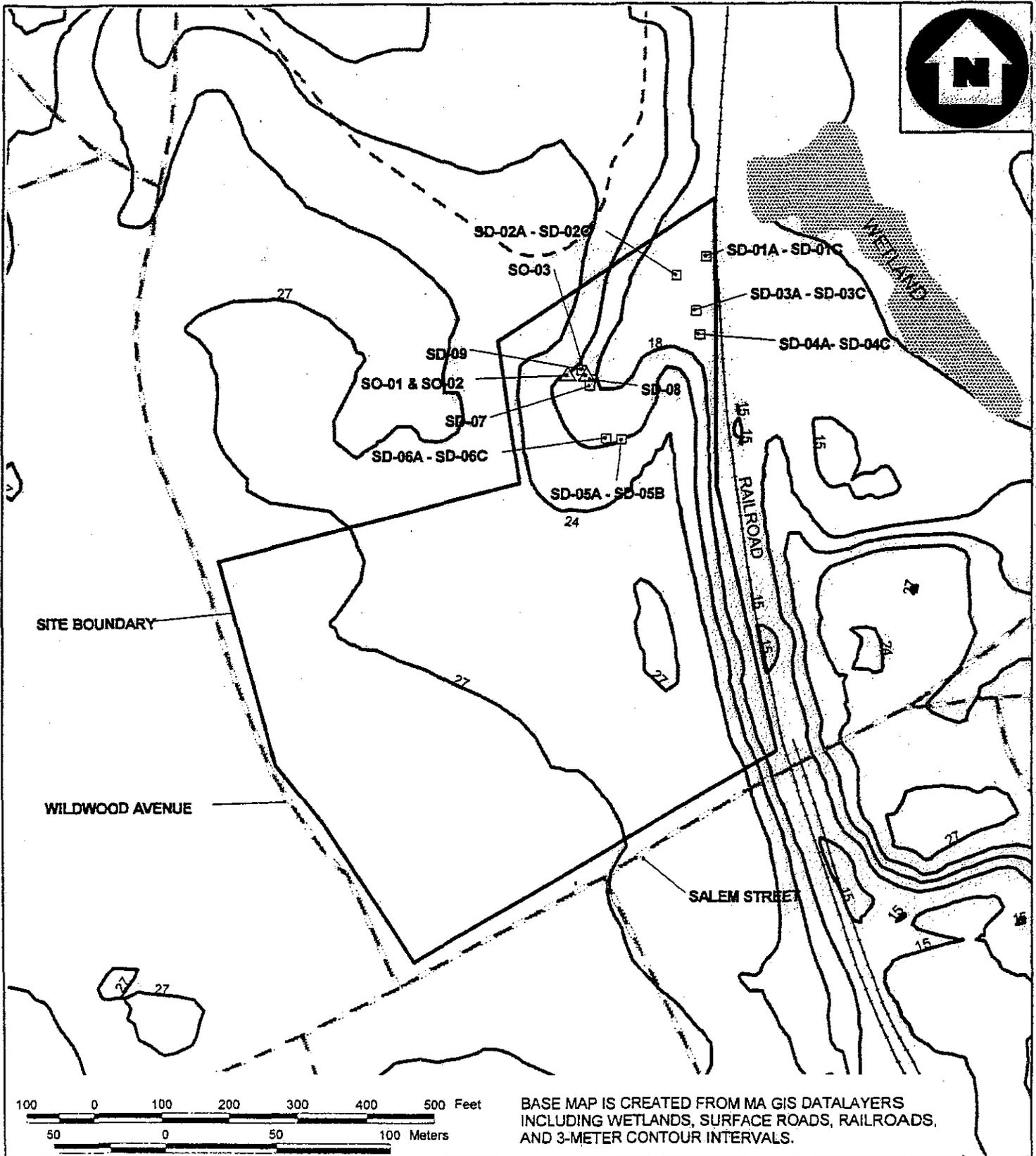
START personnel observed a stormwater detention pond located at the base of a slope in the central portion of the Organix property. On the southern section of the stormwater detention pond, a former building foundation was observed. START personnel assume that the foundation was once part of buildings used during tannery operations on the site. After completing a walk-through of the northern portion of the Organix property, Mr. LeMay and START personnel designated certain areas as proposed sample locations. In particular, the locations proposed for sampling included the exposed solid waste area, the area of the observed bluish-gray layer located on the edge of the exposed waste pile, the low-lying area west of the MBTA railroad tracks (four locations), and the stormwater detention pond (two locations). The locations were marked with either pin flags or stakes.

Site Observations/Concerns (Continued)

Sampling Trip : 22 June 2004

START personnel conducted source and sediment sampling activities at the JJ Riley site on 22 June 2004. Table 1 (p. 17) provides a summary of the three source samples (SO-01 through SO-03) and the 20 sediment samples (SD-01A through SD-01C; SD-02A through SD-02C; SD-03A through SD-03C; SD-04A through SD-04C; SD-05A through SD-05B; SD-06A through SD-06C; and SD-07 through SD-08) collected from the JJ Riley site. Figure 4 illustrates GPS-recorded START sample locations on a map created from Massachusetts Geographic Information System datalayers, including wetlands, surface roads, railroads, and 3-meter contour intervals. This figure is included to depict the topography of the northern portion of the JJ Riley property. The 3-meter contour interval of the map reveals the relatively steep slopes in this area of the site. The drainage ditch, located at the base of the slopes, carries stormwater/overland flow down a ridge (in a northeasterly direction), where the ditch and surrounding area flatten out into a low-lying area prior to the culvert located just west of the MBTA railroad tracks. All sampling activities were conducted in accordance with the EPA-approved Task Work Plan, dated 6 June 2004, with the following deviations:

- Extra volume was collected for source sample SO-01 and sediment sample SD-01A as these samples served as the Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples for each matrix sampled.
- Semivolatile organic compound (SVOC), pesticide/PCB (pest/PCB), total metals, and cyanide fractions were collected for sediment sample SD-06C. The VOC fraction and one container for SVOCs and pest/PCBs were not collected due to the fact that there was not enough sediment sample material available.
- Sediment samples SD-05C, SD-05D, and SD-06D were not collected due to encountering refusal while hand auguring at their respective locations.
- One sample equipment rinsate blank was collected during the sampling event. Source samples SO-01 and SO-02 were collected using dedicated disposable scoops.
- The VOC fractions of sediment samples SD-03B, SD-04A, SD-04B, SD-08, and SD-09 effervesced while adding sample material to the pre-preserved vials. As a result, two 5-gram Encore[®] samplers were also collected for the VOC fraction of each sample. The pre-preserved vials and the 5-gram Encore[®] samplers were both shipped to the laboratory. The laboratory was instructed to analyze the pre-preserved vials only if they had not been compromised during transport. If damage had occurred with the vials, the laboratory was instructed to analyze the 5-gram Encore[®] samplers.



BASE MAP IS CREATED FROM MA GIS DATALAYERS INCLUDING WETLANDS, SURFACE ROADS, RAILROADS, AND 3-METER CONTOUR INTERVALS.

SAMPLE LOCATION MAP

JOHN J RILEY
SALEM STREET
WOBURN, MASSACHUSETTS



REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD NUMBER: 04-05-0149	CREATED BY: T. Benton	CREATED ON: 09/22/2004
FILE LOCATION: E:\ARC_APRs\START\J RILEY.APR		FIGURE 4

Site Observations/Concerns (Concluded)

- The VOC fraction for each source sample (leather scrap and black sludge material) was collected into a pre-preserved 40-milliliter (ml) vial. Initially, the VOC fraction was going to be collected into pre-preserved 8-ounce (oz) jars, but it was decided that the source (leather scrap and black sludge material) samples would be cut up to fit into the pre-preserved vials. Two 40-ml sodium bisulfate vials and one 60-ml methanol vial were used to collect the VOC fraction of the samples. In addition, preservative blank PB-02 was not collected due to the fact that the VOC-fraction sample containers changed for all source samples.

Complete analytical results of START sediment samples, including quantitation and detection limits, are presented in Attachment A. In addition, complete analytical results of START source samples, including quantitation and detection limits, are presented in Attachment B. Sample results qualified with a "J" on analytical tables are considered approximate because of limitations identified during Delivery of Analytical Services (DAS) data validation. In addition, organic sample results reported at concentrations below sample quantitation limits and confirmed by mass spectrometry are also qualified by a "J" and considered approximate.

A photograph log depicting site conditions observed during the on-site reconnaissance, and START sample locations is presented in Attachment C.

Report prepared by: Mr. Timothy Benton

Affiliation: START 2000

Date: 21 September 2004

Table 1

Sample Summary: John J Riley
 Samples Collected by START on 22 June 2004

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Source					
SO-01 (MS/MSD)	D 15538	6/22/04 1431	Grab	NA	Grab source sample collected from a black sludge material located in the area of exposed solid waste in the northwestern portion of the Organix property. Material is black, solid, crystal-like, partially burned material. PID & FID = 0 units above background. 42° 29' 25.4" north latitude 71° 08' 03.5" west longitude
SO-02	D 15539	6/22/04 1441	Grab	NA	Grab source sample collected from a black material located on the edge of the area of exposed solid waste in the northwestern portion of the Organix property. Material was seen in a 55-gallon drum container. Material is black tar-like material. PID = 1.108 units above background FID = 15.6 units above background 42° 29' 25.4" north latitude 71° 08' 03.5" west longitude
SO-03	D 15540	6/22/04 1523	Composite	NA	Composite source sample collected from leather scraps located in the area of the exposed solid waste pile in the northwestern portion of the Organix property. Material is brown, weathered leather scraps. PID & FID = 0 units above background. 42° 29' 25.4" north latitude 71° 08' 03.1" west longitude
MATRIX: Sediment					
SD-01A (MS/MSD)	D 15541	6/22/04 0805	Grab	0 to 1 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected from the easternmost portion of the drainage ditch. Material was dark brown SILT, little fine sand, trace clay, glass and plastic. Jar headspace readings: PID = 0.2 units above background. FID = 1.7 units above background. 42° 29' 27.1" north latitude 71° 08' 00.8" west longitude

Table 1 (Continued)

Sample Summary: John J Riley
 Samples Collected by START on 22 June 2004

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Continued)					
SD-01B	D 15542	6/22/04 0825	Grab	1 to 2 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected from the easternmost portion of the drainage ditch. Material was dark brown SILT, trace fine sand, clay, glass and plastic. Jar headspace readings: PID = 0.8 units above background. FID = 0.0 units above background. 42° 29' 27.1" north latitude 71° 08' 00.8" west longitude
SD-01C	D 15543	6/22/04 0835	Grab	2 to 3 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected from the easternmost portion of the drainage ditch. Material was dark brown organic rich SILT, trace clay and organics. At 2.7 ft bgs the material was yellow brown CLAY, little fine sand and silt. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 27.1" north latitude 71° 08' 00.8" west longitude
SD-02A	D 15544	6/22/04 0825	Grab	0 to 1 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected approximately 50 ft southwest of samples SD-01A through SD-01C. Material was dark brown fine SAND, trace silt and organics. Jar headspace readings: PID = 0.0 units above background. FID = 1.5 units above background. 42° 29' 26.8" north latitude 71° 08' 01.3" west longitude

Table 1 (Continued)

**Sample Summary: John J Riley
Samples Collected by START on 22 June 2004**

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Continued)					
SD-02B	D 15555	6/22/04 0835	Grab	1 to 1.5 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected approximately 50 ft southwest of samples SD-01A through SD-01C. Material was dark brown fine SAND, trace silt and organics. Jar headspace readings: PID = 0.0 units above background. FID = 2.2 units above background. 42° 29' 26.8" north latitude 71° 08' 01.3" west longitude
SD-02C	D 15556	6/22/04 0850	Grab	2 to 3 ft	Grab sediment sample collected from the northeastern portion of the Organix property. Sample collected approximately 50 ft southwest of samples SD-01A through SD-01C. Material was dark brown medium SAND, trace silt and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.8" north latitude 71° 08' 01.3" west longitude
SD-03A	D 15547	6/22/04 0950	Grab	0 to 1 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 20 ft east of the former production well remains. Material was dark brown fine SAND, some fine sand, trace silt and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.3" north latitude 71° 08' 01.0" west longitude
SD-03B	D 15548	6/22/04 1000	Grab	1 to 2 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 20 ft east of the former production well remains. Material was dark brown medium SAND, some fine sand, trace silt and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.3" north latitude 71° 08' 01.0" west longitude

Table 1 (Continued)

**Sample Summary: John J Riley
Samples Collected by START on 22 June 2004**

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Continued)					
SD-03C	D 15549	6/22/04 1100	Grab	2 to 3 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 20 ft east of the former production well remains. Material was dark brown SILT, trace fine sand and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.3" north latitude 71° 08' 01.0" west longitude
SD-04A	D 15550	6/22/04 0935	Grab	0 to 1 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 40 ft south of samples SD-03A through SD-03C. Material was medium brown SILT, some fine sand, trace coarse gravel and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.0" north latitude 71° 08' 00.9" west longitude
SD-04B	D 15551	6/22/04 0955	Grab	1 to 2 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 40 ft south of samples SD-03A through SD-03C. Material was medium brown SILT, some coarse gravel, little medium gravel, trace clay, fine sand, and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.0" north latitude 71° 08' 00.9" west longitude

Table 1 (Continued)

Sample Summary: John J Riley
 Samples Collected by START on 22 June 2004

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Continued)					
SD-04C	D 15552	6/22/04 1020	Grab	2 to 3 ft	Grab sediment sample collected from the eastern portion of the Organix property. Sample collected approximately 40 ft south of samples SD-03A through SD-03C. Material was dark brown SILT, some coarse gravel, little fine gravel, trace clay, fine sand, and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 26.0" north latitude 71° 08' 00.9" west longitude
SD-05A	D 15553	6/22/04 1210	Grab	0 to 1 ft	Grab sediment sample collected from the central portion of the Organix property. Sample collected from the southern portion of the detention pond in the area of the former building foundation. Material was dark brown coarse SAND, trace silt and medium gravel. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 24.5" north latitude 71° 08' 02.4" west longitude
SD-05B	D 15554	6/22/04 1240	Grab	1 to 2 ft	Grab sediment sample collected from the central portion of the Organix property. Sample collected from the southern portion of the detention pond in the area of the former building foundation. Material was light brown SILT, some medium gravel, trace organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 24.5" north latitude 71° 08' 02.4" west longitude
SD-06A	D 15557	6/22/04 1200	Grab	0 to 1 ft	Grab sediment sample collected from the central portion of the Organix property. Sample collected from the southwest side of the detention pond in the area of the former building foundation. Material was medium brown fine SAND, some silt and medium gravel, little clay. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 24.5" north latitude 71° 08' 02.7" west longitude

Table 1 (Continued)

Sample Summary: John J Riley
 Samples Collected by START on 22 June 2004

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Continued)					
SD-06B	D 15558	6/22/04 1225	Grab	1 to 2 ft	Grab sediment sample collected from the central portion of the Organix property. Sample collected from the southwest side of the detention pond in the area of the former building foundation. Material was medium brown fine SAND, some coarse sand, little silt, medium gravel, and organics. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 24.5" north latitude 71° 08' 02.7" west longitude
SD-06C	D 15559	6/22/04 1302	Grab	2 to 2.6 ft	Grab sediment sample collected from the central portion of the Organix property. Sample collected from the southwest side of the detention pond in the area of the former building structure. Material was medium brown medium SAND, some fine sand. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 24.5" north latitude 71° 08' 02.7" west longitude
SD-07	D 15570	6/22/04 1355	Grab	0 to 0.5 ft	Sample collected from the area of exposed solid waste located on the northern portion of the Organix property. Material was dark brown SILT, some fine sand, trace coarse gravel. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 25.5" north latitude 71° 08' 03.2" west longitude
SD-08	D 15571	6/22/04 1405	Grab	0 to 0.5 ft	Sample collected from the edge of the area of exposed solid waste located on the northern portion of the Organix property. Material was a bluish-gray, crumbling substance. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 25.4" north latitude 71° 08' 03.0" west longitude

Table 1 (Continued)

**Sample Summary: John J Riley
Samples Collected by START on 22 June 2004**

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Sediment (Concluded)					
SD-09	D 15572	6/22/04 1410	Grab	0 to 0.5 ft	Sample collected from the edge of the area of exposed solid waste located on the northern portion of the Organix property. Material was a bluish-gray, crumbling substance. Jar headspace readings: PID = 0.0 units above background. FID = 0.0 units above background. 42° 29' 25.3" north latitude 71° 08' 03.0" west longitude
MATRIX: Aqueous QA/QC					
RB-01	D 15561	6/22/04 1545	Grab	NA	Source and sediment sampling equipment rinsate blank sample, collected for quality control.
TB-01	D 15566	6/22/04 0605	Grab	NA	Trip blank sample, collected for quality control.
TB-02	D 15566	6/22/04 0615	Grab	NA	Trip blank sample, collected for quality control.
PB-01	D 15567	6/22/04 0620	Grab	NA	Methanol preservative blank sample, collected for quality control.
PB-03	D 15569	6/22/04 0620	Grab	NA	Sodium bisulfate preservative blank, collected for quality control.
MATRIX: Performance Evaluation Samples					
PE-0026097	D 15575	6/22/04 0630	Grab	NA	Aqueous Performance Evaluation sample for low-to-medium level VOCs.
PE-SS0446	D 15576	6/22/04 0630	Grab	NA	Solid Performance Evaluation sample for low-to-medium level SVOCs.
PE-0014178	D 15577	6/22/04 0630	Grab	NA	Aqueous Performance Evaluation sample for low-to-medium level pesticides/PCBs.
PE-T105481	D 15578	6/22/04 0630	Grab	NA	Solid Performance Evaluation sample for low-to-medium level Arochlor-1254.

Table 1 (Concluded)

**Sample Summary: John J Riley
Samples Collected by START on 22 June 2004**

Sample Location No.	Traffic Report No.	Date/Time (hrs)	Remarks	Sample Depth (Feet bgs)	Sample Source
MATRIX: Performance Evaluation Samples (Concluded)					
PE-IS4279	D 15579	6/22/04 0630	Grab	NA	Solid Performance Evaluation sample for low-to-medium level metals.
PE-GNS1035	D 15580	6/22/04 0630	Grab	NA	Solid Performance Evaluation sample for low-to-medium level cyanide.

- | | | | |
|--------|---------------------------------------|-------|-------------------------------------|
| MS/MSD | = Matrix Spike/Matrix Spike Duplicate | NA | = Not applicable |
| FID | = Flame Ionization Detector | PID | = Photoionization Detector |
| VOCs | = Volatile Organic Compounds | SVOCs | = Semivolatile Organic Compounds |
| PCBs | = Polychlorinated Biphenyls | hrs | = Hours (denotes military time) |
| No. | = Number | QA/QC | = Quality Assurance/Quality Control |
| bgs | = Below Ground Surface | ft | = Feet |
| . | = Degrees | " | = Seconds |
| ' | = Minutes | | |

ATTACHMENT A

JOHN J RILEY

**SEDIMENT SAMPLE ANALYTICAL RESULTS
START**

Samples collected 22 June 2004

**DATA SUMMARY KEY
ORGANIC DATA VALIDATION**

- J = The associated numerical value is an estimated quantity.
- R = The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. The R replaces the numerical value or SQL.
- U = The compound was analyzed for, but not detected. The associated numerical value is the SQL or the adjusted SQL.
- UJ = The compound was analyzed for, but not detected. The associated numerical value is the estimated SQL.
- EB = The compound was identified in an aqueous EB that was used to assess field contamination associated with soil/sediment samples.
- TB = The compound was identified in an aqueous TB that was used to assess field contamination associated with soil/sediment samples.
- BB = The compound was identified in an aqueous BB that was used to assess field contamination associated with soil/sediment samples.

ACRONYM LIST ORGANIC DATA VALIDATION

AQ	aqueous
AQ FB	aqueous field blank
B/N	base/neutral compound
°C	degrees Celsius
CC	Continuing Calibration
CLP	Contract Laboratory Program
COC	Chain-of-Custody record
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	percent difference
DAS	Delivery of Analytical Services
DQO	Data Quality Objective
DV	Data Validation
DW	drinking water
EB	Equipment Blank
EPA	Environmental Protection Agency
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometry
GW	groundwater
IC	Initial Calibration
IS	Internal Standard
kg	kilogram
L	liter
LCS	Laboratory Control Sample
LFB	Laboratory Fortified Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	non-detected result
OSC	On-Scene Coordinator
PCB	polychlorinated biphenyl compound
P/PCB	pesticide/polychlorinated biphenyl compound
PE	Performance Evaluation
Pos	positive result
QC	Quality Control
%R	percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SOW	Statement of Work
SQL	Sample Quantitation Limit
S/S	soil/sediment
S/S (m)	soil/sediment medium level
START	Superfund Technical Assessment and Response Team
SVOC	semivolatile organic compound
SW	surface water
SW-846	EPA Test Methods for Evaluating Solid Waste
TB	Trip Blank
TCL	Target Compound List
TDD	Technical Direction Document
TIC	Tentatively Identified Compound
TR	Traffic Report
U	Undetected
µg	microgram
VOC	volatile organic compound
WESTON	Weston Solutions, Inc.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 1
VOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER:	D15541	D15542	D15543	D15544	D15555
	SAMPLE LOCATION:	SD-01A	SD-01B	SD-01C	SD-02A	SD-02B
	LABORATORY NUMBER:	576609	576610	576611	576612	576621
COMPOUND	CRQL					
Dichlorodifluoromethane	10	20 U	15 UJ	20 U	11 UJ	13 U
Chloromethane	10	20 U	15 UJ	20 U	11 UJ	13 UJ
Vinyl Chloride	10	20 U	15 UJ	20 U	11 UJ	13 U
Bromomethane	10	5 J	3 J	20 U	3 J	13 U
Chloroethane	10	20 U	15 UJ	20 U	11 UJ	13 UJ
Trichlorofluoromethane	10	20 U	15 UJ	20 U	11 UJ	13 U
1,1-Dichloroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
Acetone	10	400 J	290 J	510 J	300 J	150 J
Carbon Disulfide	10	4 J	3 J	5 J	2 J	1 J
Methyl Acetate	10	18 J	12 J	20 U	23 J	13 U
Methylene Chloride	10	20 U	15 UJ	20 U	11 UJ	13 U
trans-1,2-Dichloroethene	10	20 U	15 UJ	20 U	11 UJ	13 U
Methyl tert-Butyl Ether	10	20 U	15 UJ	20 U	11 UJ	13 U
1,1-Dichloroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
cis-1,2-Dichloroethene	10	20 U	15 UJ	20 U	11 UJ	13 U
2-Butanone	10	76 J	57 J	140 J	64 J	53 J
Chloroform	10	20 U	15 UJ	20 U	11 UJ	13 U
1,1,1-Trichloroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
Cyclohexane	10	20 U	15 UJ	20 U	11 UJ	13 U
Carbon Tetrachloride	10	20 U	15 UJ	20 U	11 UJ	13 U
Benzene	10	3 J	2 J	20 U	11 UJ	13 U
1,2-Dichloroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
Trichloroethene	10	20 U	15 UJ	20 U	11 UJ	13 U
Methylcyclohexane	10	20 U	15 UJ	20 U	11 UJ	13 U
1,2-Dichloropropane	10	20 U	15 UJ	20 U	11 UJ	13 U
Bromodichloromethane	10	20 U	15 UJ	20 U	11 UJ	13 U
cis-1,3-Dichloropropene	10	20 U	15 UJ	20 U	11 UJ	13 U
4-Methyl-2-Pentanone	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Toluene	10	3 J	3 J	20 UJ	3 J	13 UJ
trans-1,3-Dichloropropene	10	20 U	15 UJ	20 U	11 UJ	13 U
1,1,2-Trichloroethane	10	20 U	15 UJ	20 U	11 UJ	13 U
Tetrachloroethene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
2-Hexanone	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Dibromochloromethane	10	20 U	15 UJ	20 U	11 UJ	13 U
1,2-Dibromoethane	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Chlorobenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Ethylbenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Xylene (Total)	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Styrene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
Bromoform	10	20 U	15 UJ	20 U	11 UJ	13 U
Isopropylbenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,1,2,2-Tetrachloroethane	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,3-Dichlorobenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,4-Dichlorobenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,2-Dichlorobenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,2-Dibromo-3-chloropropane	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
1,2,4-Trichlorobenzene	10	20 U	15 UJ	20 UJ	11 UJ	13 UJ
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE ANALYZED:		06/24/04	06/24/04	06/24/04	06/24/04	06/24/04
% MOISTURE:		43	39	48	38	31

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0680F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 1
VOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER: SAMPLE LOCATION: LABORATORY NUMBER:	D15556 SD-02C 576622	D15547 SD-03A 576613	D15548 SD-03B 576614	D15649 SD-03C 576615R1	D15550 SD-04A 576616
COMPOUND	CRQL					
Dichlorodifluoromethane	10	9 U	12 UJ	10 U	9 UJ	24 U
Chloromethane	10	9 UJ	12 UJ	10 U	9 UJ	24 U
Vinyl Chloride	10	9 U	12 UJ	10 U	9 UJ	24 U
Bromomethane	10	9 U	12 UJ	10 U	9 UJ	24 U
Chloroethane	10	9 UJ	12 UJ	10 U	9 UJ	24 U
Trichlorofluoromethane	10	9 U	12 UJ	10 U	9 UJ	24 U
1,1-Dichloroethane	10	9 U	12 UJ	10 U	9 UJ	24 U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	9 U	12 UJ	10 U	9 UJ	24 U
Acetone		23 UJ	710 J	60 J	64 J	380 J
Carbon Disulfide	10	9 U	5 J	2 J	9 UJ	7 J
Methyl Acetate	10	9 J	12 UJ	10 U	10 J	28 J
Methylene Chloride	10	9 U	12 UJ	2 J	9 UJ	24 U
trans-1,2-Dichloroethene	10	9 U	12 UJ	10 U	9 UJ	24 U
Methyl tert-Butyl Ether	10	9 U	12 UJ	10 U	9 UJ	24 U
1,1-Dichloroethane	10	9 U	12 UJ	10 U	9 UJ	24 U
cis-1,2-Dichloroethene	10	9 U	12 UJ	10 U	9 UJ	8 J
2-Butanone	10	7 J	120 J	15 J	12 J	90 J
Chloroform	10	9 U	12 UJ	10 U	9 UJ	24 U
1,1,1-Trichloroethane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Cyclohexane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Carbon Tetrachloride	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Benzene	10	9 U	3 J	3 J	9 UJ	3 J
1,2-Dichloroethane	10	9 U	12 UJ	10 U	9 UJ	24 U
Trichloroethene	10	9 U	12 UJ	13 J	9 J	24 UJ
Methylcyclohexane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
1,2-Dichloropropane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Bromodichloromethane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
cis-1,3-Dichloropropene	10	9 U	12 UJ	10 U	9 UJ	24 UJ
4-Methyl-2-Pentanone	10	9 U	R	10 UJ	9 UJ	24 UJ
Toluene	10	9 J	8 J	4 J	9 UJ	47 J
trans-1,3-Dichloropropene	10	9 U	12 UJ	10 U	9 UJ	24 UJ
1,1,2-Trichloroethane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Tetrachloroethene	10	9 U	4 J	6 J	4 J	24 UJ
2-Hexanone	10	9 U	R	10 UJ	9 UJ	24 UJ
Dibromochloromethane	10	9 U	12 UJ	10 U	9 UJ	24 UJ
1,2-Dibromoethane	10	9 U	R	10 UJ	9 UJ	24 UJ
Chlorobenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
Ethylbenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
Xylene (Total)	10	9 U	R	10 UJ	9 UJ	24 UJ
Styrene	10	9 U	R	10 UJ	9 UJ	24 UJ
Bromoform	10	9 U	12 UJ	10 U	9 UJ	24 UJ
Isopropylbenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
1,1,2,2-Tetrachloroethane	10	9 U	R	10 UJ	9 UJ	24 UJ
1,3-Dichlorobenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
1,4-Dichlorobenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
1,2-Dichlorobenzene	10	9 U	R	10 UJ	9 UJ	24 UJ
1,2-Dibromo-3-chloropropane	10	9 U	R	10 UJ	9 UJ	24 UJ
1,2,4-Trichlorobenzene	10	9 UJ	R	10 UJ	9 UJ	24 UJ
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE ANALYZED:		06/24/04	06/24/04	06/24/04	06/24/04	06/24/04
% MOISTURE:		36	40	37	35	49

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDQ: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 1
VOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE-NUMBER:	D15551	D15552	D15553	D15554	D15557
	SAMPLE LOCATION:	SD-04B	SD-04C	SD-05A	SD-05B	SD-06A
	LABORATORY NUMBER:	576617	576618	576619	576620	576623
COMPOUND	CRQL					
Dichlorodifluoromethane	10	12 U	8 U	7 U	5 U	11 U
Chloromethane	10	12 U	8 UJ	7 UJ	5 UJ	11 UJ
Vinyl Chloride	10	12 U	8 U	7 U	5 U	11 U
Bromomethane	10	2 J	8 U	7 U	5 U	11 U
Chloroethane	10	12 U	8 UJ	7 UJ	5 UJ	11 UJ
Trichlorofluoromethane	10	12 U	8 U	7 U	5 U	11 U
1,1-Dichloroethene	10	12 U	8 U	7 U	5 U	11 U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	12 U	8 U	7 U	5 U	11 U
Acetone	10	120 J	33 UJ	14 UJ	12 UJ	28 UJ
Carbon Disulfide	10	2 J	8 U	0.7 J	0.8 J	2 J
Methyl Acetate	10	19 J	3 J	5 J	8	19
Methylene Chloride	10	12 U	8 U	7 U	1 J	11 U
trans-1,2-Dichloroethene	10	12 U	8 U	7 U	5 U	11 U
Methyl tert-Butyl Ether	10	12 U	8 U	7 U	5 U	11 U
1,1-Dichloroethane	10	12 U	8 U	7 U	5 U	11 U
cis-1,2-Dichloroethene	10	12 U	8 U	7 U	5 U	11 U
2-Butanone	10	35 J	9 J	5 J	4 J	9 J
Chloroform	10	12 U	8 U	7 U	5 U	11 U
1,1,1-Trichloroethane	10	12 U	8 U	7 U	5 U	11 U
Cyclohexane	10	12 U	8 U	7 U	5 U	11 U
Carbon Tetrachloride	10	12 U	8 U	7 U	5 U	11 U
Benzene	10	2 J	8 U	7 U	5 U	11 U
1,2-Dichloroethane	10	12 U	8 U	7 U	5 U	11 U
Trichloroethene	10	12 U	8 U	7 U	5 U	11 U
Methylcyclohexane	10	12 U	8 U	7 U	5 U	11 U
1,2-Dichloropropane	10	12 U	8 U	7 U	5 U	11 U
Bromodichloromethane	10	12 U	8 U	7 U	5 U	11 U
cis-1,3-Dichloropropene	10	12 U	8 U	7 U	5 U	11 U
4-Methyl-2-Pentanone	10	12 UJ	8 U	7 U	5 U	11 UJ
Toluene	10	50 J	9	7 U	5 U	2 J
trans-1,3-Dichloropropene	10	12 U	8 U	7 U	5 U	11 U
1,1,2-Trichloroethane	10	12 U	8 U	7 U	5 U	11 U
Tetrachloroethene	10	12 UJ	8 U	7 U	5 U	11 UJ
2-Hexanone	10	12 UJ	8 U	7 U	5 U	11 UJ
Dibromochloromethane	10	12 U	8 U	7 U	5 U	11 U
1,2-Dibromoethane	10	12 UJ	8 U	7 U	5 U	11 UJ
Chlorobenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
Ethylbenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
Xylene (Total)	10	12 UJ	8 U	7 U	5 U	11 UJ
Styrene	10	12 UJ	8 U	7 U	5 U	11 UJ
Bromoform	10	12 U	8 U	7 U	5 U	11 U
Isopropylbenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
1,1,2,2-Tetrachloroethane	10	12 UJ	8 U	7 U	5 U	11 UJ
1,3-Dichlorobenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
1,4-Dichlorobenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
1,2-Dichlorobenzene	10	12 UJ	8 U	7 U	5 U	11 UJ
1,2-Dibromo-3-chloropropane	10	12 UJ	8 U	7 U	5 U	11 UJ
1,2,4-Trichlorobenzene	10	12 UJ	8 UJ	7 UJ	5 UJ	11 UJ
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE ANALYZED:		06/24/04	06/24/04	06/24/04	06/24/04	06/24/04
% MOISTURE:		20	17	32	25	26

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 1
VOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER: SAMPLE LOCATION: LABORATORY NUMBER:	D15558 SD-06B 576624	D15570 SD-07 576631R1	D15571 SD-08 576632	D15772 SD-09 576633
COMPOUND	CRQL				
Dichlorodifluoromethane	10	7 U	18 UJ	23 UJ	25 UJ
Chloromethane	10	7 UJ	18 UJ	23 UJ	25 UJ
Vinyl Chloride	10	7 U	18 UJ	23 UJ	25 UJ
Bromomethane	10	7 U	18 UJ	23 UJ	8 J
Chloroethane	10	7 UJ	18 UJ	23 UJ	25 UJ
Trichlorofluoromethane	10	7 U	18 UJ	23 UJ	25 UJ
1,1-Dichloroethene	10	7 U	16 UJ	23 UJ	25 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	10	7 U	18 UJ	23 UJ	25 UJ
Acetone	10	7 UJ	1100 J	320 J	25 UJ
Carbon Disulfide	10	2 J	3 J	7 J	4 J
Methyl Acetate	10	8	67 J	23 UJ	25 UJ
Methylene Chloride	10	0.9 J	18 UJ	23 UJ	25 UJ
trans-1,2-Dichloroethene	10	7 U	18 UJ	23 UJ	25 UJ
Methyl tert-Butyl Ether	10	7 U	18 UJ	23 UJ	25 UJ
1,1-Dichloroethane	10	7 U	18 UJ	23 UJ	25 UJ
cis-1,2-Dichloroethene	10	7 U	18 UJ	23 UJ	25 UJ
2-Butanone	10	3 J	140 J	76 J	37 J
Chloroform	10	7 U	18 UJ	23 UJ	25 UJ
1,1,1-Trichloroethane	10	7 U	18 UJ	23 UJ	25 UJ
Cyclohexane	10	7 U	18 UJ	23 UJ	25 UJ
Carbon Tetrachloride	10	7 U	18 UJ	23 UJ	25 UJ
Benzene	10	7 U	14 J	23 UJ	25 UJ
1,2-Dichloroethane	10	7 U	18 UJ	23 UJ	25 UJ
Trichloroethene	10	7 U	18 UJ	23 UJ	25 UJ
Methylcyclohexane	10	7 U	18 UJ	23 UJ	25 UJ
1,2-Dichloropropane	10	7 U	18 UJ	23 UJ	25 UJ
Bromodichloromethane	10	7 U	18 UJ	23 UJ	25 UJ
cis-1,3-Dichloropropene	10	7 U	18 UJ	23 UJ	25 UJ
4-Methyl-2-Pentanone	10	7 U	R	23 UJ	25 UJ
Toluene	10	7 U	5 J	23 UJ	25 UJ
trans-1,3-Dichloropropene	10	7 U	18 UJ	23 UJ	25 UJ
1,1,2-Trichloroethane	10	7 U	18 UJ	23 UJ	25 UJ
Tetrachloroethene	10	7 U	R	23 UJ	25 UJ
2-Hexanone	10	7 U	R	23 UJ	25 UJ
Dibromochloromethane	10	7 U	18 UJ	23 UJ	25 UJ
1,2-Dibromoethane	10	7 U	R	23 UJ	25 UJ
Chlorobenzene	10	7 U	R	23 UJ	25 UJ
Ethylbenzene	10	7 U	R	23 UJ	25 UJ
Xylene (Total)	10	7 U	R	23 UJ	25 UJ
Styrene	10	7 U	R	23 UJ	25 UJ
Bromoform	10	7 U	18 UJ	23 UJ	25 UJ
Isopropylbenzene	10	7 U	R	23 UJ	25 UJ
1,1,2,2-Tetrachloroethane	10	7 U	R	23 UJ	25 UJ
1,3-Dichlorobenzene	10	7 U	R	23 UJ	25 UJ
1,4-Dichlorobenzene	10	7 U	R	23 UJ	25 UJ
1,2-Dichlorobenzene	10	7 U	R	23 UJ	25 UJ
1,2-Dibromo-3-chloropropane	10	7 U	R	23 UJ	25 UJ
1,2,4-Trichlorobenzene	10	7 UJ	R	23 UJ	25 UJ
DILUTION FACTOR:		1.0	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04
DATE ANALYZED:		06/24/04	06/25/04	06/25/04	05/24/04
% MOISTURE:		27	28	34	26

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0890F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 4
SEMIVOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER:	D15541	D15542	D15543	D15544	D15555	D15556	
SAMPLE LOCATION:	SD-Q1A	SD-01B	SD-01C	SD-02A	SD-02B	SD-02C	
LABORATORY NUMBER:	576809	576610	576611	576812	576821	576622R1	
COMPOUND	CRQL						
Benzaldehyde	330	830 UJ	830 UJ	630 UJ	1800 UJ	480 UJ	860 UJ
Phenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
bis(2-Chloroethyl)Ether	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Chlorophenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Methylphenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,2-dimethyl(1-Chloropropane)	330	830 U	830 U	630 U	1800 U	480 U	860 U
Acetophenone	330	830 U	830 U	630 U	1800 U	480 U	860 U
4-Methylphenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
N-Nitroso-di-n-propylamine	330	830 U	830 U	630 U	1800 U	480 U	860 U
Hexachloroethane	330	830 U	830 U	630 U	1800 U	480 U	860 U
Nitrobenzene	330	830 U	830 U	630 U	1800 U	480 U	860 U
Isophorone	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Nitrophenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,4-Dimethylphenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
bis(2-Chloroethoxy)methane	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,4-Dichlorophenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
Naphthalene	330	66 J	63 J	62 J	1800 U	480 U	860 U
4-Chloroaniline	330	830 U	830 U	630 U	1800 U	480 U	860 U
Hexachlorobutadiene	330	830 U	830 U	630 U	1800 U	480 U	860 U
Caprolactam	330	830 U	830 U	630 U	1800 U	480 U	860 U
4-Chloro-3-methylphenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Methylnaphthalene	330	830 U	48 J	52 J	1800 U	480 U	860 U
Hexachlorocyclopentadiene	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,4,6-Trichlorophenol	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,4,5-Trichlorophenol	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
1,1-Biphenyl	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Chloronaphthalene	330	830 U	830 U	630 U	1800 U	480 U	860 U
2-Nitroaniline	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
Dimethylphthalate	330	830 U	830 U	630 U	1800 U	480 U	860 U
2,6-Dinitrotoluene	330	830 U	830 U	630 U	1800 U	480 U	860 U
Acenaphthylene	330	830 U	41 J	830 U	1800 U	480 U	860 U
3-Nitroaniline	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
Acenaphthene	330	72 J	120 J	110 J	180 J	39 J	43 J
2,4-Dinitrophenol	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
4-Nitrophenol	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
Dibenzofuran	330	62 J	72 J	78 J	110 J	26 J	860 U
2,4-Dinitrotoluene	330	830 U	830 U	630 U	1800 U	480 U	860 U
Diethylphthalate	330	830 U	830 U	630 U	1800 U	480 U	860 U
Fluorene	330	70 J	120 J	110 J	160 J	42 J	45 J
4-Chlorophenyl-phenylether	330	830 U	830 U	630 U	1800 U	480 U	860 U
4-Nitroaniline	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
4,6-Dinitro-2-methylphenol	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
N-Nitrosodiphenylamine (1)	330	830 U	830 U	630 U	1800 U	480 U	860 U
4-Bromophenyl-phenylether	330	830 U	830 U	630 U	1800 U	480 U	860 U
Hexachlorobenzene	330	830 U	830 U	630 U	1800 U	480 U	860 U
Atrazine	330	830 U	830 U	630 U	1800 U	480 U	860 U
Pentachlorophenol	830	2100 U	2100 U	1600 U	4500 U	1200 U	2200 U
Phenanthrene	330	1900	1800	1800	4100	920	1000
Anthracene	330	240 J	350 J	370 J	520 J	140 J	170 J
Carbazole	330	290 J	220 J	150 J	570 J	120 J	150 J
Di-n-butylphthalate	330	830 U	56 J	39 J	1800 U	27 J	860 U
Fluoranthene	330	3800	3400	2100	7700	2000	2400
Pyrene	330	4700 J	3000	3100 J	8200	2200	2600
Butylbenzylphthalate	330	830 U	88 J	630 UJ	1800 U	46 J	860 U
3,3'-Dichlorobenzidine	330	830 UJ	830 UJ	630 UJ	1800 UJ	480 UJ	860 UJ
Benzo(a)anthracene	330	1600	1600	1300 J	3100	870	1000
Chrysene	330	3000	2200	1700 J	6300	1500	1900
bis(2-Ethylhexyl)phthalate	330	470 J	450 J	320 J	890 J	320 J	390 J
Di-n-octylphthalate	330	830 UJ	830 U	630 UJ	1800 U	480 UJ	860 UJ
Benzo(b)fluoranthene	330	4300 J	2900	2200 J	8600	2100 J	2400 J
Benzo(k)fluoranthene	330	2700 J	1900	1300 J	4800	1800 J	2200 J
Benzo(a)pyrene	330	2400 J	1800	1400 J	4900	1200 J	1500 J
Indeno(1,2,3-cd)pyrene	330	1500 J	990	870 J	3800	740 J	910 J
Dibenzo(a,h)anthracene	330	560 J	440 J	280 J	1500 J	330 J	410 J
Benzo(g,h,i)perylene	330	1600 J	1100	940 J	4500	820 J	1100 J
DILUTION FACTOR:		1.4	1.5	1.0	3.3	1.0	1.7
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:		06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:		07/02/04	07/01/04	07/02/04	07/02/04	07/02/04	07/02/04
% MOISTURE:		43	39	48	39	31	36

* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 4
SEMIVOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER:	D15547	D15548	D15549	D15550	D15551	D15552
	SAMPLE LOCATION:	SD-03A	SD-03B	SD-03C	SD-04A	SD-04B	SD-04C
	LABORATORY NUMBER:	576613	576614	576615	576616	576617	576618
COMPOUND	CRQL						
Benzaldehyde	330	550 UJ	520 UJ	4400 J EE	650 UJ	410 UJ	400 UJ
Phenol	330	550 U	520 U	190 J	650 U	410 U	400 U
bis(2-Chlorophenyl)Ether	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Chlorophenol	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Methylphenol	330	550 U	520 U	850 U	650 U	410 U	400 U
2,2'-oxybis(1-Chloropropane)	330	550 U	520 U	850 U	650 U	410 U	400 U
Acetophenone	330	550 U	520 U	850 U	650 U	410 U	400 U
4-Methylphenol	330	550 U	520 U	850 U	650 U	69 J	400 U
N-Nitroso-di-n-propylamine	330	550 U	520 U	850 U	650 U	410 U	400 U
Hexachloroethane	330	550 U	520 U	850 U	650 U	410 U	400 U
Nitrobenzene	330	550 U	520 U	850 U	650 U	410 U	400 U
Isophorone	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Nitrophenol	330	550 U	520 U	850 U	650 U	410 U	400 U
2,4-Dimethylphenol	330	550 U	520 U	850 U	650 U	410 U	400 U
bis(2-Chloroethoxy)methane	330	550 U	520 U	850 U	650 U	410 U	400 U
2,4-Dichlorophenol	330	550 U	620 U	850 U	650 U	410 U	400 U
Naphthalene	330	57 J	39 J	850 U	650 U	27 J	400 U
4-Chloroaniline	330	550 U	520 U	850 U	650 U	410 U	400 U
Hexachlorobutadiene	330	550 U	620 U	850 U	650 U	410 U	400 U
Caprolactam	330	550 U	520 U	850 U	650 U	410 U	400 U
4-Chloro-3-methylphenol	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Methylnaphthalene	330	39 J	44 J	850 U	650 U	34 J	19 J
Hexachlorocyclopentadiene	330	550 U	520 U	850 U	650 U	410 U	400 U
2,4,6-Trichlorophenol	330	550 U	520 U	850 U	650 U	410 U	400 U
2,4,5-Trichlorophenol	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
1,1'-Biphenyl	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Chloronaphthalene	330	550 U	520 U	850 U	650 U	410 U	400 U
2-Nitroaniline	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
Dimethylphthalate	330	550 U	520 U	850 U	650 U	410 U	400 U
2,6-Dinitrotoluene	330	550 U	520 U	850 U	650 U	410 U	400 U
Acenaphthylene	330	49 J	27 J	850 U	650 U	410 U	400 U
3-Nitroaniline	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
Acenaphthene	330	100 J	27 J	850 U	41 J	410 U	400 U
2,4-Dinitrophenol	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
4-Nitrophenol	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
Dibenzofuran	330	58 J	25 J	850 U	650 U	410 U	400 U
2,4-Dinitrotoluene	330	550 U	520 U	850 U	650 U	410 U	400 U
Diethylphthalate	330	550 U	520 U	850 U	650 U	410 U	400 U
Fluorene	330	84 J	28 J	850 U	36 J	410 U	400 U
4-Chlorophenyl-phenylether	330	550 U	520 U	850 U	650 U	410 U	400 U
4-Nitroaniline	330	1400 U	1300 U	2100 U	1600 U	1000 U	1000 U
4,6-Dinitro-2-methylphenol	330	1400 U	1300 U	2100 U	1800 U	1000 U	1000 U
N-Nitrosodiphenylamine (1)	330	550 U	520 U	850 U	650 U	410 U	400 U
4-Bromophenyl-phenylether	330	550 U	520 U	850 U	650 U	410 U	400 U
Hexachlorobenzene	330	550 U	520 U	850 U	650 U	410 U	400 U
Atrazine	330	550 U	520 U	850 U	650 U	410 U	400 U
Pentachlorophenol	330	1400 U	1300 U	2100 U	1600 U	1000 U	1000 U
Phenanthrene	330	2000	550	220 J	840	220 J	100 J
Anthracene	330	270 J	92 J	850 U	130 J	26 J	400 U
Carbazole	330	320 J	87 J	850 U	150 J	31 J	400 U
Di-n-butylphthalate	330	36 J	32 J	850 U	42 J	23 J	23 J
Fluoranthene	330	*4100	1000	510 J	2300	420	190 J
Pyrene	330	4400	990	550 J	2400	450	220 J
Butylbenzylphthalate	330	67 J	520 U	850 U	54 J	410 U	400 U
3,3'-Dichlorobenzidine	330	550 UJ	520 UJ	850 UJ	650 UJ	410 UJ	400 UJ
Benzo(a)anthracene	330	1900	510 J	210 J	1000	180 J	92 J
Chrysene	330	3100	780	320 J	1700	370 J	180 J
bis(2-Ethylhexyl)phthalate	330	1100	82 J	850 U	510 J	110 J	140 J
Di-n-octylphthalate	330	550 UJ	520 U	850 U	650 UJ	410 U	400 U
Benzo(b)fluoranthene	330	*4100 J	930	330 J	2800 J	580	170 J
Benzo(k)fluoranthene	330	2400 J	920	280 J	1500 J	310 J	200 J
Benzo(a)pyrene	330	2400 J	850	260 J	1300 J	270 J	110 J
Indeno(1,2,3-cd)pyrene	330	1500 J	320 J	220 J	810 J	170 J	71 J
Dibenzo(a,h)anthracene	330	690 J	140 J	74 J	310 J	41 J	30 J
Benzo(g,h,i)perylene	330	1700 J	350 J	240 J	950 J	210 J	81 J
DILUTION FACTOR:		1.0/1.4*	1.0	1.7	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:		06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:		07/02/04	07/02/04	07/02/04	07/02/04	07/02/04	07/02/04
% MOISTURE:		40	37	35	49	20	18

* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 4
SEMIVOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER:	D15563	D15554	D15557	D15558	D15559	D15570
SAMPLE LOCATION:	SD-05A	SD-05B	SD-06A	SD-06B	SD-06C	SD-07
LABORATORY NUMBER:	576619	576620	576623	576624	576625	576631
COMPOUND	CRQL					
Benzaldehyde	330	970 UJ	680 UJ	450 UJ	450 UJ	1900 UJ
Phenol	330	970 U	680 U	450 U	450 U	1900 U
bis(2-Chloroethyl)Ether	330	970 U	680 U	450 U	450 U	1900 U
2-Chlorophenol	330	970 U	680 U	450 U	450 U	1900 U
2-Methylphenol	330	970 U	680 U	450 U	450 U	1900 U
2,2'-oxybis(1-Chloropropane)	330	970 U	680 U	450 U	450 U	1900 U
Acetophenone	330	970 U	680 U	450 U	450 U	1900 U
4-Methylphenol	330	970 U	680 U	450 U	450 U	1900 U
N-Nitroso-d-n-propylamine	330	970 U	680 U	450 U	450 U	1900 U
Hexachloroethane	330	970 U	680 U	450 U	450 U	1900 U
Nitrobenzene	330	970 U	680 U	450 U	450 U	1900 U
Isophorone	330	970 U	680 U	450 U	450 U	1900 U
2-Nitrophenol	330	970 U	680 U	450 U	450 U	1900 U
2,4-Dimethylphenol	330	970 U	680 U	450 U	450 U	1900 U
bis(2-Chloroethoxy)methane	330	970 U	680 U	450 U	450 U	1900 U
2,4-Dichlorophenol	330	970 U	680 U	450 U	450 U	1900 U
Naphthalene	330	970 U	46 J	69 J	48 J	1900 U
4-Chloroaniline	330	970 U	680 U	450 U	450 U	1900 U
Hexachlorobutadiene	330	970 U	680 U	450 U	450 U	1900 U
Caprolactam	330	970 U	680 U	450 U	450 U	1900 U
4-Chloro-3-methylphenol	330	970 U	680 U	450 UJ	450 UJ	1900 UJ
2-Methylnaphthalene	330	970 U	680 U	450 U	450 U	1900 U
Hexachlorocyclopentadiene	330	970 U	680 U	450 U	450 U	1900 U
2,4,6-Trichlorophenol	330	970 U	680 U	450 U	450 U	1900 U
2,4,5-Trichlorophenol	830	2400 U	1700 U	1100 U	1100 U	4900 U
1,1'-Biphenyl	330	970 U	680 U	450 U	450 U	1900 U
2-Chloronaphthalene	330	970 U	680 U	450 U	450 U	1900 U
2-Nitroaniline	830	2400 U	1700 U	1100 U	1100 U	4900 U
Dimethylphthalate	330	970 U	680 U	450 U	450 U	1900 U
2,6-Dinitrotoluene	330	970 U	680 U	450 U	450 U	1900 U
Acenaphthylene	330	970 U	680 U	450 U	450 U	1900 U
3-Nitroaniline	830	2400 U	1700 U	1100 U	1100 U	4900 U
Acenaphthene	330	140 J	120 J	31 J	110 J	190 J
2,4-Dinitrophenol	830	2400 U	1700 U	1100 U	1100 U	4900 U
4-Nitrophenol	830	2400 U	1700 U	1100 U	1100 U	4900 U
Dibenzofuran	330	82 J	76 J	21 J	63 J	110 J
2,4-Dinitrotoluene	330	970 U	680 U	450 U	450 U	1900 U
Diethylphthalate	330	970 U	680 U	450 U	450 U	1900 U
Fluorene	330	130 J	110 J	30 J	95 J	190 J
4-Chlorophenyl-phenylether	330	970 U	680 U	450 U	450 U	1900 U
4-Nitroaniline	830	2400 U	1700 U	1100 U	1100 U	4900 U
4,6-Dinitro-2-methylphenol	830	2400 U	1700 U	1100 U	1100 U	4900 U
N-Nitrosodiphenylamine (1)	330	970 U	680 U	450 U	450 U	1900 U
4-Bromophenyl-phenylether	330	970 U	680 U	450 U	450 U	1900 U
Hexachlorobenzene	330	970 U	680 U	450 U	450 U	1900 U
Atrazine	330	970 U	680 U	450 U	450 U	1900 U
Peritachlorophenol	830	2400 U	1700 U	1100 U	1100 U	4900 U
Phenanthrene	330	2500	2400	540	1900	4400
Anthracene	330	310 J	290 J	70 J	190 J	360 J
Carbazole	330	430 J	520 J	70 J	310 J	870 J
Di-n-butylphthalate	330	47 J	680 U	34 J	34 J	1900 U
Fluoranthene	330	4400	4500	760	2900	8200
Pyrene	330	3900	4600 J	950 J	3500 J	8100
Butylbenzylphthalate	330	970 U	680 UJ	450 UJ	450 UJ	1900 U
3,3'-Dichlorobenzidine	330	970 UJ	680 UJ	450 UJ	450 UJ	1900 UJ
Benzo(a)anthracene	330	1800	1500 J	400 J	1100 J	3000
Chrysene	330	3900	3800 J	730 J	2900 J	7600
bis(2-Ethylhexyl)phthalate	330	990	1100 J	360 J	800 J	1800 J
Di-n-octylphthalate	330	270 J	680 UJ	450 UJ	450 UJ	1900 U
Benzo(b)fluoranthene	330	5900 J	5100 J	730 J	2700 J	7800
Benzo(k)fluoranthene	330	4800 J	2800 J	670 J	2600 J	7100
Benzo(a)pyrene	330	3000 J	2300 J	520 J	1800 J	5000
Indeno(1,2,3-cd)pyrene	330	1700 J	1600 J	420 J	1400 J	4400 J
Dibenzo(a,h)anthracene	330	860 J	650 J	170 J	570 J	1900 J
Benzo(g,h,i)perylene	330	1800 J	1700 J	460 J	1600 J	4700 J
DILUTION FACTOR:	2.0	1.5/2.0*	1.0	1.0	3.3	1.2
DATE SAMPLED:	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:	07/02/04	07/06/04	07/05/04	07/05/04	07/05/04	07/05/04
% MDISTURE:	32	25	26	27	43	26

* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES - VERMONT

TABLE 4
SEMIVOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER: D15571 D15572
SAMPLE LOCATION: SD-08 SD-09
LABORATORY NUMBER: 576632 576633

COMPOUND	CRQL	D15571	D15572
Benzaldehyde	330	500 UJ	450 UJ
Phenol	330	500 U	450 U
bis(2-Chloroethyl)Ether	330	500 U	450 U
2-Chlorophenol	330	500 U	450 U
2-Methylphenol	330	500 U	450 U
2,2'-oxybis(1-Chloropropane)	330	500 U	450 U
Acetophenone	330	500 U	450 U
4-Methylphenol	330	150 J	91 J
N-Nitroso-di-n-propylamine	330	500 U	450 U
Hexachloroethane	330	500 U	450 U
Nitrobenzene	330	500 U	450 U
Isophorone	330	500 U	450 U
2-Nitrophenol	330	500 U	450 U
2,4-Dimethylphenol	330	500 U	450 U
bis(2-Chloroethoxy)methane	330	500 U	450 U
2,4-Dichlorophenol	330	500 U	450 U
Naphthalene	330	58 J	100 J
4-Chloroaniline	330	500 U	450 U
Hexachlorobutadiene	330	500 U	450 U
Caprolactam	330	500 U	450 U
4-Chloro-3-methylphenol	330	500 UJ	450 U
2-Methylnaphthalene	330	35 J	41 J
Hexachlorocyclopentadiene	330	500 U	450 U
2,4,6-Trichlorophenol	330	500 U	450 U
2,4,5-Trichlorophenol	830	1300 U	1100 U
1,1'-Biphenyl	330	500 U	21 J
2-Chloronaphthalene	330	500 U	450 U
2-Nitroaniline	830	1300 U	1100 U
Dimethylphthalate	330	500 U	450 U
2,6-Dinitrotoluene	330	500 U	450 U
Acenaphthylene	330	40 J	25 J
3-Nitroaniline	830	1300 U	1100 U
Acenaphthene	330	500 U	28 J
2,4-Dinitrophenol	830	1300 U	1100 U
4-Nitrophenol	830	1300 U	1100 U
Dibenzofuran	330	500 U	33 J
2,4-Dinitrotoluene	330	500 U	450 U
Diethylphthalate	330	500 U	450 U
Fluorene	330	500 U	31 J
4-Chlorophenyl-phenylether	330	500 U	450 U
4-Nitroaniline	830	1300 U	1100 U
4,6-Dinitro-2-methylphenol	830	1300 U	1100 U
N-Nitrosodiphenylamine (1)	330	500 U	450 U
4-Bromophenyl-phenylether	330	500 U	450 U
Hexachlorobenzene	330	500 U	450 U
Atrazine	330	500 U	450 U
Pentachlorophenol	830	1300 U	1100 U
Phenanthrene	330	390 J	560 J
Anthracene	330	86 J	130 J
Carbazole	330	31 J	48 J
Di-n-butylphthalate	330	28 J	26 J
Fluoranthene	330	520	800
Pyrene	330	880 J	1000 J
Butylbenzylphthalate	330	500 UJ	450 UJ
3,3'-Dichlorobenzidine	330	500 UJ	450 UJ
Benzo(a)anthracene	330	500 J	520 J
Chrysene	330	600 J	620 J
bis(2-Ethylhexyl)phthalate	330	500 UJ	450 UJ
Di-n-octylphthalate	330	500 UJ	450 UJ
Benzo(b)fluoranthene	330	640 J	620 J
Benzo(k)fluoranthene	330	570 J	570 J
Benzo(a)pyrene	330	720 J	570 J
Indeno(1,2,3-cd)pyrene	330	470 J	280 J
Dibenzo(a,h)anthracene	330	110 J	86 J
Benzo(g,h,i)perylene	330	590 J	350 J

DILUTION FACTOR: 1.0 1.0
DATE SAMPLED: 06/22/04 06/22/04
DATE EXTRACTED: 06/23/04 06/23/04
DATE ANALYZED: 07/05/04 07/02/04
% MOISTURE: 34 26

* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 7
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER:	D15541	D15542	D15543	D15544	D15555	D15556
	SAMPLE LOCATION:	SD-01A	SD-01B	SD-01C	SD-02A	SD-02B	SD-02C
	LABORATORY NUMBER:	576609	576610	576611	576612	576821	576822
COMPOUND	CRQL						
alpha-BHC	1.7	3.0 UJ	2.8 U	3.3 U	2.8 U	2.5 U	2.7 U
beta-BHC	1.7	3.0 UJ	R	3.3 U	2.8 U	*7.4 U	*8.0 U
delta-BHC	1.7	27 J	5.0	5.8	43	9.0	7.8
gamma-BHC (Lindane)	1.7	3.0 UJ	2.8 U	3.3 U	2.8 U	2.5 U	2.7 U
Heptachlor	1.7	3.0 UJ	2.8 U	3.3 U	2.8 U	2.5 U	2.7 U
Aldrin	1.7	3.0 UJ	2.8 U	3.3 U	2.8 U	2.5 U	2.7 U
Heptachlor Epoxide	1.7	4.7 J	4.9	5.6	3.7	*7.4 U	*8.0 U
Endosulfan I	1.7	3.0 UJ	2.8 U	3.3 U	2.8 U	2.5 U	2.7 U
Dieldrin	3.3	3.0 J	5.4 U	8.5	5.4 U	4.8 U	5.2 U
4,4'-DDE	3.3	12 J	11	22	7.1	66	63
Endrin	3.3	5.8 UJ	R	6.3 U	R	4.8 U	5.2 U
Endosulfan II	3.3	5.8 UJ	5.4 U	6.3 U	6.4 U	4.8 U	5.2 U
4,4'-DDD	3.3	6.1 J	12	25	4.2 J	56	54
Endosulfan Sulfate	3.3	R	5.4 U	6.3 U	R	4.8 U	5.2 U
4,4'-DDT	3.3	46 J	79	60	28	26	23
Methoxychlor	17	30 UJ	28 U	33 U	28 U	25 U	27 U
Endrin Ketone	3.3	18 J	6.9	5.3 J	8.7 J	4.8 U	5.2 U
Endrin Aldehyde	3.3	9.4 J	R	6.3 U	5.1 J	4.8 U	5.2 U
alpha-Chlordane	1.7	32 J	36	*52	20	*50	*48
gamma-Chlordane	1.7	24 J	32	47	16 J	*48	*43
Toxaphene	170	300 UJ	280 U	330 U	280 U	250 U	270 U
Aroclor-1016	33	58 UJ	54 U	63 U	54 U	48 U	52 U
Aroclor-1221	67	120 UJ	110 U	130 U	110 U	97 U	100 U
Aroclor-1232	33	58 UJ	54 U	63 U	54 U	48 U	52 U
Aroclor-1242	33	58 UJ	54 U	63 U	54 U	48 U	52 U
Aroclor-1248	33	58 UJ	54 U	63 U	54 U	48 U	52 U
Aroclor-1254	33	58 UJ	54 U	63 U	54 U	48 U	52 U
Aroclor-1260	33	58 UJ	54 U	63 U	54 U	48 U	52 U
DILUTION FACTOR:		1.0	1.0	1.0/2.0*	1.0	1.0/3.0*	1.0/3.0*
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:		06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:		06/28/04	06/29/04	06/29/04	06/29/04	06/29/04	06/29/04
% MOISTURE:		43	39	48	39	31	36

* - RESULT REPORTED FROM DILUTED ANALYSIS.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0890F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 7
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER:	D15547	D15548	D15549	D15550	D15551	D15552
	SAMPLE LOCATION:	SD-03A	SD-03B	SD-03C	SD-04A	SD-04B	SD-04C
	LABORATORY NUMBER:	576613	576614	576615	576616	576817	576818
COMPOUND	CRQL						
alpha-BHC	1.7	2.8 U	2.7 U	2.6 U	3.3 U	2.1 U	2.1 U
beta-BHC	1.7	2.8 U	2.7 U	2.6 U	*6.7 U	R	2.1 U
delta-BHC	1.7	21	4.3	2.3 J	15	4.6	2.1 U
gamma-BHC (Lindane)	1.7	2.8 U	2.7 U	2.6 U	3.3 U	2.1 U	2.1 U
Heptachlor	1.7	2.8 U	2.7 U	2.6 U	3.3 U	2.1 U	2.1 U
Aldrin	1.7	2.8 U	2.7 U	2.6 U	3.3 U	2.1 U	2.1 U
Heptachlor Epoxide	1.7	4.6 J	1.6 J	2.6 U	5.3 J	1.9 J	2.1 U
Endosulfan I	1.7	1.5 J	2.7 U	2.6 U	2.1 J	1.2 J	2.1 U
Dieldrin	3.3	3.7 J	5.2 U	5.1 U	21 J	4.6 J	4.0 U
4,4'-DDE	3.3	8.2	4.0 J	5.1 U	4.0 J	2.1 J	4.0 U
Endrin	3.3	R	5.2 U	5.1 U	6.5 U	4.1 U	4.0 U
Endosulfan II	3.3	5.5 U	5.2 U	5.1 U	5.2 J	4.1 U	4.0 U
4,4'-DDD	3.3	9.3	7.0	5.1 U	16	7.2	4.0 U
Endosulfan Sulfate	3.3	R	5.2 U	5.1 U	5.6 J	4.1 U	4.0 U
4,4'-DDT	3.3	26 J	4.7 J	5.1 U	14	3.9 J	4.0 U
Methoxychlor	17	28 U	27 U	26 U	33 U	21 U	21 U
Endrin Ketone	3.3	7.5 J	3.7 J	5.1 U	3.9 J	4.1 U	4.0 U
Endrin Aldehyde	3.3	4.4 J	5.2 U	5.1 U	6.5 U	4.1 U	4.0 U
alpha-Chlordane	1.7	21	8.1	2.8	*72	18	3.8
gamma-Chlordane	1.7	20 J	7.6	2.5 J	*70	17	3.7
Toxaphene	170	280 U	270 U	260 U	330 U	210 U	210 U
Aroclor-1016	33	55 U	52 U	51 U	65 U	41 U	40 U
Aroclor-1221	67	110 U	110 U	100 U	130 U	84 U	82 U
Aroclor-1232	33	55 U	52 U	51 U	65 U	41 U	40 U
Aroclor-1242	33	55 U	52 U	51 U	65 U	41 U	40 U
Aroclor-1248	33	55 U	52 U	51 U	65 U	41 U	40 U
Aroclor-1254	33	55 U	52 U	51 U	65 U	41 U	40 U
Aroclor-1260	33	55 U	52 U	51 U	65 U	41 U	40 U
DILUTION FACTOR:		1.0	1.0	1.0	1.0/2.0*	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:		06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:		06/29/04	06/29/04	06/29/04	06/29/04	06/29/04	06/29/04
% MOISTURE:		40	37	35	49	20	18

* - RESULT REPORTED FROM DILUTED ANALYSIS.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 7
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - LOW LEVEL
µg/kg

	SAMPLE NUMBER:	D15553	D15554	D15557	D15558	D15559	D15570
	SAMPLE LOCATION:	SD-05A	SD-05B	SD-06A	SD-06B	SD-06C	SD-07
	LABORATORY NUMBER:	576619	576620	576623	576624	576625	576631
COMPOUND	CRQL						
alpha-BHC	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	4.3 J
beta-BHC	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	2.3 U
delta-BHC	1.7	2.5 U	2.3 U	1.9 J	1.4 J	2.2 J	2.3 U
gamma-BHC (Lindane)	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	2.3 U
Heptachlor	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	11 J
Aldrin	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	R
Heptachlor Epoxide	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	2.3 U
Endosulfan I	1.7	2.5 U	2.3 U	2.3 U	2.3 U	3.0 U	2.3 U
Dieldrin	3.3	4.9 U	4.4 U	4.5 U	4.5 U	5.8 U	4.5 U
4,4'-DDE	3.3	4.9 U	4.4 U	4.8	4.5 U	3.5 J	3.7 J
Endrin	3.3	4.9 U	4.4 U	4.5 U	4.5 U	3.8 J	4.5 U
Endosulfan II	3.3	4.9 U	4.4 U	4.5 U	4.5 U	5.8 U	4.5 U
4,4'-DDD	3.3	4.9 U	4.4 U	6.6	3.4 J	4.6 J	4.5 U
Endosulfan Sulfate	3.3	R	R	4.5 U	R	R	4.5 U
4,4'-DDT	3.3	4.3 J	3.3 J	2.9 J	3.2 J	7.9 J	30 J
Methoxychlor	17	25 U	23 U	23 U	23 U	30 U	23 U
Endrin Ketone	3.3	6.3 J	5.7 J	4.5 U	4.7	12 J	R
Endrin Aldehyde	3.3	4.9 U	4.4 U	4.5 U	2.5 J	6.1 J	4.5 U
alpha-Chlordane	1.7	2.5 U	2.3 U	3.0 J	3.0 J	R	1.6 J
gamma-Chlordane	1.7	1.4 J	2.3 U	3.3	3.5	4.6 J	R
Toxaphene	170	250 U	230 U	230 U	230 U	300 U	230 U
Aroclor-1016	33	49 U	44 U	45 U	45 U	58 U	45 U
Aroclor-1221	67	99 U	89 U	91 U	92 U	120 U	91 U
Aroclor-1232	33	49 U	44 U	45 U	45 U	58 U	45 U
Aroclor-1242	33	49 U	44 U	45 U	45 U	58 U	45 U
Aroclor-1248	33	49 U	44 U	45 U	45 U	58 U	45 U
Aroclor-1254	33	49 U	44 U	45 U	45 U	58 U	45 U
Aroclor-1260	33	49 U	44 U	45 U	45 U	58 U	45 U
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04	06/22/04	06/22/04	06/22/04	06/22/04
DATE EXTRACTED:		06/23/04	06/23/04	06/23/04	06/23/04	06/23/04	06/23/04
DATE ANALYZED:		06/29/04	06/29/04	06/28/04	06/28/04	06/28/04	06/28/04
% MOISTURE:		32	25	26	27	43	26

* - RESULT REPORTED FROM DILUTED ANALYSIS.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 7
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER:	D15571	D15572
SAMPLE LOCATION:	SD-08	SD-09
LABORATORY NUMBER:	576632	576633

COMPOUND	CRQL		
alpha-BHC	1.7	2.6 U	2.3 U
beta-BHC	1.7	2.6 U	2.3 U
delta-BHC	1.7	2.6 U	2.3 U
gamma-BHC (Lindane)	1.7	2.6 U	2.3 U
Heptachlor	1.7	2.6 U	2.3 U
Aldrin	1.7	2.6 U	2.3 U
Heptachlor Epoxide	1.7	2.6 U	2.3 U
Endosulfan I	1.7	2.6 U	2.3 U
Dieldrin	3.3	5.0 U	4.5 U
4,4'-DDE	3.3	5.0 U	4.5 U
Endrin	3.3	5.0 U	4.5 U
Endosulfan II	3.3	5.0 U	4.5 U
4,4'-DDD	3.3	5.0 U	4.5 U
Endosulfan Sulfate	3.3	5.6 J	4.5 U
4,4'-DDT	3.3	5.0 U	4.5 U
Methoxychlor	17	26 U	23 U
Endrin Ketone	3.3	3.2 J	4.5 U
Endrin Aldehyde	3.3	5.0 U	4.5 U
alpha-Chlordane	1.7	2.6 U	2.3 U
gamma-Chlordane	1.7	2.6 U	2.3 U
Toxaphene	170	260 U	230 U
Aroclor-1016	33	50 U	45 U
Aroclor-1221	67	100 U	91 U
Aroclor-1232	33	50 U	45 U
Aroclor-1242	33	50 U	45 U
Aroclor-1248	33	50 U	45 U
Aroclor-1254	33	50 U	45 U
Aroclor-1260	33	50 U	45 U

DILUTION FACTOR:	1.0	1.0
DATE SAMPLED:	06/22/04	06/22/04
DATE EXTRACTED:	06/23/04	06/23/04
DATE ANALYZED:	06/28/04	06/28/04
% MOISTURE:	34	26

* - RESULT REPORTED FROM DILUTED ANALYSIS.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

DATA SUMMARY KEY
INORGANIC DATA VALIDATION

- J = The associated numerical value is an estimated quantity.
- R = The result is rejected due to gross deficiencies in quality control criteria. The result is unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- U = The compound was analyzed for but not detected. The associated numerical value is the SDL or the adjusted SDL.
- UJ = The compound was analyzed for but not detected. The associated numerical value is the estimated SDL.

ACRONYM LIST
INORGANIC DATA VALIDATION

AQ	aqueous
°C	degrees Celsius
CCV	Continuing Calibration Verification
CLP	Contract Laboratory Program
COC	Chain-of-Custody record
Conc.	Concentration
CRDL	Contract Required Detection Limit
CRI	CRQL Standard for ICP
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	percent difference
DAS	Delivery of Analytical Services
DC	Document Control
DQO	Data Quality Objective
DV	Data Validation
DW	drinking water
GW	groundwater
Cr+6	Hexavalent Chromium
IC	Ion Chromatography
ICP-MS	Inductively Coupled Plasma - Mass Spectrometry
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
kg	kilogram
L	liter
LCS	Laboratory Control Sample
MDL	Method Detection Limit
mg	milligram
MS	Matrix Spike
MSA	Method of Standard Additions
NA	not applicable
ND	non-detected result
ORP	Oxidation Reduction Potential
PE	Performance Evaluation
Pos	positive result
QC	Quality Control
%R	percent recovery
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SDL	Sample Detection Limit
SOW	Statement of Work
S/S	soil/sediment
START	Superfund Technical Assessment and Response Team
SW	surface water
SW-846	EPA Test Methods for the Evaluation of Solid Waste
TAL	Target Analyte List
TCL	Target Compound List
µg	microgram
WESTON	Weston Solutions, Inc.

SITE: JOHN J RILEY
CASE: 0602F SDG: D15538
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 1
INORGANIC SOIL ANALYSES
mg/kg

SAMPLE NUMBER:	D15541	D15542	D15543	D15544	D15547	D15548	D15549
SAMPLE LOCATION:	SD-01A	SD-01B	SD-01C	SD-02A	SD-03A	SD-03B	SD-03C
LABORATORY NUMBER:	0406321-04	0406321-05	0406321-06	0406321-07	0406321-08	0406321-09	0406321-10
PERCENT SOLIDS:	58.1	61.6	53.5	63.2	56.8	65.7	46.8

INORGANIC ANALYTES	METHOD	METHOD DETECTION LIMITS (mg/kg)	D15541	D15542	D15543	D15544	D15547	D15548	D15549	CONTRACT QUANTITATION LIMITS (mg/kg)
ALUMINUM	P	25.9	19300	17200	17000	15500	14600	11800	19800	20
ANTIMONY	P	0.44	R	R	R	R	R	R	R	6
ARSENIC	P	0.80	1.4 UJ	1.3 UJ	1.5 UJ	1.1 UJ	1.4 UJ	1.2 UJ	2.7 UJ	1
BARIUM	P	0.11	176	279	460	181	497	191	112	20
BERYLLIUM	P	0.14	0.85 UJ	0.57 UJ	0.50 UJ	0.71 UJ	0.52 UJ	0.31 UJ	0.80 UJ	0.5
CADMIUM	P	0.14	1.8 J	1.5 J	1.7 J	1.1 J	1.4 J	0.58 U	0.83 U	0.5
CALCIUM	P	3.9	6230	4940	5710	5410	19300	54400	17700	500
CHROMIUM	P	0.79	3850 J	9060 J	19300 J	2708 J	5240 J	8390 J	1600 J	1
COBALT	P	0.13	21.2	12.8 J	10.9 J	13.3	11.8 J	6.5 J	9.6	5
COPPER	P	0.16	108 J	83.4 J	92.2 J	84.0 J	92.6 J	53.1 J	62.9 J	2.5
IRON	P	1.9	25100	23400	23900	21900	22100	15200	19700	10
LEAD	P	0.58	317	395	468	220	235	134	148	1
MAGNESIUM	P	1.1	5300	4570	4290	4390	4400	3360	3710	500
MANGANESE	P	0.13	908	515	415	585	811	262	295	1.5
MERCURY	CV	0.005	4.1	4.4	5.3	3.8	1.3	1.2	4.3	0.1
NICKEL	P	0.14	45.2	35.9	32.7	31.9	33.0	11.9	16.5	4
POTASSIUM	P	1.9	1870 J	1430 J	1080 J	1420 J	1220 J	1090 J	933 J	500
SELENIUM	P	0.57	3.4 J	2.7 UJ	3.0 UJ	2.5 UJ	2.3 UJ	1.5 UJ	2.9 UJ	3.5
SILVER	P	0.13	1.4 U	1.3 U	1.5 U	0.33 UJ	1.4 U	1.2 U	1.7 U	1
SODIUM	P	34	688 UJ	655 UJ	748 UJ	659 UJ	688 UJ	585 UJ	108 UJ	500
THALLIUM	P	0.85	R	R	R	R	R	R	R	2.5
VANADIUM	P	0.07	94.5 J	104 J	112 J	64.4 J	107 J	34.3 J	42.0 J	5
ZINC	P	1.1	576	444	608	447	486	61.3	111	6
CYANIDE	AS	0.08	4.9	5.5	7.7	3.8 J	5.9	1.1 J	1.8 J	2.5

ANALYTICAL METHOD
P - ICP
CV - COLD VAPOR
AS - SEMI AUTOMATED SPECTROPHOTOMETRIC

NOTE: J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED IN THE QUALITY CONTROL REVIEW (DATA REVIEW).
U = VALUE IS NON-DETECTED.
UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.
R = VALUE IS REJECTED.
NA = NOT ANALYZED.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0692F SDG: D15538
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 1
INORGANIC SOIL ANALYSES
mg/kg

SAMPLE NUMBER:	D15550	D15551	D15552	D15553	D15554	D15555	D15556
SAMPLE LOCATION:	SD-04A	SD-04B	SD-04C	SD-05A	SD-05B	SD-02B	SD-02C
LABORATORY NUMBER:	0406321-11	0406321-12	0406321-13	0406321-14	0406321-16	0406321-16	0406321-17
PERCENT SOLIDS:	49.6	78.5	79.9	66.5	76.1	67.3	65.2

INORGANIC ANALYTES	METHOD	METHOD DETECTION LIMITS (mg/kg)		CONTRACT QUANTITATION LIMITS (mg/kg)						
		25.9	11300	11100	12400	14000	9610	16000	9900	20
ALUMINUM	P	0.44	R	R	R	R	R	R	R	6
ANTIMONY	P	0.80	1.7 UJ	0.98 UJ	2.3 J	4.7 J	2.1 UJ	1.1 UJ	1.3 UJ	1
ARSENIC	P	0.11	1560	686	82.9	406	263	210	497	20
BARIUM	P	0.14	0.26 UJ	0.33 UJ	0.43 UJ	0.37 UJ	0.39 UJ	0.53 UJ	0.32 UJ	0.5
BERYLLIUM	P	0.14	1.7 J	0.49 U	0.50 U	0.61 U	0.53 U	0.84 J	0.46 U	0.5
CADMIUM	P	3.9	54600	13400	5910	3290	2750	5310	4480	500
CALCIUM	P	0.79	16100 J	2670 J	799 J	703 J	388 J	3990 J	11800 J	1
CHROMIUM	P	0.13	5.7 J	8.1	10.8	9.8	8.6	12.5	5.0 J	5
COBALT	P	0.16	124 J	64.0 J	53.0 J	48.5 J	30.8 J	72.2 J	40.9 J	2.5
COPPER	P	1.9	13800	15400	18100	18600	13500	20800	11400	10
IRON	P	0.58	508	93.4	42.2	52.5	32.7	204	91.6	1
LEAD	P	1.1	4250	4080	4520	5590	3850	5420	2640	500
MAGNESIUM	P	0.13	486	233	233	179	140	474	209	1.5
MANGANESE	P	0.005	2.4	0.59	0.70	0.19	0.12	8.6	1.2	0.1
MERCURY	CV	0.14	22.8	15.6	17.7	22.4	15.4	30.4	13.7	4
NICKEL	P	1.9	1020 J	1250 J	1140 J	1800 J	1160 J	1810 J	548 J	500
POTASSIUM	P	0.57	1.5 UJ	1.6 UJ	1.5 UJ	2.3 UJ	1.6 UJ	2.2 UJ	1.4 UJ	3.5
SELENIUM	P	0.13	1.7 U	0.98 U	1.0 U	1.2 U	1.1 U	0.26 UJ	1.3 U	1
SILVER	P	34	826 UJ	490 UJ	177 UJ	611 UJ	526 UJ	571 UJ	623 UJ	500
SODIUM	P	0.85	R	R	R	R	R	R	R	2.5
THALLIUM	P	0.07	83.1 J	41.0 J	39.1 J	51.7 J	35.6 J	68.7 J	36.7 J	5
VANADIUM	P	1.1	589	306	71.1	271	173	335	221	6
ZINC	P	0.08	1.9 J	0.84 J	2.9 U	2.3 J	0.87 J	3.5 UJ	0.18 J	2.5
CYANIDE	AS									

ANALYTICAL METHOD
P - ICP
CV - COLD VAPOR
AS - SEMI AUTOMATED
SPECTROPHOTOMETRIC

NOTE: J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED IN THE QUALITY CONTROL REVIEW (DATA REVIEW).
U = VALUE IS NON-DETECTED
UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.
R = VALUE IS REJECTED
NA = NOT ANALYZED.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0692F SDG: D15538
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 1
INORGANIC SOIL ANALYSES
mg/kg

SAMPLE NUMBER:	D15557	D15558	D15559	D15570	D15571	D15572
SAMPLE LOCATION:	SD-06A	SD-06B	SD-06C	SD-07	SD-08	SD-09
LABORATORY NUMBER:	0406321-18	0406321-19	0406321-20	0406321-22	0406321-23	0406321-24
PERCENT SOLIDS:	80.7	80.4	83.0	72.7	88.4	74.0

INORGANIC ANALYTES	METHOD	METHOD DETECTION LIMITS (mg/kg)	D15557	D15558	D15559	D15570	D15571	D15572	CONTRACT QUANTITATION LIMITS (mg/kg)
ALUMINUM	P	25.9	9480	7980	10300	5080	5450	6810	20
ANTIMONY	P	0.44	R	R	R	R	R	R	8
ARSENIC	P	0.80	0.94 UJ	0.77 UJ	1.3 UJ	127 J	1.2 UJ	1.1 UJ	1
BARIUM	P	0.11	1030	491	664	1450	118	263	20
BERYLLIUM	P	0.14	0.30 UJ	0.35 UJ	0.39 UJ	0.80 UJ	0.60 UJ	0.27 UJ	0.5
CADMIUM	P	0.14	0.66 J	0.48 U	0.47 U	3.0 J	0.32 UJ	0.36 U	0.5
CALCIUM	P	3.9	1720	1880	1940	3480	29600	32500	500
CHROMIUM	P	0.79	1140 J	675 J	927 J	1490 J	47100 J	19200 J	1
COBALT	P	0.13	6.9	6.7	8.9	16.7 J	R	R	5
COPPER	P	0.16	34.8 J	29.1 J	49.3 J	257 J	44.6 J	60.0 J	2.5
IRON	P	1.9	14000	13600	17100	170000	8780	29400	10
LEAD	P	0.58	76.2	52.2	99.5	3110	254	289	1
MAGNESIUM	P	1.1	3890	3730	4590	1910	1910	2540	500
MANGANESE	P	0.13	127	120	145	908	115	277	1.5
MERCURY	CV	0.005	0.29	0.24	0.40	3.7	3.9	5.1	0.1
NICKEL	P	0.14	17.0	16.7	22.5	42.2	6.0	9.9	4
POTASSIUM	P	1.9	1040 J	841 J	1130 J	318 J	732 J	503 J	500
SELENIUM	P	0.57	1.4 UJ	1.5 UJ	1.9 UJ	19.0 J	4.2 UJ	3.1 J	3.5
SILVER	P	0.13	0.94 U	0.98 U	1.2 U	1.1	0.17 UJ	1.1 U	1
SODIUM	P	34	469 UJ	482 UJ	608 UJ	537 UJ	602 UJ	563 UJ	500
THALLIUM	P	0.85	R	R	R	R	R	R	2.5
VANADIUM	P	0.07	41.3 J	38.3 J	51.2 J	49.8 J	R	19.3 J	5
ZINC	P	1.1	478	259	360	1540	7.2 U	46.8	6
CYANIDE	AS	0.08	0.62 J	0.23 J	2.6 J	6.5	5.5	4.8	2.5

ANALYTICAL METHOD
P - ICP
CV - COLD VAPOR
AS - SEMI AUTOMATED SPECTROPHOTOMETRIC

NOTE: J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED IN THE QUALITY CONTROL REVIEW (DATA REVIEW).
U = VALUE IS NON-DETECTED
UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.
R = VALUE IS REJECTED
NA = NOT ANALYZED

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

ATTACHMENT B

JOHN J RILEY

**SOURCE SAMPLE ANALYTICAL RESULTS
START**

Samples collected 22 June 2004

DATA SUMMARY KEY
ORGANIC DATA VALIDATION

- J = The associated numerical value is an estimated quantity.
- R = The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. The R replaces the numerical value or SQL.
- U = The compound was analyzed for, but not detected. The associated numerical value is the SQL or the adjusted SQL.
- UJ = The compound was analyzed for, but not detected. The associated numerical value is the estimated SQL.
- EB = The compound was identified in an aqueous EB that was used to assess field contamination associated with soil/sediment samples.
- TB = The compound was identified in an aqueous TB that was used to assess field contamination associated with soil/sediment samples.
- BB = The compound was identified in an aqueous BB that was used to assess field contamination associated with soil/sediment samples.

ACRONYM LIST
ORGANIC DATA VALIDATION

AQ	aqueous
AQFB	aqueous field blank
B/N	base/neutral compound
°C	degrees Celsius
CC	Continuing Calibration
CLP	Contract Laboratory Program
COC	Chain-of-Custody record
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	percent difference
DAS	Delivery of Analytical Services
DQO	Data Quality Objective
DV	Data Validation
DW	drinking water
EB	Equipment Blank
EPA	Environmental Protection Agency
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometry
GW	groundwater
IC	Initial Calibration
IS	Internal Standard
kg	kilogram
L	liter
LCS	Laboratory Control Sample
LFB	Laboratory Fortified Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	non-detected result
OSC	On-Scene Coordinator
PCB	polychlorinated biphenyl compound
P/PCB	pesticide/polychlorinated biphenyl compound
PE	Performance Evaluation
Pos	positive result
QC	Quality Control
%R	percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SOW	Statement of Work
SQL	Sample Quantitation Limit
S/S	soil/sediment
S/S (m)	soil/sediment medium level
START	Superfund Technical Assessment and Response Team
SVOC	semivolatile organic compound
SW	surface water
SW-846	EPA Test Methods for Evaluating Solid Waste
TB	Trip Blank
TCL	Target Compound List
TDD	Technical Direction Document
TIC	Tentatively Identified Compound
TR	Traffic Report
U	Undetected
µg	microgram
VOC	volatile organic compound
WESTON	Weston Solutions, Inc.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 2
VOLATILE SOIL ANALYSES - MEDIUM LEVEL
µg/kg

	SAMPLE NUMBER:	D15538	D15539	D15540
	SAMPLE LOCATION:	SO-01	SO-02	SO-03
	LABORATORY NUMBER:	578606	578607	578608
COMPOUND	CRQL			
Dichlorodifluoromethane	1200	760 U	71000 U	7200 U
Chloromethane	1200	760 U	71000 U	7200 U
Vinyl Chloride	1200	760 U	71000 U	7200 U
Bromomethane	1200	760 U	71000 U	7200 U
Chloroethane	1200	760 U	71000 U	7200 U
Trichlorofluoromethane	1200	760 U	71000 U	7200 U
1,1-Dichloroethene	1200	760 U	71000 U	7200 U
1,1,2-Trichloro-1,2,2-trifluoroethane	1200	760 U	71000 U	7200 U
Acetone	1200	760 U	71000 U	7200 U
Carbon Disulfide	1200	760 U	71000 U	7200 U
Methyl Acetate	1200	160 J	71000 U	7200 U
Methylene Chloride	1200	760 U	71000 U	7200 U
trans-1,2-Dichloroethene	1200	760 U	71000 U	7200 U
Methyl tert-Butyl Ether	1200	760 U	71000 U	7200 U
1,1-Dichloroethane	1200	760 U	71000 U	7200 U
cis-1,2-Dichloroethene	1200	760 U	71000 U	7200 U
2-Butanone	1200	760 U	71000 U	7200 U
Chloroform	1200	760 U	71000 U	7200 U
1,1,1-Trichloroethane	1200	760 U	71000 U	7200 U
Cyclohexane	1200	760 U	71000 U	7200 U
Carbon Tetrachloride	1200	760 U	71000 U	7200 U
Benzene	1200	760 U	71000 U	7200 U
1,2-Dichloroethane	1200	760 U	71000 U	7200 U
Trichloroethene	1200	760 U	71000 U	7200 U
Methylcyclohexane	1200	760 U	290000	7200 U
1,2-Dichloropropane	1200	760 U	71000 U	7200 U
Bromodichloromethane	1200	760 U	71000 U	7200 U
cis-1,3-Dichloropropene	1200	760 U	71000 U	7200 U
4-Methyl-2-Pentanone	1200	760 U	71000 U	7200 U
Toluene	1200	760 U	71000 U	7200 U
trans-1,3-Dichloropropene	1200	760 U	71000 U	7200 U
1,1,2-Trichloroethane	1200	760 U	71000 U	7200 U
Tetrachloroethene	1200	760 U	71000 U	7200 U
2-Hexanone	1200	760 U	71000 U	7200 U
Dibromochloromethane	1200	760 U	71000 U	7200 U
1,2-Dibromoethane	1200	760 U	71000 U	7200 U
Chlorobenzene	1200	760 U	71000 U	7200 U
Ethylbenzene	1200	760 U	71000 U	7200 U
Xylene (Total)	1200	760 U	16000 J	7200 U
Styrene	1200	760 U	71000 U	7200 U
Bromoform	1200	760 U	71000 U	7200 U
Isopropylbenzene	1200	760 U	71000 U	7200 U
1,1,2,2-Tetrachloroethane	1200	760 U	71000 U	7200 U
1,3-Dichlorobenzene	1200	760 U	71000 U	7200 U
1,4-Dichlorobenzene	1200	760 U	71000 U	7200 U
1,2-Dichlorobenzene	1200	760 U	71000 U	7200 U
1,2-Dibromo-3-chloropropane	1200	760 U	71000 U	7200 U
1,2,4-Trichlorobenzene	1200	760 U	71000 U	7200 U
DILUTION FACTOR:		1.0	58.7	1.0
DATE SAMPLED:		08/22/04	06/22/04	06/22/04
DATE ANALYZED:		06/24/04	06/24/04	06/24/04
% MOISTURE:		3	25	51

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0890F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 5
SEMIVOLATILE SOIL ANALYSES - MEDIUM LEVEL
µg/kg

COMPOUND	CRQL	D15538	D15538
		SO-01	SO-02
		576606	576607
Benzaldehyde	10000	100000 UJ	130000 UJ
Phenol	10000	100000 U	130000 U
bis(2-Chloroethyl)Ether	10000	100000 U	130000 U
2-Chlorophenol	10000	100000 U	130000 UJ
2-Methylphenol	10000	100000 U	130000 U
2,2'-oxybis(1-Chloropropane)	10000	100000 U	130000 U
Acetophenone	10000	100000 U	130000 U
4-Methylphenol	10000	100000 U	130000 U
N-Nitroso-4-n-propylamine	10000	100000 UJ	130000 U
Hexachloroethane	10000	100000 U	130000 U
Nitrobenzene	10000	100000 U	130000 U
Isophorone	10000	100000 U	130000 U
2-Nitrophenol	10000	100000 U	130000 U
2,4-Dimethylphenol	10000	100000 U	130000 U
bis(2-Chloroethoxy)methane	10000	100000 U	130000 U
2,4-Dichlorophenol	10000	100000 U	130000 U
Naphthalene	10000	27000 J	130000 U
4-Chloroaniline	10000	100000 U	130000 U
Hexachlorobutadiene	10000	100000 U	130000 U
Caprolactam	10000	100000 U	130000 U
4-Chloro-3-methylphenol	10000	100000 UJ	130000 UJ
2-Methylnaphthalene	10000	14000 J	50000 J
Hexachlorocyclopentadiene	10000	100000 U	130000 U
2,4,6-Trichlorophenol	10000	100000 U	130000 U
2,4,5-Trichlorophenol	25000	250000 U	330000 U
1,1'-Biphenyl	10000	5800 J	130000 U
2-Chloronaphthalene	10000	100000 U	130000 U
2-Nitroaniline	25000	250000 U	330000 U
Dimethylphthalate	10000	100000 U	130000 U
2,6-Dinitrotoluene	10000	100000 U	130000 U
Acenaphthylene	10000	9700 J	130000 U
3-Nitroaniline	25000	250000 U	330000 U
Acenaphthene	10000	42000 J	130000 U
2,4-Dinitrophenol	25000	250000 U	330000 U
4-Nitrophenol	25000	250000 U	330000 U
Dibenzofuran	10000	40000 J	130000 U
2,4-Dinitrotoluene	10000	100000 U	130000 U
Diethylphthalate	10000	100000 U	130000 U
Fluorene	10000	55000 J	130000 U
4-Chlorophenyl-phenylether	10000	100000 U	130000 U
4-Nitroaniline	25000	250000 U	330000 U
4,6-Dinitro-2-methylphenol	25000	250000 U	330000 U
N-Nitrosodiphenylamine (1)	10000	100000 U	130000 U
4-Bromophenyl-phenylether	10000	100000 U	130000 U
Hexachlorobenzene	10000	100000 U	130000 U
Atrazine	10000	100000 U	130000 U
Pentachlorophenol	25000	250000 U	330000 U
Phenanthrene	10000	490000	11000 J
Anthracene	10000	140000	130000 U
Carbazole	10000	33000 J	130000 U
Di-n-butylphthalate	10000	100000 U	130000 U
Fluoranthene	10000	430000	130000 U
Pyrene	10000	440000	130000 U
Butylbenzylphthalate	10000	100000 U	130000 U
3,3'-Dichlorobenzidine	10000	100000 UJ	130000 UJ
Benzo(a)anthracene	10000	230000	130000 U
Chrysene	10000	220000	130000 U
bis(2-Ethylhexyl)phthalate	10000	100000 U	130000 U
Di-n-octylphthalate	10000	100000 U	130000 U
Benzo(b)fluoranthene	10000	150000	130000 U
Benzo(k)fluoranthene	10000	180000	130000 U
Benzo(a)pyrene	10000	180000	130000 U
Indeno(1,2,3-cd)pyrene	10000	82000 J	130000 UJ
Dibenzo(a,h)anthracene	10000	38000 J	130000 U
Benzo(g,h,i)perylene	10000	84000 J	130000 UJ

DILUTION FACTOR:	10.0	10.0
DATE SAMPLED:	06/22/04	06/22/04
DATE EXTRACTED:	06/25/04	06/25/04
DATE ANALYZED:	07/05/04	07/05/04
% MOISTURE:	3	25

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES - VERMONT

TABLE 3
SEMIVOLATILE SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER: D15540
SAMPLE LOCATION: SO-03
LABORATORY NUMBER: 578608

COMPOUND	CRQL	
Benzaldehyde	330	670 UJ
Phenol	330	100 J
bis(2-Chloroethyl)Ether	330	670 U
2-Chlorophenol	330	670 U
2-Methylphenol	330	670 U
2,2'-oxybis(1-Chloropropane)	330	670 U
Acetophenone	330	670 U
4-Methylphenol	330	670 U
N-Nitroso-di-n-propylamine	330	670 U
Hexachloroethane	330	670 U
Nitrobenzene	330	670 U
Isophorone	330	670 U
2-Nitrophenol	330	670 U
2,4-Dimethylphenol	330	670 U
bis(2-Chloroethoxy)methane	330	670 U
2,4-Dichlorophenol	330	670 U
Naphthalene	330	670 U
4-Chloroaniline	330	670 U
Hexachlorobutadiene	330	670 U
Cephalactam	330	670 U
4-Chloro-3-methylphenol	330	670 U
2-Methylnaphthalene	330	670 U
Hexachlorocyclopentadiene	330	670 U
2,4,6-Trichlorophenol	330	670 U
2,4,5-Trichlorophenol	830	1700 U
1,1'-Biphenyl	330	670 U
2-Chloronaphthalene	330	670 U
2-Nitroaniline	830	1700 U
Dimethylphthalate	330	670 U
2,6-Dinitrotoluene	330	670 U
Acenaphthylene	330	670 U
3-Nitroaniline	830	1700 U
Acenaphthene	330	670 U
2,4-Dinitrophenol	830	1700 U
4-Nitrophenol	830	1700 U
Dibenzoturan	330	670 U
2,4-Dinitrotoluene	330	670 U
Diethylphthalate	330	670 U
Fluorene	330	670 U
4-Chlorophenyl-phenylether	330	670 U
4-Nitroaniline	830	1700 U
4,6-Dinitro-2-methylphenol	830	1700 U
N-Nitrosodiphenylamine (1)	330	670 U
4-Bromophenyl-phenylether	330	670 U
Hexachlorobenzene	330	670 U
Atrazine	330	670 U
Pentachlorophenol	830	1700 U
Phenanthrene	330	300 J
Anthracene	330	670 U
Carbazole	330	36 J
Di-n-butylphthalate	330	40 J
Fluoranthene	330	510 J
Pyrene	330	450 J
Butylbenzylphthalate	330	670 U
3,3'-Dichlorobenzidine	330	670 UJ
Benzo(a)anthracene	330	170 J
Chrysene	330	360 J
bis(2-Ethylhexyl)phthalate	330	150 J
Di-n-octylphthalate	330	670 U
Benzo(b)fluoranthene	330	380 J
Benzo(k)fluoranthene	330	360 J
Benzo(a)pyrene	330	220 J
Indeno(1,2,3-cd)pyrene	330	170 J
Dibenzo(a,h)anthracene	330	67 J
Benzo(g,h,i)perylene	330	220 J

DILUTION FACTOR: 1.0
DATE SAMPLED: 06/22/04
DATE EXTRACTED: 06/23/04
DATE ANALYZED: 07/01/04
% MOISTURE: 51

* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES- VERMONT

TABLE 8
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - MEDIUM LEVEL
µg/kg

COMPOUND	RL	D15538	D15539
		SO-01	SO-02
		576606	576607
alpha-BHC	50	52 U	66 U
beta-BHC	50	52 U	66 U
delta-BHC	50	52 U	66 U
gamma-BHC (Lindane)	50	52 U	66 U
Heptachlor	50	52 U	66 U
Aldrin	50	52 U	66 U
Heptachlor Epoxide	50	52 U	66 U
Endosulfan I	50	52 U	66 U
Dieldrin	100	100 U	130 U
4,4'-DDE	100	100 U	130 U
Endrin	100	100 U	130 U
Endosulfan II	100	100 U	130 U
4,4'-DDD	100	100 U	130 U
Endosulfan Sulfate	100	100 U	130 U
4,4'-DDT	100	100 U	130 U
Methoxychlor	500	520 U	660 U
Endrin Ketone	100	100 U	130 U
Endrin Aldehyde	100	100 U	130 U
alpha-Chlordane	50	52 U	66 U
gamma-Chlordane	50	52 U	66 U
Toxaphene	5000	5200 U	6600 U
Chlorodane	500	520 U	660 U
Aroclor-1016	500	520 U	670 U
Aroclor-1221	500	520 U	670 U
Aroclor-1232	500	520 U	670 U
Aroclor-1242	500	520 U	670 U
Aroclor-1248	500	520 U	670 U
Aroclor-1254	500	520 U	670 U
Aroclor-1260	500	520 U	670 U
DILUTION FACTOR:		1.0	1.0
DATE SAMPLED:		06/22/04	06/22/04
DATE EXTRACTED:		06/25/04	06/25/04
DATE ANALYZED:		06/29/04	06/29/04
% MOISTURE:		3	25

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: JOHN J RILEY
CASE: 0690F SDG: D15538
LABORATORY: SEVERN TRENT
LABORATORIES-VERMONT

TABLE 6
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES - LOW LEVEL
µg/kg

SAMPLE NUMBER: D15540
SAMPLE LOCATION: SO-03
LABORATORY NUMBER: 576608

COMPOUND	CRQL	
alpha-BHC	1.7	5.1 J
beta-BHC	1.7	3.5 U
delta-BHC	1.7	3.5 U
gamma-BHC (Lindane)	1.7	3.5 U
Heptachlor	1.7	10 J
Aldrin	1.7	R
Heptachlor Epoxide	1.7	2.1 J
Endosulfan I	1.7	3.5 U
Dieldrin	3.3	6.7 U
4,4'-DDE	3.3	10 J
Endrin	3.3	6.7 U
Endosulfan II	3.3	6.7 U
4,4'-DDD	3.3	6.7 U
Endosulfan Sulfate	3.3	6.7 U
4,4'-DDT	3.3	66 J
Methoxychlor	17	35 U
Endrin Ketone	3.3	6.7 U
Endrin Aldehyde	3.3	4.0 J
alpha-Chlordane	1.7	5.5 J
gamma-Chlordane	1.7	6.4 J
Toxaphene	170	350 U
Aroclor-1016	33	67 U
Aroclor-1221	67	140 U
Aroclor-1232	33	67 U
Aroclor-1242	33	67 U
Aroclor-1248	33	67 U
Aroclor-1254	33	67 U
Aroclor-1260	33	67 U

DILUTION FACTOR: 1.0
DATE SAMPLED: 06/22/04
DATE EXTRACTED: 06/23/04
DATE ANALYZED: 06/28/04
% MOISTURE: 51

* - RESULT REPORTED FROM DILUTED ANALYSIS. NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

DATA SUMMARY KEY
INORGANIC DATA VALIDATION

- J = The associated numerical value is an estimated quantity.
- R = The result is rejected due to gross deficiencies in quality control criteria. The result is unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- U = The compound was analyzed for but not detected. The associated numerical value is the SDL or the adjusted SDL.
- UJ = The compound was analyzed for but not detected. The associated numerical value is the estimated SDL.

ACRONYM LIST INORGANIC DATA VALIDATION

AQ	aqueous
°C	degrees Celsius
CCV	Continuing Calibration Verification
CLP	Contract Laboratory Program
COC	Chain-of-Custody record
Conc.	Concentration
CRDL	Contract Required Detection Limit
CRI	CRQL Standard for ICP
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	percent difference
DAS	Delivery of Analytical Services
DC	Document Control
DQO	Data Quality Objective
DV	Data Validation
DW	drinking water
GW	groundwater
Cr+6	Hexavalent Chromium
IC	Ion Chromatography
ICP-MS	Inductively Coupled Plasma - Mass Spectrometry
ICS	Interference Check Sample
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
kg	kilogram
L	liter
LCS	Laboratory Control Sample
MDL	Method Detection Limit
mg	milligram
MS	Matrix Spike
MSA	Method of Standard Additions
NA	not applicable
ND	non-detected result
ORP	Oxidation Reduction Potential
PE	Performance Evaluation
Pos	positive result
QC	Quality Control
%R	percent recovery
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SDL	Sample Detection Limit
SOW	Statement of Work
S/S	soil/sediment
START	Superfund Technical Assessment and Response Team
SW	surface water
SW-846	EPA Test Methods for the Evaluation of Solid Waste
TAL	Target Analyte List
TCL	Target Compound List
µg	microgram
WESTON	Weston Solutions, Inc.

SITE: JOHN J RILEY
CASE: 0692F SDG: D15538
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 1
INORGANIC SOIL ANALYSES
mg/kg

SAMPLE NUMBER:	D15538	D15539	D15540
SAMPLE LOCATION:	SO-01	SO-02	SO-03
LABORATORY NUMBER:	0406321-01	0406321-02	0406321-03
PERCENT SOLIDS:	97.8	66.9	59.7

INORGANIC ANALYTES	METHOD	METHOD DETECTION LIMITS (mg/kg)				CONTRACT QUANTITATION LIMITS (mg/kg)
ALUMINUM	P	25.9	323 J	167 J	2470 J	20
ANTIMONY	P	0.44	0.90 UJ	7.0 UJ	R	6
ARSENIC	P	0.80	1.8 UJ	0.95 UJ	1.4 UJ	1
BARIUM	P	0.11	42.6 J	5.7 J	112 J	20
BERYLLIUM	P	0.14	0.15 UJ	0.58 UJ	0.71 UJ	0.5
CADMIUM	P	0.14	0.27 U	0.58 U	0.93 U	0.5
CALCIUM	P	3.9	1140 J	1170 J	2840 J	500
CHROMIUM	P	0.79	310 J	286 J	49000 J	1
COBALT	P	0.13	0.35 U	0.36 U	R	5
COPPER	P	0.16	102	5.3	68.5	2.5
IRON	P	1.9	708 J	6940 J	6320 J	10
LEAD	P	0.58	151 J	10.4 J	637 J	1
MAGNESIUM	P	1.1	179	73.8	488 J	500
MANGANESE	P	0.13	8.1 J	168 J	232 J	1.5
MERCURY	CV	0.005	2.4	0.095 J	0.57	0.1
NICKEL	P	0.14	1.5	0.65 U	8.9	4
POTASSIUM	P	1.9	28.7	225	404	500
SELENIUM	P	0.57	1.3 U	2.3 U	2.3 U	3.5
SILVER	P	0.13	0.50 UJ	1.2 UJ	0.38 UJ	1
SODIUM	P	34	419 U	97.6 U	710 U	500
THALLIUM	P	0.85	2.1 UJ	2.9 UJ	3.6 UJ	2.5
VANADIUM	P	0.07	1.4 J	2.6 J	109 J	5
ZINC	P	1.1	47.1 J	66.5 J	8.5 UJ	6
CYANIDE	AS	0.08	3.3	31.5	9.0	2.5

ANALYTICAL METHOD
P - ICP
CV - COLD VAPOR
AS - SEMI AUTOMATED
SPECTROPHOTOMETRIC

NOTE: J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED IN THE QUALITY CONTROL REVIEW (DATA REVIEW).
U = VALUE IS NON-DETECTED.
UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.
R = VALUE IS REJECTED.
NA = NOT ANALYZED.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

ATTACHMENT C

JOHN J RILEY

**PHOTOGRAPH LOG
START**

Photographs taken 30 April 2004 and 22 June 2004

PHOTOGRAPHY LOG SHEET

John J. Riley Site • Woburn, MA



SCENE: View of proposed sample locations SD-01A through SD-01C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks/right-of-way and the northeastern section of the former John J. Riley site. Note stormwater drainage culvert running under the MBTA railroad tracks in the center and background of photograph. The photograph was taken facing northeast.

FRAME NUMBER: 1

DATE: 30 April 2004

TIME: 0938 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SD-01A through SD-01C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The photograph was taken facing north-northeast.

FRAME NUMBER: 2

DATE: 22 June 2004

TIME: 1539 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 310

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA



SCENE: View of proposed sample locations SD-02A through SD-02C, located west of chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The photograph was taken facing north-northeast. Note proposed sample locations SD-01A through SD-01C in the background.

FRAME NUMBER: 3

DATE: 30 April 2004

TIME: 0938 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SD-02A through SD-02C, located west of chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The photograph was taken facing east.

FRAME NUMBER: 4

DATE: 22 June 2004

TIME: 1537 hours

CERCLIS No.: MAD001035872

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TDD No. 04-05-0149

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA

PHOTOGRAPHY BY: Jessica Burdett

CAMERA: Nikon CoolPix 310



SCENE: View of proposed sample locations SD-01A through SD-03C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The sample location is located in the immediate vicinity of a former production well house (brick structure) located on the John J. Riley site. The photograph was taken facing southeast.

FRAME NUMBER: 5

DATE: 30 April 2004

TIME: 0939 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SD-01A through SD-03C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The sample location is located in the immediate vicinity of a former production well house (brick structure) located on the John J. Riley site. The photograph was taken facing southeast.

FRAME NUMBER: 6

DATE: 22 June 2004

TIME: 1535 hours

CERCLIS No.: MAD001035872

Page 3 of 9

TDD No. 04-05-0149

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nixon CoolPix 310



SCENE: View of proposed sample locations SD-04A through SD-04C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The photograph was taken facing southeast.

FRAME NUMBER: 7

DATE: 30 April 2004

TIME: 0941 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nixon CoolPix 3100



SCENE: View of sample locations SD-04A through SD-04C, located adjacent to (west of) the chain-link fence separating the MBTA railroad tracks and the northeastern section of the former John J. Riley site. The photograph was taken facing north.

FRAME NUMBER: 8

DATE: 22 June 2004

TIME: 1533 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nixon CoolPix 3100

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA



SCENE: View of proposed sample locations SD-01A through SD-03D and SD-04A through SD-06D, located in the stormwater detention pond located north of the Organix building on the John J. Riley site. The photograph was taken facing southeast.

FRAME NUMBER: 9

DATE: 30 April 2004

TIME: 1017 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SD-05A through SD-05B and SD-06A through SD-06C, located in the stormwater detention pond located north of the Organix building on the John J. Riley site. The photograph was taken facing southeast.

FRAME NUMBER: 10

DATE: 22 June 2004

TIME: 1547 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Weburn, MA



SCENE: View of proposed sample location SD-07, located in the area of exposed solid waste on a slope in the northern portion of the John J. Riley site. The photograph was taken facing north.

FRAME NUMBER: 11

DATE: 30 April 2004

TIME: 0952 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample location SD-07, located in the area of exposed solid waste on a slope in the northern portion of the John J. Riley site. The photograph was taken facing northwest.

FRAME NUMBER: 12

DATE: 22 June 2004

TIME: 1516 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA



SCENE: View of proposed sample locations SD-08 and SD-09, located at the edge/base of the area of exposed solid waste, in the vicinity of the stormwater drainage ditch in the northern portion of the John J. Riley site. The photograph was taken facing east-northeast.

FRAME NUMBER: 13

DATE: 30 April 2004

TIME: 0958 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SD-08 and SD-09, located at the edge/base of the area of exposed solid waste, in the vicinity of the stormwater drainage ditch in the northern portion of the John J. Riley site. The photograph was taken facing northwest.

FRAME NUMBER: 14

DATE: 22 June 2004

TIME: 1525 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA



SCENE: View of proposed sample locations SO-01 and SO-02, located at the edge/base of the area of exposed solid waste, in the vicinity of the stormwater drainage ditch in the northern portion of the John J. Riley site. Sample locations were proposed to be collected from a black sludge/hardened tar-like material. The photograph was taken facing north.

FRAME NUMBER: 15

DATE: 30 April 2004

TIME: 0953 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of sample locations SO-01 and SO-02, located at the edge/base of the area of exposed solid waste, in the vicinity of the stormwater drainage ditch in the northern portion of the John J. Riley site. Samples were collected from a black sludge/hardened tar-like material was observed to be seeping out of a drum carcass. The photograph was taken facing north.

FRAME NUMBER: 16

DATE: 22 June 2004

TIME: 1453 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
John J. Riley Site • Woburn, MA



SCENE: View of proposed sample location SO-03, located in the area of exposed solid waste (such as leather hide scraps) along a slope in the northern portion of the John J. Riley site. The photograph was taken facing northwest.

FRAME NUMBER: 17

DATE: 30 April 2004

TIME: 1000 hours

PHOTOGRAPHY BY: Timothy Benton

CAMERA: Nikon CoolPix 3100



SCENE: View of composite leather sample location SO-03, located in the area of exposed solid waste along a slope in the northern portion of the John J. Riley site. The photograph was taken facing west.

FRAME NUMBER: 18

DATE: 22 June 2004

TIME: 1522 hours

PHOTOGRAPHY BY: Jessica Burkhamer

CAMERA: Nikon CoolPix 3100

330 Boston Road
Suite 4
Billerica, MA 01862
(508) 671-9501
Fax (508) 671-0139

21E INC.



Hazardous Waste Soil Testing
Environmental Site Assessment

September 11, 1996

The Maggiore Companies
13 Wheeling Avenue
Woburn, MA 01801

ATTN: Mr. Paul Maggiore

RE: Summary of Activities - Lot 12
228 Salem Street
Woburn, MA

Dear Mr. Maggiore:

The following report provides information pertaining to the investigations that were undertaken at the above referenced property (herein referred to as the "Lot 12 Site"). This letter summarizes activities which have taken place on Lot 12, and does not address specific activities or results on other lots.

BACKGROUND INFORMATION - SITE

A Licensed Site Professional (LSP) Evaluation Opinion Transmittal Form and supporting documentation were completed for the six lots on March 7, 1994 and submitted to the Department of Environmental Protection (DEP). On September 29, 1995, the DEP issued a Notice of Audit of the LSP Evaluation Opinion to the PRP. On January 4, 1996, the DEP issued a Notice of Audit Findings (NOAF) and a Notice of Noncompliance to the PRP. In response to the NOAF, and following a meeting with DEP representatives on January 24, 1996, 21E Inc. prepared a "Plan of Activities (NOA Findings)" on January 25, 1996, and submitted it to the DEP for approval.

The Plan of Activities included: the excavation of test pits and the collection of soil samples across the undeveloped lots at the Site (including lot 12); laboratory analysis of selected soil samples; and the preparation of a Site map which included all potential source areas. This plan was approved by the DEP prior to the initiation of the sampling program on January 30 and 31, 1996.



TEST PIT EXCAVATIONS - LOT 12

On January 30, 1996, 18 test pits (TP-11 to TP-22 and TP-A to TP-F) were excavated at the Lot 12 Site (see Figure 1 for test pit locations). The test pits were initially excavated systematically in a 200 foot interval grid pattern. The following test pits were excavated in biased locations: TP-14 was excavated in the vicinity of the former hide storage area; TP-18, TP-19, TP-20, and TP-21 were excavated in the vicinity of the former sludge disposal area; TP-18 and TP-22 were excavated in the vicinity of the former catch basin; and TP-A through TP-F were excavated around TP-16. Samples were collected from the surface at each test pit location and at changes in lithology. All soil samples were screened in the field for volatiles with an HNu model PI-101 photoionization detector (PID) equipped with 10.2 eV lamp. With the exception of soils from TP-16, PID levels ranged from none detected to 7.8 parts per million (ppm).

Laboratory analysis of selected soil samples was conducted (see Table 1 for complete results). Since TP-1, TP-9, and TP-10 are not located on Lot 12, no discussion is presented regarding the analytical results. The 0-6 inch sample from TP-12 contained arsenic at 40 ppm. This result indicated the potential presence of an imminent hazard at the Lot 12 Site. However, after the surficial sample was collected from TP-12 and the test pit was backfilled, clean soil from the excavation of TP-16 was placed on top of TP-12, preventing access to the surficial arsenic contamination. It was determined that if and when the arsenic contaminated soil became accessible, appropriate actions would be taken to prevent potential imminent hazard conditions.

Three test pits, TP-109, TP-110, and TP-111, were excavated around TP-12 in an attempt to delineate the extent of the surficial arsenic contamination. Surficial soil samples from 0-0.5 feet BGS and 0.5-1 foot BGS from TP-109 and TP-111 were submitted for laboratory analysis of RCRA 8 metals. The laboratory reported that the 0.5-1 foot BGS sample from TP-109 contained elevated levels of chromium and arsenic, while the 0-0.5 foot samples contained lower levels of these compounds and did not present an imminent hazard condition. Excavation of the near surface chromium and arsenic contaminated soil in TP-109 was undertaken in conjunction with the soil excavation around TP-16 (see **FURTHER EXCAVATION ACTIVITIES**).

DELINEATION AND INITIAL EXCAVATION OF MATERIAL IN TP-16

During the excavation of TP-16 on January 30 (see Figure 1), several layers of a material, consistent with the appearance and

characteristics of tannery waste, were observed from a depth of 6 feet below ground surface (BGS) to about 12 feet (BGS). Samples of the material were field screened with a PID and levels up to 110 ppm were detected. The material and associated soil were excavated from TP-16 and stockpiled on and covered with 6 millimeter polyethylene sheeting. The material had a distinct organic odor. TP-17 was excavated northeast of TP-16 in an effort to determine the extent of the material and associated soil. None of the material observed in TP-16 was visible in this test pit.

After completing the last test pit for the preapproved sampling plan on January 30, 1996, the excavation of TP-16 continued in an effort to find the extent of the material and associated soils. DEP approval to continue exploration of the observed material and subsequent stockpiling of excavated test pit material was granted by the on-Site DEP representative. Approximately 150+/- cubic yards were excavated and stockpiled on and covered with 6 millimeter (mm) polyethylene sheeting and, due to the late hour, excavations were ceased. The area was secured for the evening.

On January 31, the excavation of TP-16 was continued in an attempt to define the horizontal extent of the observed material and associated soils. It appeared that the material had been deposited on a slope, and as excavations continued towards the south, the top and bottom limits of the material were observed at shallower depths and the thickness of the material decreased to about 3 feet. Once the southern, southeastern and southwestern extents of the material were visually determined, test pits were excavated around TP-16 (see Figure 2). An additional 50+/- cubic yards of the observed material and associated soils were excavated on this day. The confirmatory test pits, A through F, were excavated west, north, and east of TP-16. Based on visual and olfactory observations, it appeared that none of the material or associated soil observed in TP-16 were present in these test pits. Soil samples collected from TP-B, TP-D, TP-F, and the southwest corner and the southern wall of TP-16 were analyzed for trace metals. A confirmatory sample from the bottom of TP-16 was analyzed for trace metals and extractable organic compounds. The laboratory reported that no extractable organic compounds were detected in the bottom sample and samples from the test pits contained only low levels of metals with the exception of a sample from the southern wall of TP-D, which contained a concentration of chromium at 2,800 ppm (see Table 1 for analytical results). Laboratory reports are provided as Attachment A.

As of January 31, 1996, a total of approximately 200-250 cubic yards of the observed material and associated soil were excavated



from this area and stockpiled on and covered with 6 mm polyethylene sheeting. Based on the observations made from the test pits excavated around TP-16 and confirmatory laboratory data, the estimated extent of the observed material and associated soils was determined (see Area of Excavation, Figure 2) and the volume of soil remaining in the ground was estimated at 200-250 cubic yards.

The following four distinct layers of the observed material were identified in the TP-16 excavation (see Figure 3 for a cross sectional diagram): a blue layer, which comprised less than 1% of the material; an orange/brown layer, which comprised +/-30% of the material; a pink layer, which comprised +/-25% of the material; and a black layer, which comprised +/-45% of the material. A grab sample of each layer was submitted for laboratory analysis of RCRA 8 metals and extractable organic compounds. No extractable organic compounds, including benzidine, were detected in any of the samples above the detection limit. The blue layer was reported to contain chromium at 82,500 ppm; the orange/brown layer was reported to contain chromium at 13,500 ppm and lead at 314 ppm; the pink layer was reported to contain arsenic at 77 ppm, chromium at 1,100 ppm, and lead at 317 ppm; and the black layer was reported to contain arsenic at 61 ppm, chromium at 3,250 ppm, and lead at 409 ppm. While the chromium concentration in the blue layer is elevated, this material represented less than one percent of the total amount of the material that was present at the Site.

A status report titled "Report of Activities and Soil Excavation Plan - Tannery Waste and Soil Contamination" was completed by 21E Inc. for the Site on April 25, 1996 and submitted to the DEP. This report included information pertaining to the above referenced test pit excavations, the initial excavation and stockpiling of soil from TP-16, the analysis of confirmatory samples from the southern boundary of the TP-16 excavation and test pits TP-B, TP-D, and TP-F, and the characterization of the individual layers of material observed and excavated from TP-16.

FURTHER EXCAVATION ACTIVITIES

Excavation activities began again at the Site on May 29, 1996 and continued through May 31, June 12, 13, 14, and 17. Excavations at the Site were coincided with excavations of arsenic contaminated soil located in the southern portion of the L.T.B.I. and addressed under an IRA Plan submitted to the DEP on April 12, 1996. It was initially estimated that 200-250 cubic yards of material remained at the Site. However, as excavations continued, the thickness of the material did not decrease as initially



calculated and additional pockets of the material and associated soils were observed in the northeast and northwest corners of the excavation and subsequently removed. In excavating these additional areas, the amount of additional material removed from the Site totaled approximately 1,900 cubic yards. The extent of the excavation is shown on Figure 4.

As a means of further characterizing the Site, on June 4, four test pits were excavated on Lot 12 (TP-401 through TP-404). All test pits were excavated to determine if the material observed in the original excavation was present in these test pits (see Figure 1 for test pit locations). None of the material observed in the original excavation was observed in any of these test pits. However, during the excavation of TP-402, a clay pipe located approximately 4 feet below ground surface was broken by the excavator. The pipe was observed to contain blue and black material similar to that removed from the original excavation. The pipe ran in a north/south direction and was pitched downgradient from south to north. It is believed that this pipe carried residual tannery material from the interior of the former tannery to a catch basin located in the northern portion of the Site near the current detention pond.

Since the clay pipe contained material consistent with the material removed from the excavation, it was determined that the pipe would be excavated and disposed of with the remainder of the material from the Site, and through excavation of the pipe, the beginning and end point of the pipe would be investigated. The pipe excavation occurred on June 18 and 19, 1996. The pipe was initially traced to the south. It was revealed that the pipe originated in an enclosed, cement, 6 foot by 8 foot, vault which appeared to have been located in the floor of the former tannery. The vault was free of the material observed in the pipe and was in good condition. Excavation of the pipe continued toward the north and the end point of the pipe was determined to be a closed catch basin in the vicinity of TP-22. The catch basin did not contain any of the material observed in the pipe, and was completely enclosed. It appeared as though the catch basin and the end of the pipe had been cleaned out some time ago as both locations were free of the material. According to Mr. Riley, the catch basins were periodically cleaned out of any material which had deposited there. Test pits TP-18, TP-19, and TP-22 were previously excavated near the former catch basins and none of the material observed in the pipe was observed in these test pits.

Remediation Waste

Waste Management of New Hampshire was consulted as a potential disposal facility and samples of the excavated material were



submitted to Waste Management for analysis of RCRA and facility disposal parameters. Based on the results of these analyses, Waste Management determined that the material was suitable for recycling by thermal processing at Environmental Soil Management, Inc. (ESMI) in Loudon, NH.

On May 29, 30, and 31, 1996, a total of 711 tons of excavated material were removed from the Site and transported to ESMI. 312.01 tons of this material had been recycled as of the afternoon of May 30, when operations at ESMI were ceased by the New Hampshire Department of Environmental Services, due to concerns over emissions from the facility during the processing of material from the Site. Supplemental analyses conducted on the material delivered to ESMI from the Site revealed that the results were consistent with those previously reported and provided to ESMI. However, ESMI was forced to refuse acceptance of any additional material from the Site.

During the week of June 3, 1996, arrangements were made to dispose of the material at Waste Management of New Hampshire's (WMNH) Rochester, NH lined landfill. On June 10 and 11, material which remained unprocessed at ESMI was transported to WMNH. The remainder of the material excavated from the Site, 1,987.65 tons, was transported to WMNH on the following dates: June 12, 13, 14, 17, 18. A total of 2,287.66 tons of material excavated from the northern portion of the Site was disposed. Including the 1,110.75 tons of material excavated from the southern portion of the Site, a total of 3,398.41 tons of material were excavated from the Site and disposed. See Table 2 for a breakdown of disposal amounts.

Permits

According to 310 CMR 30.125 (4), the material is not subject to 310 CMR 30.000, and is therefore not considered a hazardous waste (provided TCLP limits are not exceeded) solely due to elevated chromium. In this regard, a special permit is not required for disposal. All excavated material was removed under a Bill of Lading. The original Bills of Lading were received at DEP on July 17, 1996 and copies are provided as Attachment B.

RISK CHARACTERIZATION

A Method 1 Risk Characterization was conducted in accordance with the guidelines of the Massachusetts Contingency Plan, 310 CMR 40.0000 to determine if a Level of No Significant Risk exists or has been achieved at the Site which is identified as 228 Salem Street in Woburn, MA (see Figure 1). Method 1 was chosen to demonstrate that a Level of No Significant Risk exists because



only soil contamination has been reported at the Site.

Current and Foreseeable Land Use

The Site is currently undeveloped. The Site was part of the John J. Riley Tannery which was in operation at this location from 1915 to 1989. It is understood that the Site will be commercially developed and occupancy is not expected to change in the foreseeable future.

Identification of Soil and Groundwater Categories

The groundwater at the Site has been classified as groundwater category GW-1 because the groundwater, although not encountered during the course of this investigation, is located within an Interim Wellhead Protection Area. The groundwater at the Site is also classified as category GW-3 groundwater because all groundwater in the Commonwealth is classified as GW-3 due to its potential to discharge to surface water. Although the Site is expected to be developed, groundwater is greater than 30 feet below ground surface, therefore groundwater at the Site is not considered GW-2.

The soil at the Site has been classified as soil category S-1 and S-2. On-Site soils have been categorized based on: 1) the type of receptor present; 2) frequency of Site use by the receptors; 3) intensity of use by the receptors; and 4) accessibility of the Site soil to the receptors.

Although there are no current occupants of the Site, future commercial development would result in the presence of adults as workers or visitors, and children as visitors. Therefore, both adults and children have been included as potential receptors.

Frequency of use (either high or low) indicates how often a receptor uses or has access to the Site and surrounding area. Based on potential exposure conditions, adult's frequency of use is considered high and children's frequency of use is considered low.

Intensity of use (either high or low) describes the nature of Site activities and uses which could result in exposure to the soil. Currently, the Site is unoccupied and primarily dirt covered land. It is believed that future development activities will create soil derived dust for a short period of time. Additionally, disturbances to the on-Site soil for the purposes of installing utility lines and/or landscaping would also create soil derived dust. Although, once construction activities are completed and soil derived dust is minimized, continued



landscaping maintenance would result in periods of high intensity use of soil. Therefore, to be conservative, the intensity of use for the Site, for use in determining the soil category, would be considered high.

Accessibility of the soil is described as either "accessible", "potentially accessible", or "isolated". Soil samples collected during soil excavation were obtained from depths ranging from 1 to 14 feet below ground surface and are classified as both "accessible" (0-3 feet BGS) and "potentially accessible" (3-14 feet BGS).

Given the depth of impacted soils, potential receptors, and most conservative frequency and intensity of use of soils, the impacted soils have been classified as categories S-1 and S-2. Therefore, the applicable Method 1 Risk Characterization Standards for soils on-Site are S-1/GW-1, S-1/GW-3, S-2/GW-1, and S-2/GW-3.

Confirmatory Analysis

Soil samples were collected from the excavation at various stages and submitted for rush analysis to aid in determining whether the boundaries of the contamination had been reached. The material of concern is visibly discernible due to its distinct color and texture, so select confirmatory samples were chosen for analysis of metals and/or polynuclear aromatic hydrocarbons, including aniline and benzidine. All confirmatory soil samples were submitted to Matrix Analytical in Hopkinton, MA for analysis.

Following excavations on January 31, confirmatory samples from TP-B, TP-F, the southwest corner of the excavation, the southern wall of the excavation, and the bottom of the excavation were collected. All samples were analyzed for total metals and the bottom sample was also analyzed for extractable organic compounds including aniline and benzidine. Metals were detected in these samples but no extractable organics were detected. Benzidine and aniline were not detected above the laboratory's detection limits of 1,000 ppb and 500 ppb, respectively. For results of all confirmatory analyses, see Table 3.

On June 4, confirmatory samples were collected from the northeast corner of the excavation just south of monitoring well RIZ-4, and from the southwest corner of the excavation along the western wall in the location of former TP-12, TP-109, TP-110, and TP-111. These samples were submitted for laboratory analysis of RCRA 8 metals.



On June 17, a confirmatory sample was collected from the northeast corner of the excavation along the north wall. This sample was collected following the excavation of a pocket of material which appeared to have characteristics consistent with buffing dust located north of RIZ-4 at a depth of 3 to 5 feet below ground surface. A sample was also collected from the northwest corner along the north wall. This sample was collected following the excavation of a pocket of material consistent in appearance to the blue layer observed in the original excavation. These two samples were submitted for RCRA 8 metals analysis. Following the excavation of blue material, an ash like material was observed at varying depths in the northwest corner and surrounding the excavated drain pipe. Six samples of this material were collected on June 18, one of which was submitted for analysis of priority pollutant metals and base neutral compounds. The five remaining samples of the ash like materials were submitted for priority pollutant metals analysis on July 29, 1996. Please refer to Table 3 for analytical results.

TP-16/bottom, was analyzed for metals and PAH including aniline and benzidine and the laboratory reported that no PAHs were detected. All other samples were analyzed for only metals. In Table 3, the reported metals concentrations and average exposure point concentrations have been compared to applicable S-1/GW-1, S-1/GW-3, S-2/GW-1, and S-2/GW-3 Method 1 standards and all concentrations are below the Method 1 standards.

Identification of Background

Background data was obtained from previous reports completed for the Site and analysis of soil samples collected from the recent test pit excavations. Refer to Table 4 for Background data. A comparison of the arithmetic means of the background concentrations and the exposure point concentrations is made in Table 3.

The mean exposure point concentrations for arsenic, barium, beryllium, copper, lead, mercury, nickel, and zinc are consistent with background concentrations, however, the mean exposure point concentration for chromium is above the background concentration.

It has been determined that it is not feasible to reduce on-Site concentrations of chromium to the background concentration for the following reasons. The chromium detected in the soil on-Site is trivalent chromium which was utilized in the tanning process which formerly took place at the Site. According to 310 CMR 30.125 (3) and (4), trivalent chromium from tannery processes is not considered hazardous and therefore less of a risk. There is no proven field screening method for chromium, therefore,

Summary Letter - Activities Lot 12
228 Salem Street, Woburn, MA
90-0505 Dated 09/11/96

21E INC.

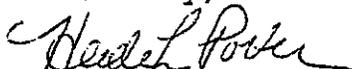


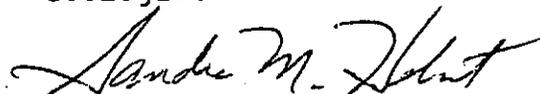
laboratory analysis would have to be conducted on individual samples and the cost for additional analysis, excavation, and disposal of soils from the Site do not justify the minimal benefit.

Therefore, based on the information provided herein, and in the RAO previously submitted to the DEP and provided as Attachment B to this report, conditions at the Site pose a Level of No Significant Risk, an Activity and Use Limitation is not required to maintain a level of No Significant Risk, a Permanent Solution has been achieved, and conditions meet the requirements of a Class A-2 RAO. As referenced in 310 CMR 40.1036(2), Class A-2 Response Action Outcomes shall apply to disposal sites where a Permanent Solution has been achieved, the level of hazardous material in the environment has not been reduced to background, and one or more Activity and Use Limitations are not required to maintain a level of No Significant Risk. Additionally, since the visibly discernible apparent tannery material has been excavated and removed from the Site and no other tannery material has been identified at the Site through the extensive test pit excavations which have been conducted at the Site, the source of contamination has been eliminated.

If you have any questions regarding this submittal, please do not hesitate to contact this office. This report serves as a revised LSP Evaluation Opinion as required by the DEP.

Sincerely,


Heidi Porter
Geologist


Sandra M. Hebert, LSP
Operations Manager

cc: George Hailer, Gadsby & Hannah (without enclosures)

TABLE 1



TABLE 2

SOIL DISPOSAL DATA
228 SALEM STREET
WOBURN, MA

DATE	ARSENIC LOADS	ARSENIC TONS	TANNERY LOADS	TANNERY TONS	TOTAL LOADS	TOTAL TONS	TRANSPORTED FROM	TRANSPORTED TO
05/29/96	11.5	350.98	6.5	198.39	18	549.37(1)	WOBURN	ESMI
05/30/96	8	252.01	10	315.02	18	567.03(1)	WOBURN	ESMI
05/31/96	4	131.93	2	65.97	6	197.90(1)	WOBURN	ESMI
06/10/96	4	121.31	0	0	4	121.31	WOBURN	WMNH
					16	515.66(2)	ESMI	WMNH
06/11/96					12	366.63(2)	ESMI	WMNH
06/12/96	8	254.52	10	318.14	18	572.66	WOBURN	WMNH
06/13/96	0	0	23	719.18	23	719.18	WOBURN	WMNH
06/14/96	0	0	12	360.19	12	360.19	WOBURN	WMNH
06/17/96	0	0	6	189.12	6	189.12	WOBURN	WMNH
06/18/96	0	0	4	121.65	4	121.65	WOBURN	WMNH
TOTALS	35.5	1110.75	73.5	2287.66	109	3398.41		

NOTES:

WOBURN= J.J. Riley Tannery, 228 Salem St., Woburn, MA

ESMI= Environmental Soil Management, Inc., Loudon, NH

WMNH= Waste Management New Hampshire, Rochester, NH

(1) Only 432.01 tons of this material were recycled at ESMI: 120 tons of the arsenic material and 312 tons of the tannery material. The remaining material (882.29 tons) was transported to WMNH for disposal and amounts are not included in the disposal totals.

(2) This material was transported from ESMI to WMNH for disposal.



TABLE 3

21E

CONFIRMATORY RESULTS FROM EXCAVATION (in ppm)

228 Salem Street
Woburn, MA

SAMPLE ID	MAP ID	DEPTH	COMPOUND														
			ANTIMONY	ARSENIC	BARIUM	BERYLLIUM	CADMIUM	CHROMIUM	COPPER	LEAD	MERCURY	NICKEL	SELENIUM	SILVER	THALLIUM	ZINC	
TP-B	1	7'		5	60			ND	148		14			ND	ND		
TP-F	2	7'		3.4	204			ND	146		19			ND	ND		
TP-16/S-1 SW CORNER	3	3'		6.4	198			ND	153		53			ND	ND		
TP-16/S-3 S WALL	4	1'		4.3	14			ND	21		8			ND	ND		
TP-16 (1) BOTTOM	5	14'		11	21			ND	200		16	ND		ND	ND		
NE CORNER E WALL	6	5-8'		3.3	29			ND	96		6.8	0.2		ND	ND		
SW CORNER W WALL	7	3'		6.9	8			ND	17		4.1	ND		ND	ND		
NE CORNER N WALL	8	3-5'		2.6	24			ND	112		21	ND		ND	ND		
NW CORNER W WALL	9	8-9'		8.8	13			ND	763		6.8	1.6		ND	ND		
NW CORNER N WALL (2)	10	1-4'	ND	6.6		1.3	ND	343	20	17	ND	20	ND	ND	ND	ND	40
NW CORNER N WALL	11	7-8'				ND											
NW CORNER W WALL	12	7-9'				ND											
NW CORNER W WALL	13	4'				ND											
NW CORNER N WALL	14	1-4'				0.7											
NW CORNER S WALL	15	3-5'				ND											
AVERAGE SITE CONCENTRATIONS			ND	6.05	56.6	0.47	ND	200	20	16.8	0.33	20	ND	ND	ND	ND	40
S-1/GW-1&3 STANDARDS			10	30	1000	0.7	30	1000	N/A	300	20	300	400	100	8	2500	
S-2/GW-1&3 STANDARDS			40	30	2500	0.8	80	2500	N/A	600	60	700	2500	200	30	2500	
MEAN SITE BACKGROUND CONCENTRATIONS (2)			N/A	5.98	47.4	N/A	0.93	37.9	N/A	8.45	0.13	N/A	0.51	0.14	N/A	N/A	
DEP BACKGROUND DATA (4)			1.4	17	45	0.4	2	28	36	89	0.3	17	0.5	0.8	0.8	116	

- NOTES
- Blank space indicates sample not analyzed for that compound
 - ND = Compound not detected above the laboratory's detection limit
 - N/A = No applicable standard or background concentration available for this compound
 - (1) = sample also analyzed for extractable organic compounds including benzidine and aniline; all compounds reported as ND
 - Benidine ND above 1000 ppb and aniline ND above 500 ppb
 - (2) = Sample also analyzed for base neutral compounds; all compounds reported as ND
 - (3) = Site background data displayed in Table 4
 - (4) = Derived from Table 2.1 in "Guidance for Disposal Site Risk Characterization", BWSCORS-95-141

Prepared by **21E INC.**



Consulting Geologists, Hydrogeologists,
Environmental Chemists

TABLE 4

SITE BACKGROUND CONCENTRATIONS (In ppm)

228 Salem Street
Woburn, MA

SAMPLE ID	DEPTH	ANALYTE							
		ARSENIC	BARIUM	CADMIUM	CHROMIUM	LEAD	MERCURY	SELENIUM	SILVER
MW-1	34-35.5'	3.4	58	0.2	24.3	5.0	ND(0.1)	ND(0.5)	0.1
MW-3	34-35.5'	3.1	29	0.1	17.5	6.7	ND(0.1)	ND(0.5)	0.1
MW-4	35-35.5'	6.8	15	0.1	17	3.8	ND(0.1)	ND(0.5)	0.1
RIZ-1	20-27'	7.27	37.8	1.81	18.3	2.47	ND(0.002)	ND(0.006)	ND(0.003)
RIZ-2	35-37'	1.78	26.7	1.34	11.3	ND(0.06)	ND(0.002)	ND(0.006)	ND(0.003)
RIZ-3	40-41'	10.8	21.9	1.74	12	ND(0.06)	ND(0.002)	4.75	ND(0.003)
RIZ-4	30-32'	12.7	69.2	2.15	18	ND(0.06)	ND(0.002)	ND(0.1)	ND(0.01)
RIZ-5	30-32'	11.8	64.5	3.06	23	2.38	ND(0.002)	ND(0.1)	ND(0.01)
RIZ-6	35-37'	ND(0.04)	7.87	ND(0.01)	6.41	ND(0.06)	ND(0.002)	ND(0.1)	ND(0.01)
TP-10	5'	3.5	70	ND(0.4)	68	11	ND(0.3)	ND(3)	ND(1)
TP-14	0-1'	6.1	69	ND(0.4)	79	26	1	ND(3)	ND(1)
TP-18	0-1'	4.7	100	ND(0.4)	160	44	0.3	ND(3)	ND(1)
AVERAGE SITE BACKGROUND CONCENTRATION		5.98	47.4	0.93	37.9	8.45	0.13	0.51	0.14

NOTE

ND(#) = method detection limit for compound from that sampling event.

Half this number was used to calculate the mean background value for that compound

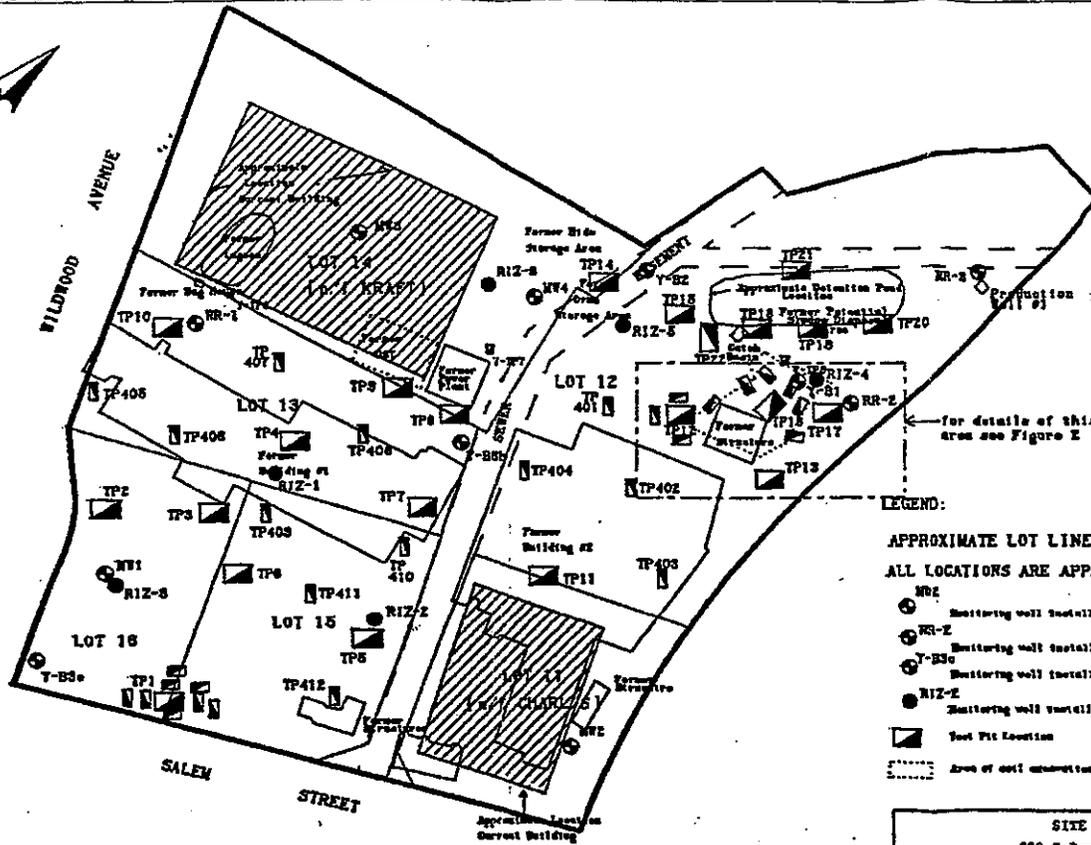
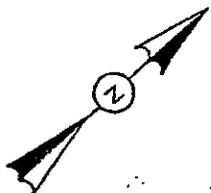
MW-# samples collected by 21E Inc. on 12/26/90

RIZ-# samples collected by Rizzo Associates Inc. on 12/22/95

TP-# samples collected by 21E Inc. on 01/30/96

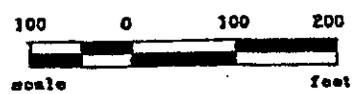
21E INC. (

FIGURE 1



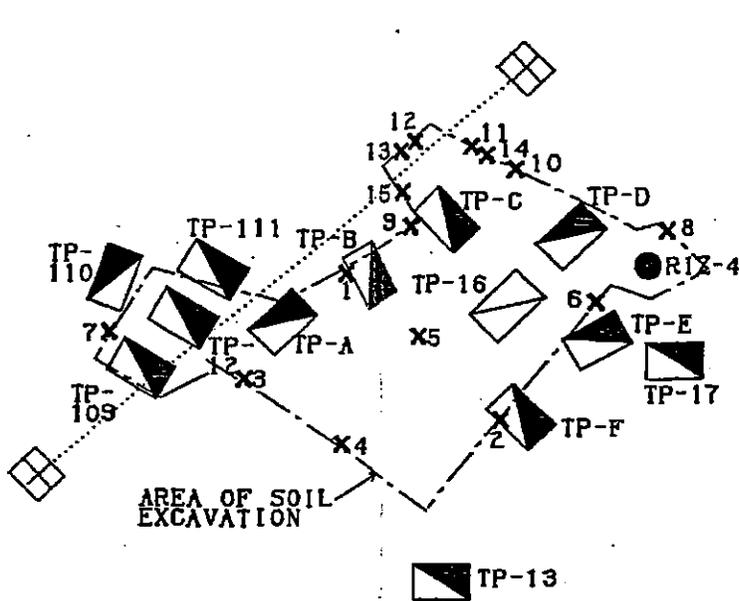
LEGEND:

- APPROXIMATE LOT LINES
- ALL LOCATIONS ARE APPROXIMATE
- NDZ
 - Monitoring well installed by ETE Inc.
- RR-Z
 - Monitoring well installed for Rain & Run
- Y-B3a
 - Monitoring well installed by ETE Inc.
- RIZ-Z
 - Monitoring well installed by Stone
- ▣ Test Pit Location
- Area of soil excavation

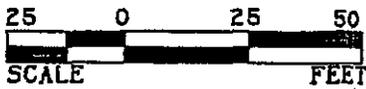


SITE PLAN 228 Salem Street Woburn, MA	
Scale: As shown	Prepared by: 21E INC. Consulting Geologists, Hydrogeologists, Environmental Chemists
Date: 08/14/96	
Project Number: 90-0505	
Drafted by: HLP	

FIGURE 2



- KEY**
- All locations are approximate
 - TEST PIT
 - CATCH BASIN
 - FORMER LOCATION OF CLAY PIPE
 - CONFIRMATORY SOIL SAMPLE LOCATION



EXTENT OF EXCAVATIONS 228 Salem Street Woburn, MA	
Scale: As shown	Prepared by: 21E INC.  Consulting Geologists, Hydrogeologists, Environmental Chemists
Date: 08/14/96	
Project Number: 90-0505	
Drafted by: HLP	

21E INC.



FIGURE 3

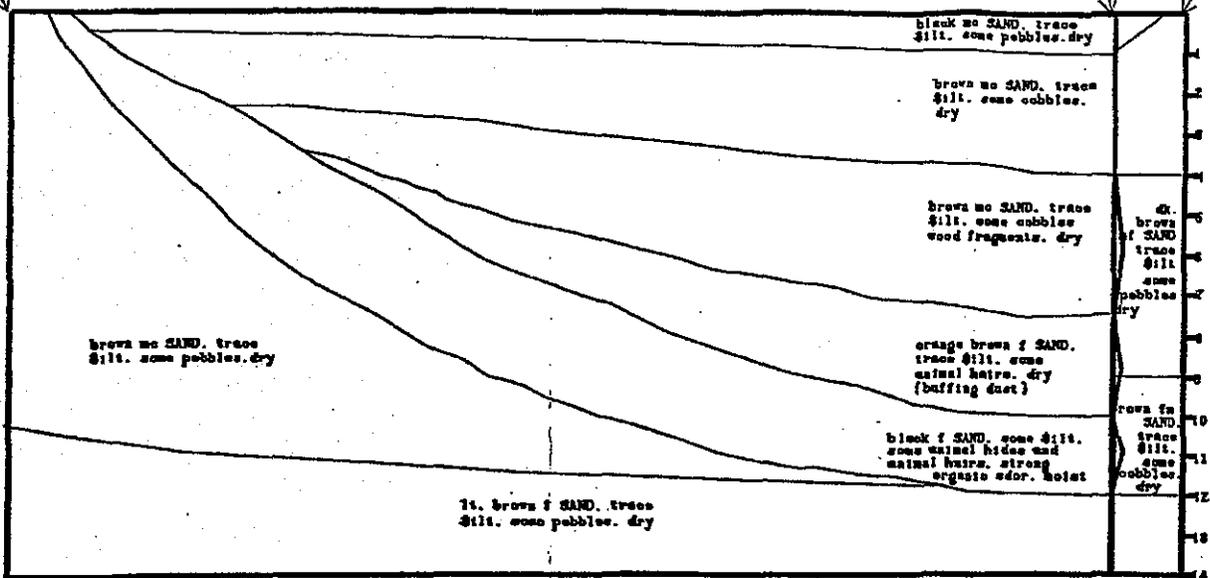




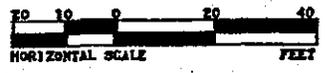
SOUTH WALL OF EXCAVATION

NORTH WALL OF IP-16

SOUTH WALL OF IP-D



DEPTH BELOW GROUND SURFACE (IN FEET)



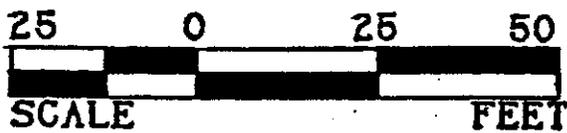
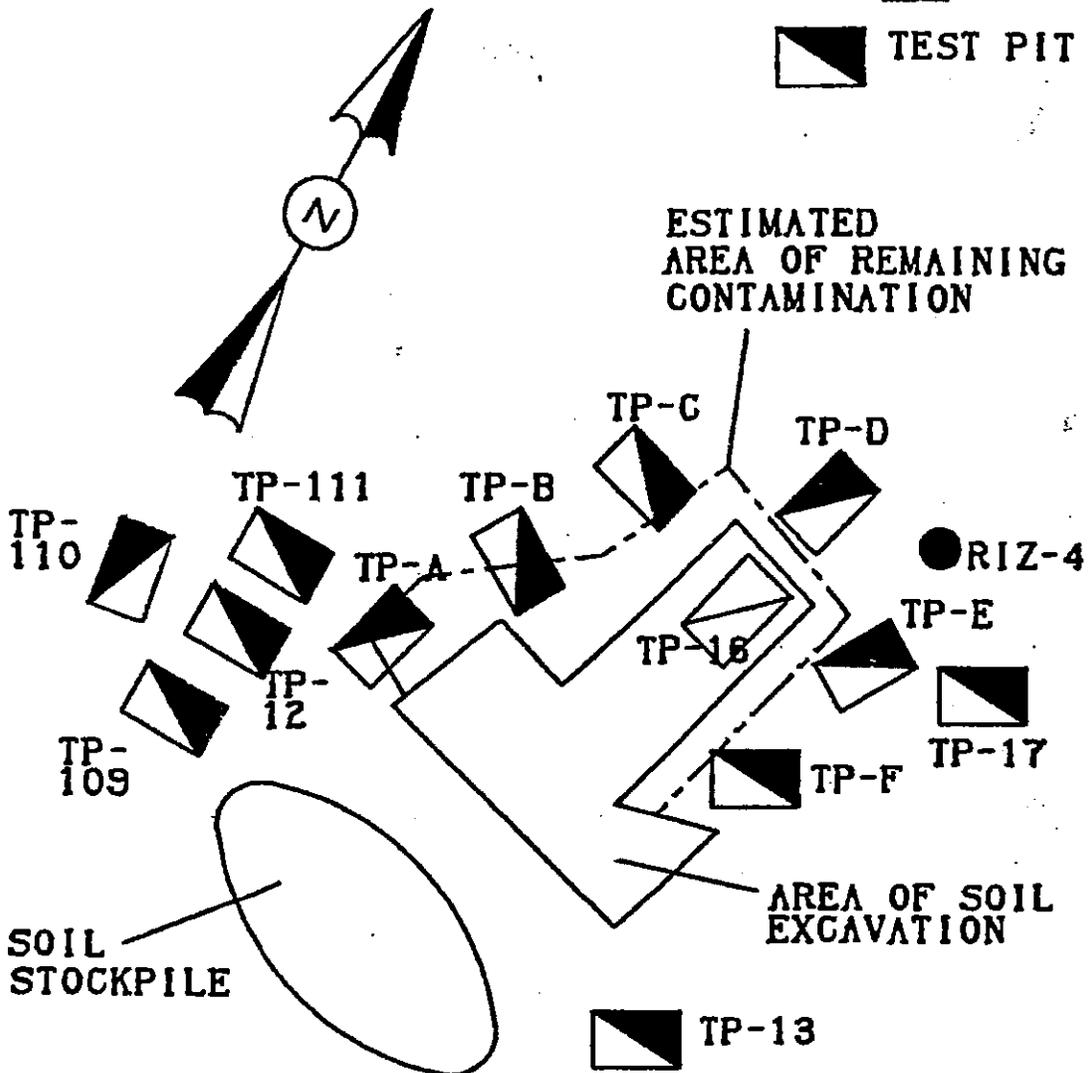
SOIL PROFILE - AREA OF EXCAVATION	
228 Salem Street Woburn, MA	
Scale: As shown	Prepared by: 21E INC.
Date: 08/14/96	Consulting Geologists, Hydrogeologists, Environmental Chemists
Project Number: 90-0505	
Drafted by: HLP	

FIGURE 4

KEY



**ESTIMATED
AREA OF REMAINING
CONTAMINATION**



AREA OF INITIAL EXCAVATION

228 Salem Street
Woburn, MA

Scale: As shown

Date: 08/14/96

Project Number: 90-0505

Drafted by: HLP

Prepared by:

21E INC.



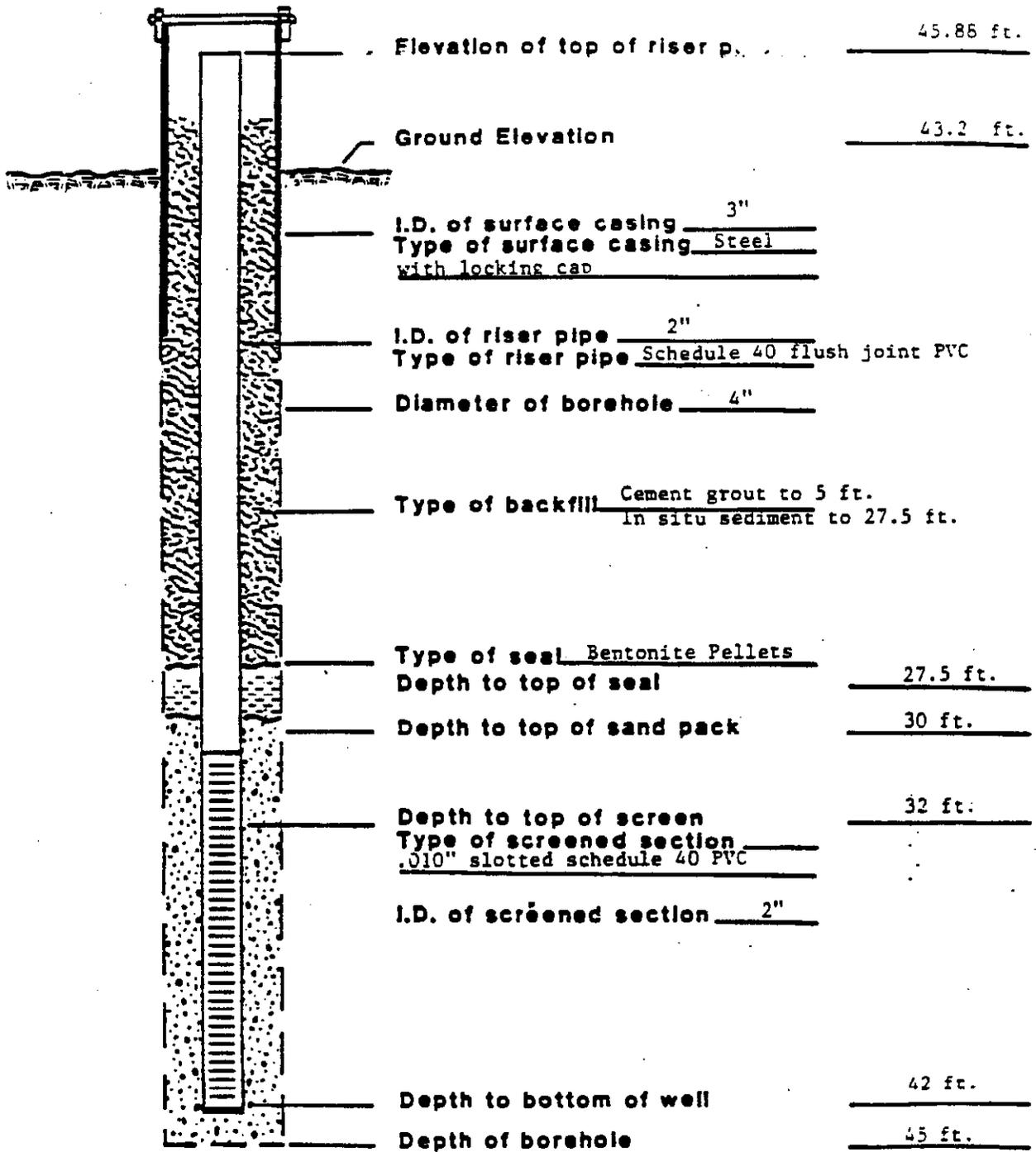
Consulting Geologists, Hydrogeologists,
Environmental Chemists

LOG of BORING No. W-4

DATE 8/25/83 SURFACE ELEVATION 43.2 LOCATION See Plate

DEPTH, ft.	SAMPLES	(1) SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	O.V. Silt (ppm)
0					
5		35	Tan to grey medium to fine Sand, trace of mica, trace of organics.	29.7	1
10		11			<1
15		8	Tan to orange medium to fine Sand - some coarse sand, trace of mica	11.2	<1
20		11			<1
25		15			1.5
30		33	Tan to grey coarse to fine sandy Gravel trace of silt, trace of mica.	-1.8	<1
35		50			-
40		10 ⁽²⁾	(1) 3½-inch O.D. split spoon sampler driven with 300-lb. hammer (2) 2-inch O.D. split spoon sampler driven with 300-lb. hammer	-1.8	<1
45		100 ⁽²⁾ 0"			-

Completion Depth 45 Feet Water Depth 2.97 Feet Date 11/17/83
 Project Name BEATRICE Project Number 82C2467



REPORT OF MONITORING WELL W-4

DRAWN BY: LGR | CHECKED BY: | PROJECT NO: 82C2467 | DATE: 9/26/83 | FIGURE NO

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

Appendix E

**Soil Boring Logs, Test Pit Logs, and Monitoring Well Construction
Diagrams**



CLIENT Organix, LLC PROJECT NAME Phase II Subsurface Investigation
 PROJECT NUMBER 127-13417-09001 PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
 DATE STARTED 12/15/08 COMPLETED 12/15/08 GROUND ELEVATION _____ TEST PIT SIZE 16"
 EXCAVATION CONTRACTOR Clean Harbors Environmental Services GROUND WATER LEVELS:
 EXCAVATION METHOD Test Pit AT TIME OF EXCAVATION ---
 LOGGED BY Ian Cannan CHECKED BY Ronald E. Myrick AT END OF EXCAVATION ---
 NOTES _____ AFTER EXCAVATION ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
0.3			dark brown, fine SAND and organic matter	
			brown, c-m SAND with roots, poorly sorted	
2.0	TP-201(0-3)		tan, c-m SAND and GRAVEL, little rounded cobble, poorly sorted	0.0
2.5				
5.0			Bottom of test pit at 5.0 feet.	

GENERAL BH / TP / WELL 2008-12-15-TEST.PIT.LOGS.GPJ GINT US.GDT 12/31/08



TEST PIT NUMBER TP-202

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 127-13417-09001	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/15/08 COMPLETED 12/15/08	GROUND ELEVATION _____ TEST PIT SIZE 16"
EXCAVATION CONTRACTOR Clean Harbors Environmental Services	GROUND WATER LEVELS:
EXCAVATION METHOD Test Pit	AT TIME OF EXCAVATION ---
LOGGED BY Ian Cannan CHECKED BY Ronald E. Myrick	AT END OF EXCAVATION ---
NOTES _____	AFTER EXCAVATION ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
0.3			dark brown, fine SAND and organic matter, visible solid waste at surface (glass and brick)	
0.5			interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.) white-gray TANNERY WASTE, little f-c sand and silt	
1.5			interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.)	
2.5	TP-202(0-5)			0.0
3.0			blue-gray TANNERY WASTE, little f-c sand and silt	
4.0			interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.)	
5.0			tan, c-m SAND and GRAVEL	
5.0	TP-202(5-7)			0.0
7.0			Bottom of test pit at 6.0 feet.	

GENERAL BH / TP / WELL 2008-12-15-TEST.PIT.LOGS.GPJ GINT US.GDT 12/31/08



TEST PIT NUMBER TP-203

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 127-13417-09001	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/15/08 COMPLETED 12/15/08	GROUND ELEVATION _____ TEST PIT SIZE 16"
EXCAVATION CONTRACTOR Clean Harbors Environmental Services	GROUND WATER LEVELS:
EXCAVATION METHOD Test Pit	AT TIME OF EXCAVATION ---
LOGGED BY Ian Cannan CHECKED BY Ronald E. Myrick	AT END OF EXCAVATION ---
NOTES _____	AFTER EXCAVATION ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
			interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.), interbedded roots	
			1.0 red-brown TANNERY WASTE, little f-c sand and silt, interbedded roots	
			2.0 interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.), interbedded roots	
2.5				
			3.0 white-gray TANNERY WASTE, little f-c sand and silt	
	TP-203(0-7.5)		4.0 interbedded lenses of tan f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.), interbedded roots from 4-5'	0.0
5.0				
			6.0 blue-gray TANNERY WASTE, little f-c sand and silt, interbedded roots from 6-7'	
			7.5 tan, m-f SAND, trace gravel, well sorted	
	TP-203(7.5-9)			0.0
			9.0 Bottom of test pit at 9.0 feet.	

GENERAL BH / TP / WELL 2008-12-15-TEST PIT LOGS.GPJ GINT US.GDT 12/31/08



TEST PIT NUMBER TP-204

CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 127-13417-09001 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/15/08 **COMPLETED** 12/15/08 **GROUND ELEVATION** _____ **TEST PIT SIZE** 16"
EXCAVATION CONTRACTOR Clean Harbors Environmental Services **GROUND WATER LEVELS:**
EXCAVATION METHOD Test Pit **AT TIME OF EXCAVATION** ---
LOGGED BY Ian Cannan **CHECKED BY** Ronald E. Myrick **AT END OF EXCAVATION** ---
NOTES _____ **AFTER EXCAVATION** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
2.5	TP-204(0-4)		interbedded lenses of gray, white, and brown f-c SAND and TANNERY WASTE (hides, hair, leather scrap, etc.), little glass fragments, interbedded roots 0-3'	0.0
4.0	TP-204(4-5)		tan, m-c SAND, well sorted	0.0
5.0			Bottom of test pit at 5.0 feet.	

GENERAL BH / TP / WELL 2008-12-15-TEST PIT LOGS.GPJ GINT US.GDT 12/31/08



TEST PIT NUMBER TP-205

CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 127-13417-09001 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/15/08 **COMPLETED** 12/15/08 **GROUND ELEVATION** _____ **TEST PIT SIZE** 16"
EXCAVATION CONTRACTOR Clean Harbors Environmental Services **GROUND WATER LEVELS:**
EXCAVATION METHOD Test Pit **AT TIME OF EXCAVATION** ---
LOGGED BY Ian Cannan **CHECKED BY** Ronald E. Myrick **AT END OF EXCAVATION** ---
NOTES _____ **AFTER EXCAVATION** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
0.3			dark brown, fine SAND and organic matter and roots	
			brown, m-c SAND with roots, poorly sorted	
	TP-205(0-3)			0.0
2.0			tan, c-m SAND and GRAVEL, little rounded cobble, poorly sorted	
2.5				
3.0			Bottom of test pit at 3.0 feet.	



CLIENT Organix, LLC PROJECT NAME Phase II Subsurface Investigation
 PROJECT NUMBER 127-13417-09001 PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
 DATE STARTED 12/15/08 COMPLETED 12/15/08 GROUND ELEVATION _____ TEST PIT SIZE 16"
 EXCAVATION CONTRACTOR Clean Harbors Environmental Services GROUND WATER LEVELS:
 EXCAVATION METHOD Test Pit AT TIME OF EXCAVATION ---
 LOGGED BY Ian Cannan CHECKED BY Ronald E. Myrick AT END OF EXCAVATION ---
 NOTES _____ AFTER EXCAVATION ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
0.3			dark brown, fine SAND and organic matter	
			brown to dark brown, f-m SAND, some solid waste (brick, glass, ash/slag), little rounded cobble	
2.5	TP-206(0-3)			0.0
3.2			tan, c-m SAND and GRAVEL, little rounded cobble, poorly sorted	
4.0			Bottom of test pit at 4.0 feet.	

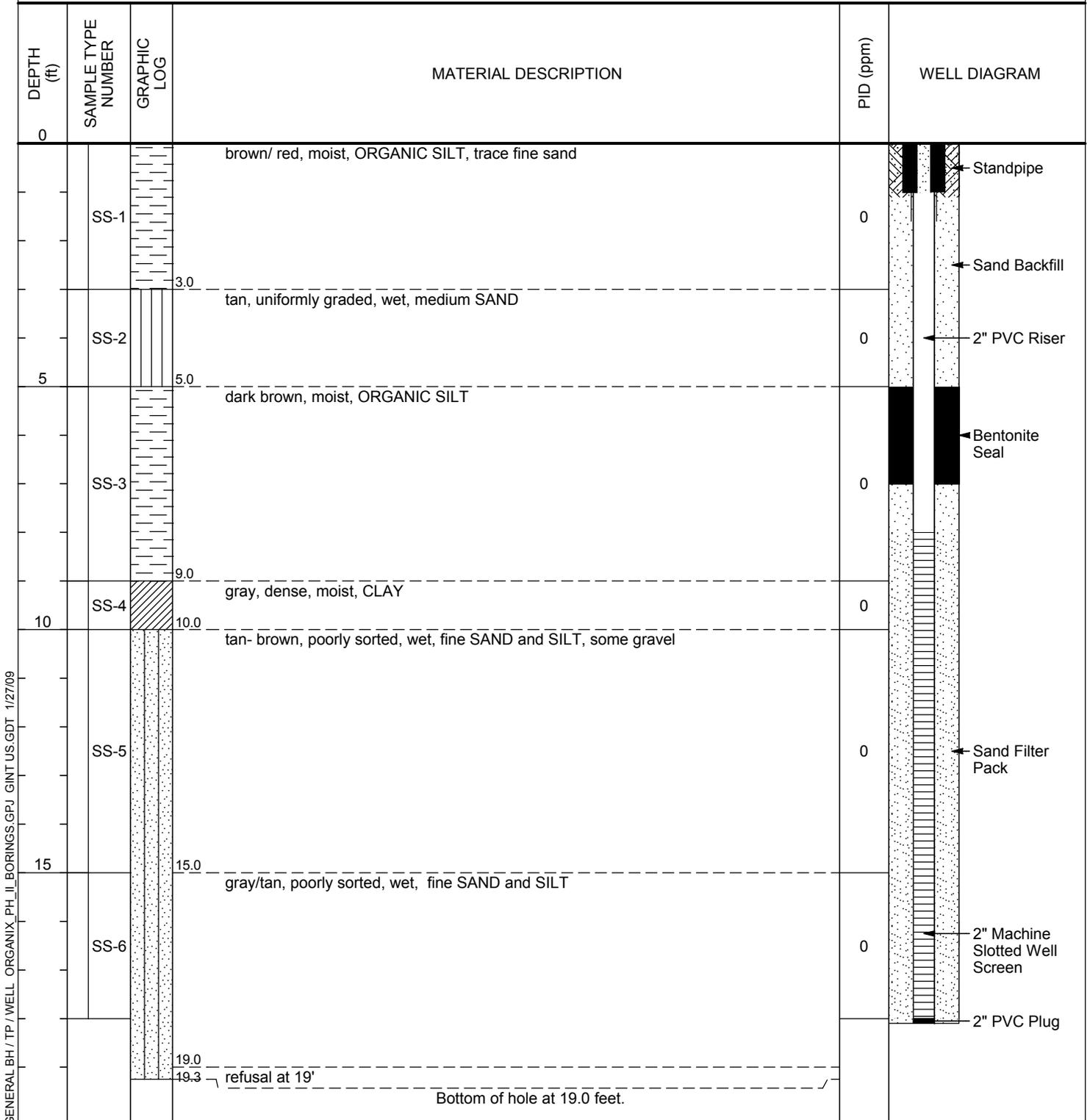


TEST PIT NUMBER TP-207

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 127-13417-09001	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/15/08 COMPLETED 12/15/08	GROUND ELEVATION _____ TEST PIT SIZE 16"
EXCAVATION CONTRACTOR Clean Harbors Environmental Services	GROUND WATER LEVELS:
EXCAVATION METHOD Test Pit	AT TIME OF EXCAVATION ---
LOGGED BY Ian Cannan CHECKED BY Ronald E. Myrick	AT END OF EXCAVATION ---
NOTES _____	AFTER EXCAVATION ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
	TP-207(02)		brown to gray, m-c SAND and GRAVEL, some solid waste (brick, glass, ash/slag), little asphalt fragments, little red brick fragments, little rounded cobble	0.0
2.0			brown to tan, c-m SAND and GRAVEL, little rounded cobble, poorly sorted	
2.5				
3.0			Bottom of test pit at 3.0 feet.	

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---



GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-201

CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 12"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD Hand-dug test pit **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
0	SS-1		black, poorly sorted, wet, medium SAND and GRAVEL , with metals and glass, trace leather scrap	0
1				
1.5				
1.5	SS-2		Wet, reddish brown, fine SAND and SILT	0
2				
3				
3.0			Bottom of hole at 3.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 12"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD Hand-dug test pit **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			Wet, black, poorly sorted, medium SAND and GRAVEL	
1				
2				
3	SS-1			0
5.0			Bottom of hole at 3.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-203

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
0			brown, poorly sorted, moist, medium SAND, some crushed rock	
1				
1	SS-1			0
2				
2				
3				
3			reddish brown, moist, fine SAND and SILT	
3				
4				
4	SS-2			0
5				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1			brown, moist, ORGANIC SILT and fine SAND	
2	SS-1			0
3			reddish brown, moist, fine SAND and SILT	
4	SS-2			0
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1	SS-1		brown, moist, ORGANIC SILT and fine SAND	0
2				
3	SS-2		reddish brown, moist, fine SAND and SILT, some crushed rock	0
4				
5				
			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			brown, moist, ORGANIC SILT and fine SAND	
1				
2				
3	SS-1			0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-207

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1	SS-1		brown, poorly sorted, moist, medium SAND	0
2				
3	SS-2		3.0 - brown-black, poorly sorted, moist, fine SAND and SILT	0
4				
5				
			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-208

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1	SS-1		brown, moist, ORGANIC SILT, some fine sand, trace gravel	0
2				
3				
3.0			Bottom of hole at 3.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

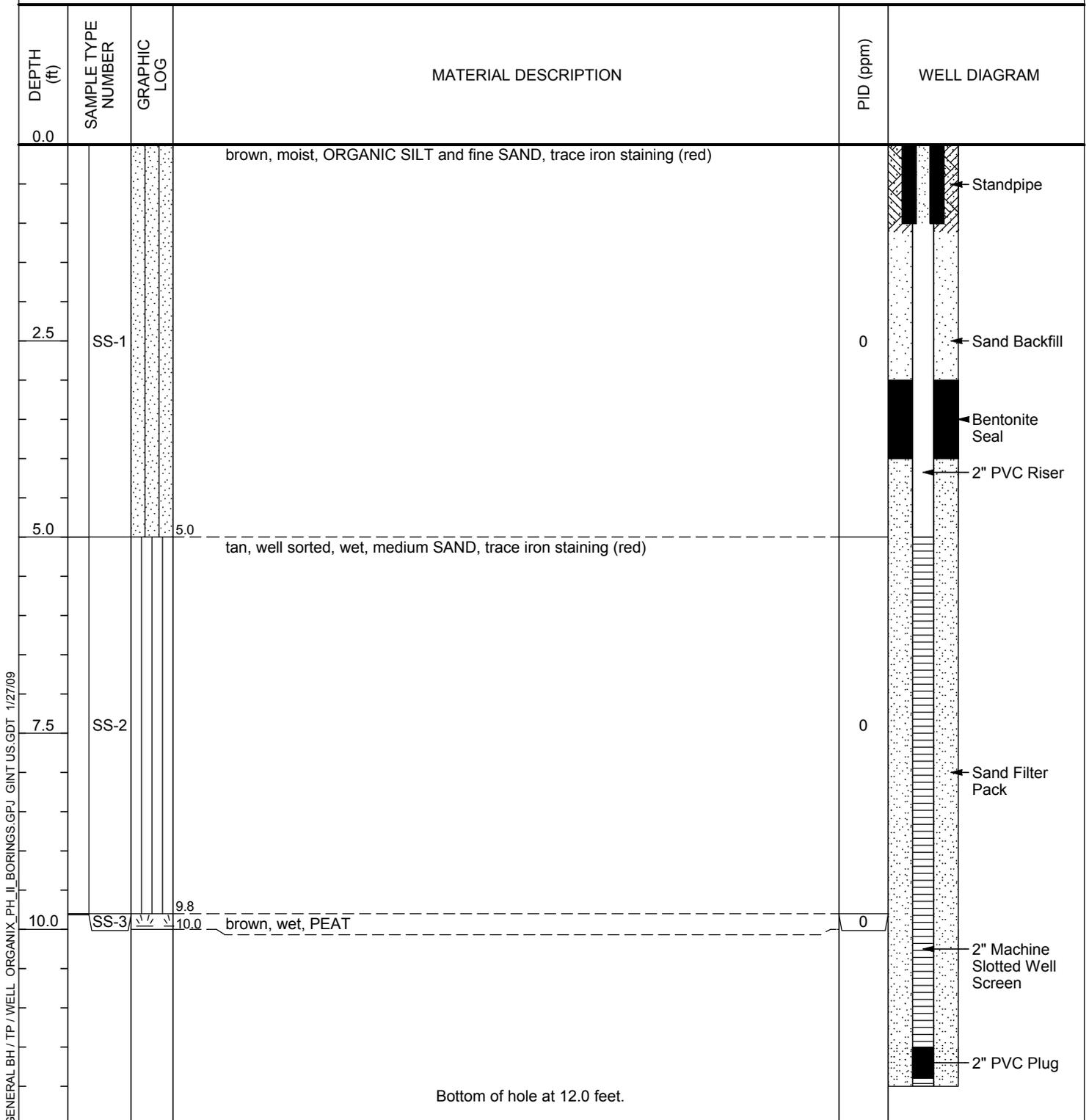


CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1			brown/light blue/light red, poorly sorted, moist, fine SAND and ORGANIC SILT	
2	SS-1			0
3		3.0	brown/tan, poorly sorted, moist, medium SAND, trace coarse sand	
4	SS-2			0
5		5.0	Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

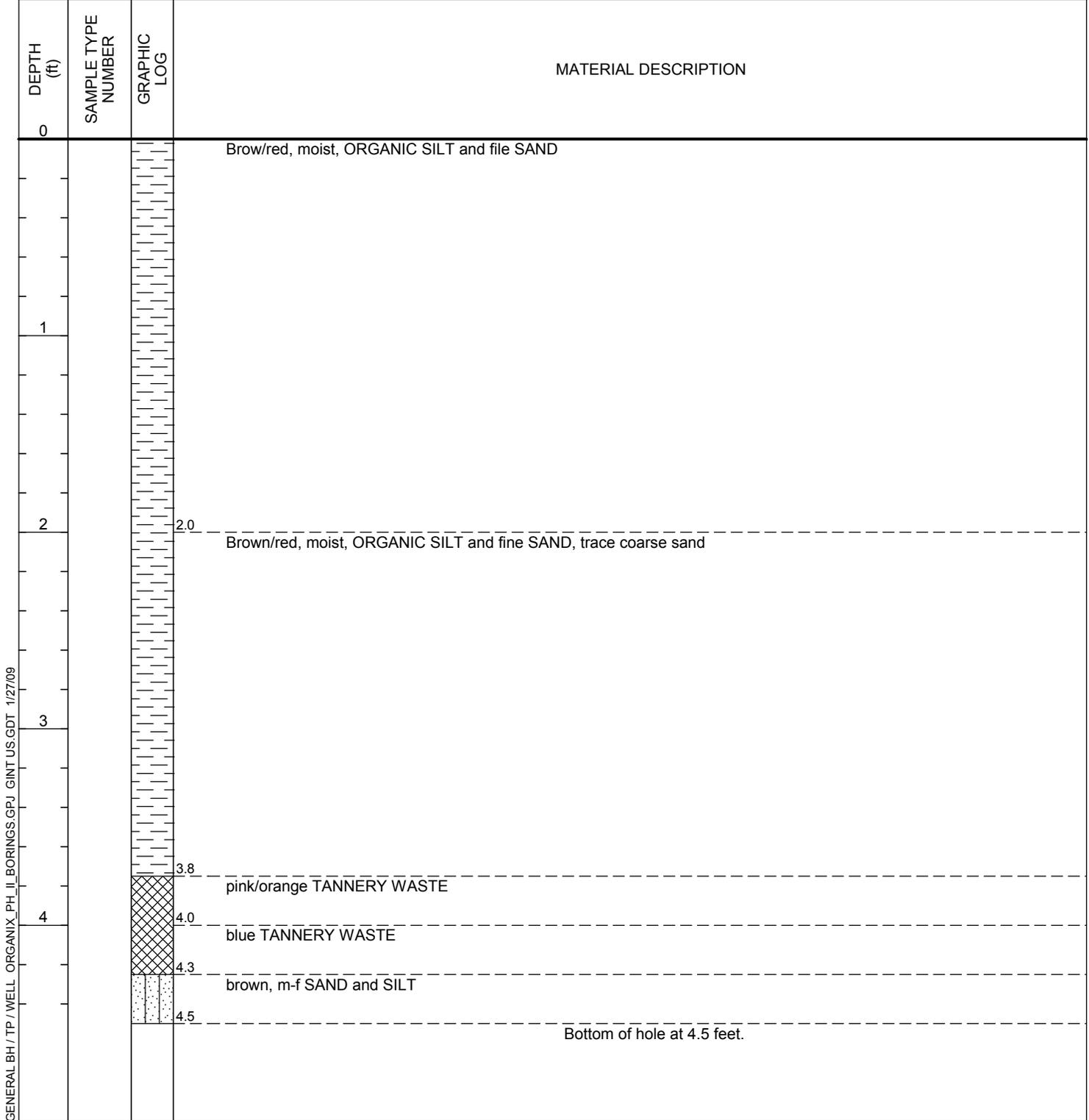


GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-210R

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/30/08 COMPLETED 12/30/08	GROUND ELEVATION _____ HOLE SIZE 12"
DRILLING CONTRACTOR Tetra Tech Rizzo	GROUND WATER LEVELS:
DRILLING METHOD Hand-dug test pit	AT TIME OF DRILLING ---
LOGGED BY Ronald E. Myrick CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---



GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-211

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			Black, ORGANIC SILT	
0.8			yellow, well sorted, wet, medium SAND	
1	SS-1			0
2				
3	SS-2		Bottom of hole at 3.0 feet.	0
3.0				

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-212

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			brown, poorly sorted, moist, fine SAND, some coarse sand	
1				
2				
3	SS-1			0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			dark brown, poorly sorted, moist, medium SAND, some medium gravel	
1				
2				
3	SS-1			0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1			crushed rock (boulder)	
2	SS-1			0
3				
3			3.0	
4	SS-2		brown, poorly sorted, moist, ORGANIC SILT and fine SAND	0
5				
5			5.0	
			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			dark brown-black, poorly sorted, moist, medium SAND, trace fine gravel (iron staining & banding)	
1	SS-1			0
2				
3	SS-2		3.0 - tan, well sorted, wet, fine SAND	0
4			4.0 - brown-black, well sorted, wet, medium SAND	
5	SS-3		5.0 - Bottom of hole at 5.0 feet.	0



BORING NUMBER B-216

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1	SS-1		brown-gray, well sorted, moist, fine SAND, trace red brick fragments	0
2				
3	SS-2		brown, poorly sorted, moist, medium SAND, some medium gravel	0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-217

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			brown, well sorted, moist fine SAND, trace medium gravel	
1				
2				
3	SS-1			0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



BORING NUMBER B-218

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0			brown, poorly sorted, moist, medium SAND, trace fine gravel	
1				
2				
3	SS-1			0
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

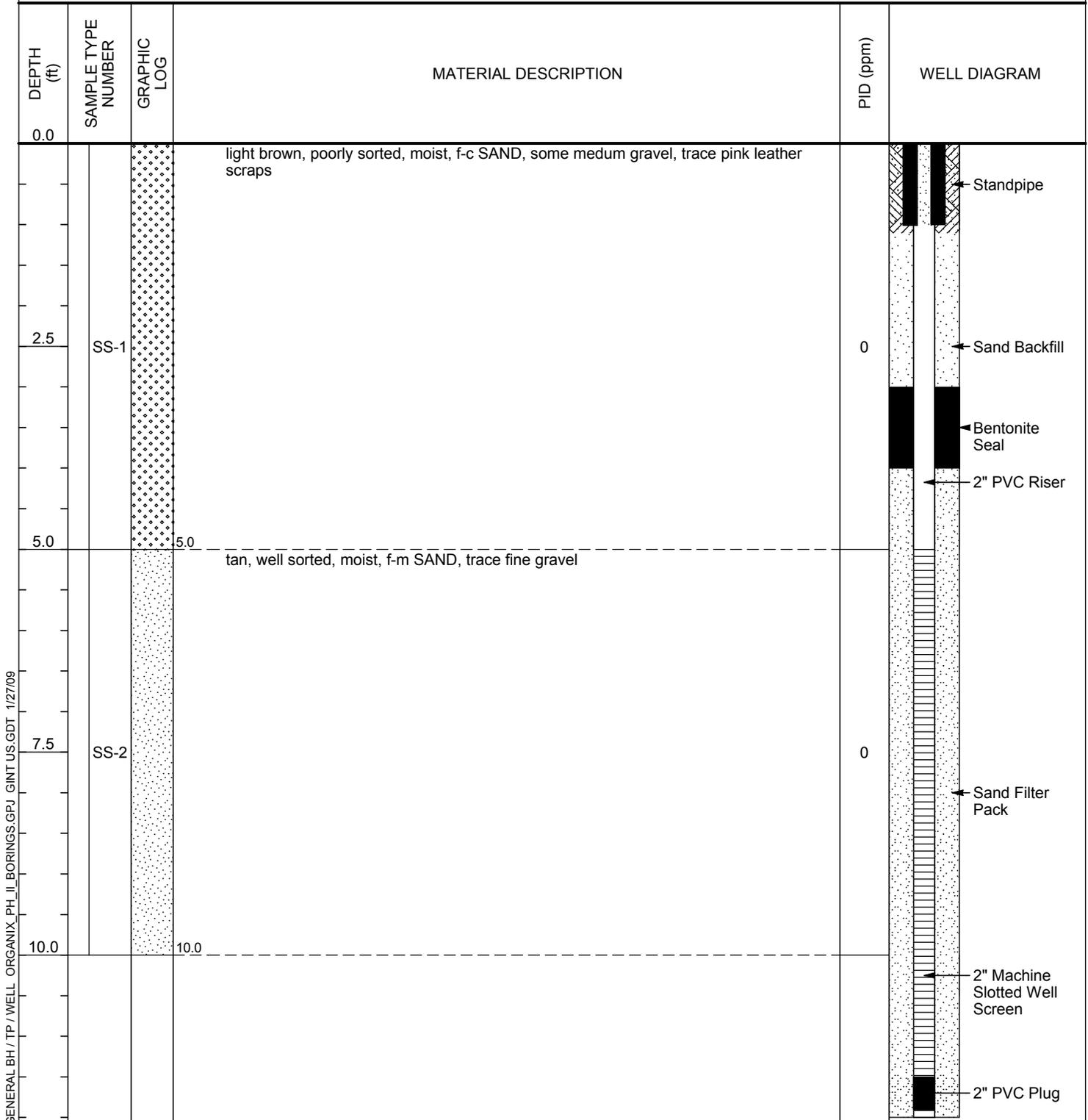


CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
1			brown, well sorted, moist, fine SAND, trace medium gravel	
2	SS-1			0
3			2.5 Moist, dark brown, moist, ORGANIC SILT and fine SAND	
4	SS-2			0
5			5.0 Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING 5'
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---



GENERAL BH / TP / WELL ORGAINIX_PH_II_BORINGS.GPJ_GINT US.GDT 1/27/09

Bottom of hole at 12.0 feet.



CLIENT Organix, LLC	PROJECT NAME Phase II Subsurface Investigation
PROJECT NUMBER 12700673	PROJECT LOCATION 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 COMPLETED 12/18/08	GROUND ELEVATION _____ HOLE SIZE 2"
DRILLING CONTRACTOR New England Geotech	GROUND WATER LEVELS:
DRILLING METHOD GEOPROBE	AT TIME OF DRILLING ---
LOGGED BY DG/MT CHECKED BY Ronald E. Myrick	AT END OF DRILLING ---
NOTES _____	AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
2.5	SS-1		brown, poorly sorted, medium SAND and GRAVEL	0
5.0	SS-2		yellow-gray, poorly sorted, medium SAND and GRAVEL	0
10.0	SS-3		yellow, poorly sorted, medium SAND and GRAVEL	0
15.0			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
			dark brown/black, moist, fine SAND and organic matter	
			Moist, redish brown, poorly sorted, medium SAND, trace gravel	
			Moist, light brown, poorly sorted, medium SAND and GRAVEL	
2.5	SS-1			0
5.0			Moist, yellow, poorly sorted, medium SAND and GRAVEL	
	SS-2			0
			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
			dark brown/black, moist, fine SAND and organic matter	
			black, poorly sorted, medium SAND, little concrete and brick fragments	
1				
			Moist, yellow, poorly sorted, medium SAND and GRAVEL	
2				
	SS-1			0
3				
4				
5			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				
	SS-1		black, poorly sorted, fine SAND and TANNERY WASTE (hides, hair, leather scraps, etc.)	0
5				
5.0				
5.3	SS-2		black, medium SAND and TANNERY WASTE (leather scraps), some brick fragments yellow, poorly sorted, moist, medium SAND and GRAVEL	0
10.0	SS-3		yellow, poorly sorted, moist, medium SAND and GRAVEL	0
15.0	SS-4		yellow, poorly sorted, moist, medium SAND and GRAVEL	0
20.0			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09



CLIENT Organix, LLC **PROJECT NAME** Phase II Subsurface Investigation
PROJECT NUMBER 12700673 **PROJECT LOCATION** 240 Salem Street, Woburn, Massachusetts
DATE STARTED 12/18/08 **COMPLETED** 12/18/08 **GROUND ELEVATION** _____ **HOLE SIZE** 2"
DRILLING CONTRACTOR New England Geotech **GROUND WATER LEVELS:**
DRILLING METHOD GEOPROBE **AT TIME OF DRILLING** ---
LOGGED BY DG/MT **CHECKED BY** Ronald E. Myrick **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.0				
2.5	SS-1		crushed boulder	0
5.0			yellow, well sorted, wet, medium SAND and GRAVEL	0
10.0			Bottom of hole at 5.0 feet.	

GENERAL BH / TP / WELL ORGANIX_PH_II_BORINGS.GPJ GINT US.GDT 1/27/09

Appendix F
Laboratory Certificates of Analysis



39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

REPORT DATE 8/22/2006

RIZZO ASSOCIATES - FRAMINGHAM
ONE GRANT STREET
FRAMINGHAM, MA 01701
ATTN: RON MYRICK

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-99260

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: ORGANIX, WOBURN, MA.

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
A1	06B25983	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
A1	06B25983	SOIL	NOT SPECIFIED	chromium 6 drywt
A1	06B25983	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
A1	06B25983	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
A1	06B25983	SOIL	NOT SPECIFIED	solids (percent)
A2	06B25984	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
A2	06B25984	SOIL	NOT SPECIFIED	chromium 6 drywt
A2	06B25984	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
A2	06B25984	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
A2	06B25984	SOIL	NOT SPECIFIED	solids (percent)
A3	06B25985	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
A3	06B25985	SOIL	NOT SPECIFIED	chromium 6 drywt
A3	06B25985	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
A3	06B25985	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
A3	06B25985	SOIL	NOT SPECIFIED	solids (percent)
A4	06B25986	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
A4	06B25986	SOIL	NOT SPECIFIED	chromium 6 drywt
A4	06B25986	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
A4	06B25986	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
A4	06B25986	SOIL	NOT SPECIFIED	solids (percent)
A5	06B25987	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
A5	06B25987	SOIL	NOT SPECIFIED	chromium 6 drywt
A5	06B25987	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
A5	06B25987	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
A5	06B25987	SOIL	NOT SPECIFIED	solids (percent)
B1	06B25988	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
B1	06B25988	SOIL	NOT SPECIFIED	chromium 6 drywt
B1	06B25988	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
B1	06B25988	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
B1	06B25988	SOIL	NOT SPECIFIED	solids (percent)
B2	06B25989	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
B2	06B25989	SOIL	NOT SPECIFIED	chromium 6 drywt
B2	06B25989	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
B2	06B25989	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
B2	06B25989	SOIL	NOT SPECIFIED	solids (percent)
B3	06B25990	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
B3	06B25990	SOIL	NOT SPECIFIED	chromium 6 drywt



39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

REPORT DATE 8/22/2006

RIZZO ASSOCIATES - FRAMINGHAM
ONE GRANT STREET
FRAMINGHAM, MA 01701
ATTN: RON MYRICK

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-99260

JOB NUMBER: -

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

B3	06B25990	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
B3	06B25990	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
B3	06B25990	SOIL	NOT SPECIFIED	solids (percent)
B4	06B25991	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
B4	06B25991	SOIL	NOT SPECIFIED	chromium 6 drywt
B4	06B25991	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
B4	06B25991	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
B4	06B25991	SOIL	NOT SPECIFIED	solids (percent)
B5	06B25992	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
B5	06B25992	SOIL	NOT SPECIFIED	chromium 6 drywt
B5	06B25992	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
B5	06B25992	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
B5	06B25992	SOIL	NOT SPECIFIED	solids (percent)
C-0	06B25999	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
C-0	06B25999	SOIL	NOT SPECIFIED	chromium 6 drywt
C-0	06B25999	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
C-0	06B25999	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
C-0	06B25999	SOIL	NOT SPECIFIED	solids (percent)
C4	06B25994	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
C4	06B25994	SOIL	NOT SPECIFIED	chromium 6 drywt
C4	06B25994	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
C4	06B25994	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
C4	06B25994	SOIL	NOT SPECIFIED	solids (percent)
D3	06B25995	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
D3	06B25995	SOIL	NOT SPECIFIED	chromium 6 drywt
D3	06B25995	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
D3	06B25995	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
D3	06B25995	SOIL	NOT SPECIFIED	solids (percent)
D5 0-3	06B25996	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
D5 0-3	06B25996	SOIL	NOT SPECIFIED	chromium 6 drywt
D5 0-3	06B25996	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
D5 0-3	06B25996	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
D5 0-3	06B25996	SOIL	NOT SPECIFIED	solids (percent)
D5 3.1	06B25997	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
D5 3.1	06B25997	SOIL	NOT SPECIFIED	chromium 6 drywt
D5 3.1	06B25997	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
D5 3.1	06B25997	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
D5 3.1	06B25997	SOIL	NOT SPECIFIED	solids (percent)
E-0	06B26000	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
E-0	06B26000	SOIL	NOT SPECIFIED	chromium 6 drywt
E-0	06B26000	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
E-0	06B26000	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp



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REPORT DATE 8/22/2006

RIZZO ASSOCIATES - FRAMINGHAM
ONE GRANT STREET
FRAMINGHAM, MA 01701
ATTN: RON MYRICK

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMS-99260

JOB NUMBER: -

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

E-0	06B26000	SOIL	NOT SPECIFIED	solids (percent)
E-3	06B25998	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
E-3	06B25998	SOIL	NOT SPECIFIED	chromium 6 drywt
E-3	06B25998	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
E-3	06B25998	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
E-3	06B25998	SOIL	NOT SPECIFIED	solids (percent)
S-1-S-5	06B25993	SOIL	NOT SPECIFIED	as (mg/kg)dw icp
S-1-S-5	06B25993	SOIL	NOT SPECIFIED	chromium 6 drywt
S-1-S-5	06B25993	SOIL	NOT SPECIFIED	cr (mg/kg)dw icp
S-1-S-5	06B25993	SOIL	NOT SPECIFIED	pb (mg/kg)dw icp
S-1-S-5	06B25993	SOIL	NOT SPECIFIED	solids (percent)

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

AIHA 100033	AIHA ELLAP (LEAD) 100033	
MASSACHUSETTS MA0100	NEW HAMPSHIRE NELAP 2516	NEW JERSEY NELAP NJ MA007 (AIR)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036	
NEW YORK ELAP/NELAP 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.

Sondra L. Slesinski 08/22/06
SIGNATURE DATE

Tod Kopyscinski
Director of Operations

Sondra L. Slesinski
Quality Assurance Officer

Edward Denson
Technical Director



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FRAMINGHAM, MA 01701

8/22/2006
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Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
Job Number: -

Field Sample # : A1

Sample ID : 06B25983 Sampled : 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	10.9	08/16/06	KSH	2.95		

Field Sample # : A2

Sample ID : 06B25984 Sampled : 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	9.36	08/16/06	KSH	2.77		

Field Sample # : A3

Sample ID : 06B25985 Sampled : 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	15.9	08/16/06	KSH	2.75		

Field Sample # : A4

Sample ID : 06B25986 Sampled : 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	19.1	08/16/06	KSH	2.72		

Field Sample # : A5

Sample ID : 06B25987 Sampled : 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	9.33	08/16/06	KSH	2.76		

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: C-0

Purchase Order No.:

Sample ID: 06B25999 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	57.0	08/16/06	KSH	2.82		

Field Sample #: C4

Sample ID: 06B25994 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	110.	08/16/06	KSH	2.87		

Field Sample #: D3

Sample ID: 06B25995 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	8.73	08/16/06	KSH	2.60		

Field Sample #: D5 0-3

Sample ID: 06B25996 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	20.4	08/16/06	KSH	2.98		

Field Sample #: D5 3.1

Sample ID: 06B25997 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	18.3	08/16/06	KSH	2.87		

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: E-0

Sample ID: 06B26000 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	63.1	08/16/06	KSH	2.85		

Field Sample #: E-3

Sample ID: 06B25998 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	16.7	08/16/06	KSH	2.98		

Field Sample #: S-1-S-5

Sample ID: 06B25993 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Arsenic	mg/kg dry wt	14.8	08/16/06	KSH	3.60		

Analytical Method:
 SW846 3050/6010

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

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Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
Job Number: -

Field Sample #: C-0

Purchase Order No.:

Sample ID: 06B25999
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.09			

Field Sample #: C4

Sample ID: 06B25994
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.26			

Field Sample #: D3

Sample ID: 06B25995
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	1.94			

Field Sample #: D5 0-3

Sample ID: 06B25996
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.22			

Field Sample #: D5 3.1

Sample ID: 06B25997
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.16			

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: E-0

Sample ID: 06B26000 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.16		

Field Sample #: E-3

Sample ID: 06B25998 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	4.67		

Field Sample #: S-1-S-5

Sample ID: 06B25993 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium (+6)	mg/kg dry wt	ND	08/18/06	KFD	2.73		

Analytical Method:
 MODIFIED SW846 7196
 ALKALINE DIGESTION OF SOLID FOLLOWED BY COLORIMETRIC ANALYSIS WITH S-DIPHENYLCARBAZIDE.

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample # : A1

Sample ID : 06B25983 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	466.	08/16/06	KSH	0.59			

Field Sample # : A2

Sample ID : 06B25984 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	797.	08/16/06	KSH	0.55			

Field Sample # : A3

Sample ID : 06B25985 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	1230.	08/16/06	KSH	0.55			

Field Sample # : A4

Sample ID : 06B25986 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	1330.	08/16/06	KSH	0.54			

Field Sample # : A5

Sample ID : 06B25987 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	865.	08/16/06	KSH	0.55			

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8/22/2006
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Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
Job Number: -

Field Sample #: C-0

Sample ID: 06B25999 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	1670.	08/16/06	KSH	0.56			

Field Sample #: C4

Sample ID: 06B25994 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	1600.	08/16/06	KSH	0.57			

Field Sample #: D3

Sample ID: 06B25995 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	155.	08/16/06	KSH	0.52			

Field Sample #: D5 0-3

Sample ID: 06B25996 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	1790.	08/16/06	KSH	0.60			

Field Sample #: D5 3.1

Sample ID: 06B25997 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Chromium	mg/kg dry wt	893.	08/16/06	KSH	0.57			

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FRAMINGHAM, MA 01701

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Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

Purchase Order No.:
LIMS-BAT #: LIMS-99260
Job Number: -

Field Sample #: E-0

Sample ID: 06B26000
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium	mg/kg dry wt	6450.	08/16/06	KSH	0.57		

Field Sample #: E-3

Sample ID: 06B25998
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium	mg/kg dry wt	6880.	08/16/06	KSH	0.60		

Field Sample #: S-1-S-5

Sample ID: 06B25993
Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Chromium	mg/kg dry wt	2600.	08/16/06	KSH	0.72		

Analytical Method:
SW846 3050/6010

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

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Purchase Order No.:

Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample # : A1

Sample ID : 06B25983 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	80.8	08/16/06	KSH	0.88			

Field Sample # : A2

Sample ID : 06B25984 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	99.5	08/16/06	KSH	0.83			

Field Sample # : A3

Sample ID : 06B25985 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	217.	08/16/06	KSH	0.83			

Field Sample # : A4

Sample ID : 06B25986 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	730.	08/16/06	KSH	0.82			

Field Sample # : A5

Sample ID : 06B25987 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	87.9	08/16/06	KSH	0.83			

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: B1

Sample ID: 06B25988 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

Purchase Order No.:

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	527.	08/16/06	KSH	0.89			

Field Sample #: B2

Sample ID: *06B25989 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	782.	08/16/06	KSH	1.00			

Field Sample #: B3

Sample ID: 06B25990 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	1070.	08/16/06	KSH	0.81			

Field Sample #: B4

Sample ID: 06B25991 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	1780.	08/16/06	KSH	0.84			

Field Sample #: B5

Sample ID: 06B25992 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	225.	08/16/06	KSH	0.88			

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Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
Job Number: -

Field Sample #: C-0

Purchase Order No.:

Sample ID: 06B25999 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	9350.	08/16/06	KSH	0.85			

Field Sample #: C4

Sample ID: 06B25994 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	18700.	08/16/06	KSH	0.86			

Field Sample #: D3

Sample ID: 06B25995 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	42.0	08/16/06	KSH	0.78			

Field Sample #: D5 0-3

Sample ID: 06B25996 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	858.	08/16/06	KSH	0.89			

Field Sample #: D5 3.1

Sample ID: 06B25997 Sampled: 8/14/2006
NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	417.	08/16/06	KSH	0.86			

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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

Purchase Order No.:
 LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: E-0

Sample ID: 06B26000
 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	190.	08/16/06	KSH	0.85			

Field Sample #: E-3

Sample ID: 06B25998
 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	83.2	08/16/06	KSH	0.89			

Field Sample #: S-1-S-5

Sample ID: 06B25993
 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Lead	mg/kg dry wt	213.	08/16/06	KSH	1.08			

Analytical Method:
 SW846 3050/6010

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

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

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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 RIZZO ASSOCIATES - FRAMINGHAM
 ONE GRANT STREET
 FRAMINGHAM, MA 01701

8/22/2006
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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample # : A1

Sample ID : 06B25983 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	84.8	08/17/06	LL			

Field Sample # : A2

Sample ID : 06B25984 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	90.2	08/17/06	LL			

Field Sample # : A3

Sample ID : 06B25985 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	90.8	08/17/06	LL			

Field Sample # : A4

Sample ID : 06B25986 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	91.8	08/17/06	LL			

Field Sample # : A5

Sample ID : 06B25987 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	90.5	08/17/06	LL			

RL = Reporting Limit

ND = Not Detected at or above the Reporting 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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8/22/2006
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Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample # : B1

Sample ID : 06B25988 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	84.4	08/17/06	LL			

Field Sample # : B2

Sample ID : 06B25989 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	75.0	08/17/06	LL			

Field Sample # : B3

Sample ID : 06B25990 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	92.6	08/17/06	LL			

Field Sample # : B4

Sample ID : 06B25991 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	89.1	08/17/06	LL			

Field Sample # : B5

Sample ID : 06B25992 Sampled : 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	84.9	08/17/06	LL			

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NM = Not Measured

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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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 FRAMINGHAM, MA 01701

8/22/2006
 Page 19 of 21

Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: C-0

Purchase Order No.:

Sample ID: 06B25999 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	88.5	08/17/06	LL			

Field Sample #: C4

Sample ID: 06B25994 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	87.0	08/17/06	LL			

Field Sample #: D3

Sample ID: 06B25995 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	96.0	08/17/06	LL			

Field Sample #: D5 0-3

Sample ID: 06B25996 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	83.8	08/17/06	LL			

Field Sample #: D5 3.1

Sample ID: 06B25997 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	87.1	08/17/06	LL			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

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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8/22/2006
 Page 20 of 21

Project Location: ORGANIX, WOBURN, MA.
 Date Received: 8/15/2006

Purchase Order No.:
 LIMS-BAT #: LIMS-99260
 Job Number: -

Field Sample #: E-0

Sample ID: 06B26000 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	87.8	08/17/06	LL			

Field Sample #: E-3

Sample ID: 06B25998 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	83.9	08/17/06	LL			

Field Sample #: S-1-S-5

Sample ID: 06B25993 Sampled: 8/14/2006
 NOT SPECIFIED

Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/ F
Solids, total	%	69.5	08/17/06	LL			

Analytical Method:

SM 2540G

PERCENT OF SAMPLE REMAINING AFTER DRYING OVERNIGHT AT 103-105 DEGREES CENTIGRADE.

RL = Reporting 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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ONE GRANT STREET
FRAMINGHAM, MA 01701

8/22/2006
Page 21 of 21

Purchase Order No.:

Project Location: ORGANIX, WOBURN, MA.
Date Received: 8/15/2006

LIMS-BAT #: LIMS-99260
Job Number: -

The following notes were attached to the reported analysis :

Sample ID: * 06B25989
Analysis: Chromium

SAMPLE TO SPIKE RATIO GREATER THAN OR EQUAL TO 4:1, INCREASING VARIATION FROM ESTABLISHED CONTROL LIMIT IS ANTICIPATED. CONTROL LIMITS PROVIDED FOR REFERENCE ONLY AND ARE NOT APPLICABLE.

Sample ID: * 06B25989
Analysis: Lead

SAMPLE CONCENTRATION GREATER THAN 4X SPIKED CONCENTRATION, THEREFORE A REPRESENTATIVE RECOVERY IS NOT OBTAINABLE. CONTROL LIMITS ARE PROVIDED FOR REFERENCE ONLY AND ARE NOT APPLICABLE.

** END OF REPORT **

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

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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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 8/22/2006

Lims Bat # : LIMS-99260

Page 1 of 4

QC Batch Number: ICP-14709

Sample Id	Analysis	QC Analysis	Values	Units	Limits
06B25989	Arsenic	Sample Amount	82.20	mg/kg dry wt	
		Duplicate Value	82.61	mg/kg dry wt	
		Duplicate RPD	0.50	%	0-35
		Sample Amount	82.20	mg/kg dry wt	
		Matrix Spk Amt Added	133.25	mg/kg dry wt	
		MS Amt Measured	212.53	mg/kg dry wt	
	Chromium	Matrix Spike % Rec.	97.81	%	70-130
		Sample Amount	5882.57	mg/kg dry wt	
		Duplicate Value	6818.70	mg/kg dry wt	
		Duplicate RPD	14.74	%	0-35
		Sample Amount	5882.57	mg/kg dry wt	
		Matrix Spk Amt Added	133.25	mg/kg dry wt	
	Lead	MS Amt Measured	6347.56	mg/kg dry wt	
		Matrix Spike % Rec.	348.95	%	70-130
		Sample Amount	782.04	mg/kg dry wt	
		Duplicate Value	919.30	mg/kg dry wt	
		Duplicate RPD	16.14	%	0-35
		Sample Amount	782.04	mg/kg dry wt	
BLANK-91061	Matrix Spk Amt Added	133.25	mg/kg dry wt		
	MS Amt Measured	950.06	mg/kg dry wt		
	Matrix Spike % Rec.	126.09	%	70-130	
	Arsenic	Blank	<2.50	mg/kg dry wt	
	Chromium	Blank	<0.50	mg/kg dry wt	
	Lead	Blank	<0.75	mg/kg dry wt	
LFBLANK-53885	Arsenic	Lab Fort Blank Amt.	100.00	mg/kg dry wt	
		Lab Fort Blk. Found	104.98	mg/kg dry wt	
		Lab Fort Blk. % Rec.	104.98	%	80-120
	Chromium	Lab Fort Blank Amt.	100.00	mg/kg dry wt	
		Lab Fort Blk. Found	102.84	mg/kg dry wt	
		Lab Fort Blk. % Rec.	102.84	%	80-120
	Lead	Lab Fort Blank Amt.	100.00	mg/kg dry wt	
		Lab Fort Blk. Found	101.02	mg/kg dry wt	
		Lab Fort Blk. % Rec.	101.02	%	80-120



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 8/22/2006

Lims Bat # : LIMS-99260

Page 2 of 4

QC Batch Number: WETCHEM-11370

Sample Id	Analysis	QC Analysis	Values	Units	Limits
06B25992	Chromium (+6)	Sample Amount	<2.30	mg/kg dry wt	
		Matrix Spk Amt Added	113.30	mg/kg dry wt	
		MS Amt Measured	91.80	mg/kg dry wt	
		Matrix Spike % Rec.	81.02	%	
06B26000	Chromium (+6)	Sample Amount	<2.16	mg/kg dry wt	
		Matrix Spk Amt Added	110.80	mg/kg dry wt	
		MS Amt Measured	96.36	mg/kg dry wt	
		Matrix Spike % Rec.	86.97	%	
LFBLANK-54022	Chromium (+6)	Lab Fort Blank Amt.	91.50	mg/kg dry wt	
		Lab Fort Blk. Found	85.07	mg/kg dry wt	
		Lab Fort Blk. % Rec.	92.97	%	
STDADD-31675	Chromium (+6)	Standard Measured	89.80	mg/kg dry wt	
		Standard Amt Added	93.50	mg/kg dry wt	
		Standard % Recovery	96.04	%	



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 8/22/2006

Lims Bat # : LIMS-99260

Page 3 of 4

NOTES:

QC Batch No. : ICP-14709

Sample ID : 06B25989

Analysis : Chromium

SAMPLE TO SPIKE RATIO GREATER THAN OR EQUAL TO 4:1, INCREASING VARIATION FROM ESTABLISHED CONTROL LIMIT IS ANTICIPATED. CONTROL LIMITS PROVIDED FOR REFERENCE ONLY AND ARE NOT APPLICABLE.

QC Batch No. : ICP-14709

Sample ID : 06B25989

Analysis : Lead

SAMPLE CONCENTRATION GREATER THAN 4X SPIKED CONCENTRATION, THEREFORE A REPRESENTATIVE RECOVERY IS NOT OBTAINABLE. CONTROL LIMITS ARE PROVIDED FOR REFERENCE ONLY AND ARE NOT APPLICABLE.



QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 8/22/2006

Lims Bat #: LIMS-99260

Page 4 of 4

QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER	This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.
LIMITS	Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.
Sample Amount	Amount of analyte found in a sample.
Blank	Method Blank that has been taken though all the steps of the analysis.
LFBLANK	Laboratory Fortified Blank (a control sample)
STDADD	Standard Added (a laboratory control sample)
Matrix Spk Amt Added	Amount of analyte spiked into a sample
MS Amt Measured	Amount of analyte found including amount that was spiked
Matrix Spike % Rec.	% Recovery of spiked amount in sample.
Duplicate Value	The result from the Duplicate analysis of the sample.
Duplicate RPD	The Relative Percent Difference between two Duplicate Analyses.
Surrogate Recovery	The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.
Sur. Recovery (ELCD)	Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID)	Surrogate Recovery on the Photoionization Detector.
Standard Measured	Amount measured for a laboratory control sample
Standard Amt Added	Known value for a laboratory control sample
Standard % Recovery	% recovered for a laboratory control sample with a known value.
Lab Fort Blank Amt	Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found	Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec	Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt	Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd	Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec	Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range	Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).
Lab Fort Bl. Av. Rec.	Laboratory Fortified Blank Average Recovery
Duplicate Sample Amt	Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added	Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured	Matrix Spike Duplicate Amount Measured
MSD % Recovery	Matrix Spike Duplicate % Recovery
MSD Range	Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries



Phone: 413-525-2332
 Fax: 413-525-6405
 Email: info@contestlabs.com
 www.contestlabs.com

CHAIN OF CUSTODY RECORD

Limst# 99260

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

Company Name: RIZZO ASSOCIATES
 Address: 1 GRANT STREET
FRAMINGHAM, MA

Telephone: (508) 903 2000
 Project # _____
 Client PO # _____

Attention: RON MYRICK
 Project Location: Organic Wolburn MA
 Sampled By: DMITRI GOUNIS

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT
 Fax # : _____
 Email: _____
 Format: EXCEL PDF GIS KEY

Proposal Provided? (For Billing purposes) yes _____ proposal date
 State Form Required? yes no

OTHER _____
Date Sampled

Field ID	Sample Description	Lab #	Date Sampled		Com- osite	Grab	*Matrix Conc. Code Code		Total Chromium	Total Arsenic	Total Lead	Chromium et	ANALYSIS REQUESTED
			Start Date/Time	Stop Date/Time									
	A1	✓ 25983	8/14/06	1200		✓	So	A	✓	✓	✓	✓	
	A2	✓ 25984		1210		✓		H	✓	✓	✓	✓	
	A3	✓ 25985		1220		✓		H	✓	✓	✓	✓	
	A4	✓ 25986		1230		✓		H	✓	✓	✓	✓	
	A5	✓ 25987		1240		✓		H	✓	✓	✓	✓	
	B1	✓ 25988		1250		✓		H	✓	✓	✓	✓	
	B2	✓ 25989		100pm		✓		H	✓	✓	✓	✓	
	B3	✓ 25990	✓	110pm		✓		H	✓	✓	✓	✓	

of containers: _____
 **Preservation _____
 -Cont.Code _____
 -Cont. Code:
 A=amber glas
 G=glass
 P=plastic
 ST=sterile
 V= vial
 S=summa car
 T=tedlar bag
 O=Other

**Client
 Comments**

Laboratory Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) [Signature] Date/Time: 8/14/06 5pm
 Received by: (signature) [Signature] Date/Time: 8/15/06 12:50
 Relinquished by: (signature) [Signature] Date/Time: 8/15/06 17:45
 Received by: (signature) [Signature] Date/Time: 8/15/06 17:45

Turnaround **
 7-Day
 10-Day
 Other 5
RUSH *
 *24-Hr *48-Hr
 *72-Hr *4-Day
 * Require lab approval

Detection Limit Requirements
 Regulations? MCL RCL-T
 Data Enhancement Project/RCP? Y N
 Special Requirements or DL's: _____

***Matrix Code:**
 GW= groundwater
 WW= wastewater
 DW= drinking water
 A = air
 S = soil/solid
 SL = sludge
 O = other

****Preservation Codes:**
 I = Iced X = Na hydroxide
 H = HCL T = Na thiosulfate
 M = Methanol
 N = Nitric Acid
 S = Sulfuric Acid
 B = Sodium bisulfate
 O = Other



www.contestlabs.com

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East Longmeadow, MA
Phone: 1-413-525-2332
Fax: 1-413-525-6405

SAMPLE RECEIPT CHECKLIST

CLIENT NAME: Rizzo

RECEIVED BY: KA DATE: 8/15/06

1. Was chain of custody relinquished and signed? YES NO

2. Does Chain agree with samples? YES NO

If not, explain:

3. All Samples in good condition? YES NO

If not, explain:

4. Were samples received in compliance with Temperature 0-6 degrees C? YES NO

Degrees:
5°C

5. Are all soil vph & voc samples covered with preservation? YES NO

6. Are there any on hold samples? YES NO

7. Laboratory analysts notified? YES NO

Who _____ Time _____ Date _____

8. Location where samples are stored: 1B

CONTAINERS SENT IN TO CON-TEST	# of containers	CONTAINERS SENT TO CON-TEST	# of containers
1 liter amber		Air Cassettes	
500 ml amber		8 oz clear jar	18
250 ml amber (8oz. Amber)		4 oz clear jar	
1 liter plastic		2 oz clear jar	
500 ml plastic		Plastic bag	
250 ml plastic		Encore	
40 ml vial		Brass Sleeves	
Colisure bottle		Tubes	
Dissolved oxygen bottle		Summa cans	
Flashpoint bottle		Other	

Laboratory comments:

Do all the samples have the correct pH levels? YES NO If no, please explain below:

Report Date:
26-Feb-07 17:02



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Dimitri Gounis

Project: Organix - 240 Salem St - Woburn, MA
Project 12700673

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA58154-01	PH-1	Ground Water	13-Feb-07 11:00	14-Feb-07 15:05
SA58154-02	TB	Ground Water	13-Feb-07 11:05	14-Feb-07 15:05

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Please note that this report contains 23 pages of analytical data plus Chain of Custody document(s).

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Maine # MA138
New Hampshire # 2538/2972
New Jersey # MA011/MA012
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

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CASE NARRATIVE:

The data set for work order SA58154 complies with internal QC criteria for the methods performed. The samples were received @ 5.3 degrees Celsius. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

MADEP has published a list of analytical methods (CAM), which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2004 Rev.4, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended 70%-130% recovery range, a range has been set based on historical control limits.

Please refer to "Notes and Definitions" for all sample/analyte qualifiers. Qualifiers will narrate any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

Sample Identification

PH-1

SA58154-01

Client Project #

12700673

Matrix

Ground Water

Collection Date/Time

13-Feb-07 11:00

Received

14-Feb-07

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Volatile Organic Compounds											
<u>Volatile Organic Compounds</u>											
Prepared by method SW846 5030 Water MS											
76-13-1	1,1,2-Trichlorotrifluoroethane (Frec 113)	BRL		µg/l	1.0	1	SW 846 8260B	20-Feb-07	21-Feb-07	7021084	JRO
67-64-1	Acetone	BRL		µg/l	10.0	1	"	"	"	"	"
107-13-1	Acrylonitrile	BRL		µg/l	1.0	1	"	"	"	"	"
71-43-2	Benzene	BRL		µg/l	1.0	1	"	"	"	"	"
108-86-1	Bromobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
74-97-5	Bromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-27-4	Bromodichloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-25-2	Bromoform	BRL		µg/l	1.0	1	"	"	"	"	"
74-83-9	Bromomethane	BRL		µg/l	2.0	1	"	"	"	"	"
78-93-3	2-Butanone (MEK)	BRL		µg/l	10.0	1	"	"	"	"	"
104-51-8	n-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
135-98-8	sec-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
98-06-6	tert-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-15-0	Carbon disulfide	BRL		µg/l	5.0	1	"	"	"	"	"
56-23-5	Carbon tetrachloride	BRL		µg/l	1.0	1	"	"	"	"	"
108-90-7	Chlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-00-3	Chloroethane	BRL		µg/l	2.0	1	"	"	"	"	"
67-66-3	Chloroform	BRL		µg/l	1.0	1	"	"	"	"	"
74-87-3	Chloromethane	BRL		µg/l	2.0	1	"	"	"	"	"
95-49-8	2-Chlorotoluene	BRL		µg/l	1.0	1	"	"	"	"	"
106-43-4	4-Chlorotoluene	BRL		µg/l	1.0	1	"	"	"	"	"
96-12-8	1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0	1	"	"	"	"	"
124-48-1	Dibromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	1.0	1	"	"	"	"	"
74-95-3	Dibromomethane	BRL		µg/l	1.0	1	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0	1	"	"	"	"	"
75-34-3	1,1-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
107-06-2	1,2-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-35-4	1,1-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
78-87-5	1,2-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
142-28-9	1,3-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
594-20-7	2,2-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
563-58-6	1,1-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
87-68-3	Hexachlorobutadiene	BRL		µg/l	1.0	1	"	"	"	"	"
591-78-6	2-Hexanone (MBK)	BRL		µg/l	10.0	1	"	"	"	"	"
98-82-8	Isopropylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
99-87-6	4-Isopropyltoluene	BRL		µg/l	1.0	1	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0	1	"	"	"	"	"
75-09-2	Methylene chloride	BRL		µg/l	10.0	1	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	1.0	1	"	"	"	"	"

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 2 of 23

Sample Identification

PH-1

SA58154-01

Client Project #

12700673

Matrix

Ground Water

Collection Date/Time

13-Feb-07 11:00

Received

14-Feb-07

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
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Volatile Organic CompoundsVolatile Organic Compounds

Prepared by method SW846 5030 Water MS

103-65-1	n-Propylbenzene	BRL		µg/l	1.0	1	SW 846 8260B	20-Feb-07	21-Feb-07	7021084	JRO
100-42-5	Styrene	BRL		µg/l	1.0	1	"	"	"	"	"
630-20-6	1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-34-5	1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
108-88-3	Toluene	BRL		µg/l	1.0	1	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-01-6	Trichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0	1	"	"	"	"	"
96-18-4	1,2,3-Trichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-01-4	Vinyl chloride	BRL		µg/l	1.0	1	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/l	2.0	1	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/l	1.0	1	"	"	"	"	"
109-99-9	Tetrahydrofuran	BRL		µg/l	10.0	1	"	"	"	"	"
60-29-7	Ethyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
994-05-8	Tert-amyl methyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
637-92-3	Ethyl tert-butyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
108-20-3	Di-isopropyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/l	10.0	1	"	"	"	"	"
123-91-1	1,4-Dioxane	BRL		µg/l	20.0	1	"	"	"	"	"

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	100			70-130 %		"	"	"	"	"
2037-26-5	Toluene-d8	99			70-130 %		"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	90			70-130 %		"	"	"	"	"
1868-53-7	Dibromofluoromethane	104			70-130 %		"	"	"	"	"

VPH Aliphatic/Aromatic Carbon Ranges

PH

Prepared by method VPH - EPA 5030B

C5-C8 Aliphatic Hydrocarbons	BRL			mg/l	0.0750	1	MADEP VPH 5/2004 Rev. 1.1	16-Feb-07	16-Feb-07	7020930	EQ
C9-C12 Aliphatic Hydrocarbons	BRL			mg/l	0.0250	1	"	"	"	"	"
C9-C10 Aromatic Hydrocarbons	BRL			mg/l	0.0250	1	"	"	"	"	"
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL			mg/l	0.0750	1	"	"	"	"	"
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL			mg/l	0.0250	1	"	"	"	"	"

VPH Target Analytes

PH

Prepared by method VPH - EPA 5030B

71-43-2	Benzene	BRL		µg/l	5.0	1	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/l	5.0	1	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	5.0	1	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	5.0	1	"	"	"	"	"
108-88-3	Toluene	BRL		µg/l	5.0	1	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/l	10.0	1	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/l	5.0	1	"	"	"	"	"

Surrogate recoveries:*This laboratory report is not valid without an authorized signature on the cover page.*

* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

PH-1

SA58154-01

Client Project #

12700673

Matrix

Ground Water

Collection Date/Time

13-Feb-07 11:00

Received

14-Feb-07

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Volatile Organic Compounds											
<u>VPH Target Analytes</u>											
PH											
Prepared by method VPH - EPA 5030B											
615-59-8	2,5-Dibromotoluene (FID)	99.4		70-130 %			MADEP VPH 5/2004 Rev. 1.1	16-Feb-07	16-Feb-07	7020930	EQ
615-59-8	2,5-Dibromotoluene (PID)	88.0		70-130 %			"	"	"	"	"
Extractable Petroleum Hydrocarbons											
<u>EPH Aliphatic/Aromatic Ranges</u>											
Prepared by method SW846 3510C											
	C9-C18 Aliphatic Hydrocarbons	BRL		mg/l	0.2	1	MADEP EPH 5/2004 R	15-Feb-07	23-Feb-07	7020840	M.B
	C19-C36 Aliphatic Hydrocarbons	BRL		mg/l	0.2	1	"	"	"	"	"
	C11-C22 Aromatic Hydrocarbons	BRL		mg/l	0.2	1	"	"	"	"	"
	Unadjusted C11-C22 Aromatic Hydrocarbons	BRL		mg/l	0.2	1	"	"	"	"	"
	Total Petroleum Hydrocarbons	BRL		mg/l	0.2	1	"	"	"	"	"
	Unadjusted Total Petroleum Hydrocarbons	BRL		mg/l	0.2	1	"	"	"	"	"
<u>EPH Target PAH Analytes</u>											
Prepared by method SW846 3510C											
91-20-3	Naphthalene	BRL		µg/l	6.02	1	"	"	"	"	"
91-57-6	2-Methylnaphthalene	BRL		µg/l	6.02	1	"	"	"	"	"
208-96-8	Acenaphthylene	BRL		µg/l	6.02	1	"	"	"	"	"
83-32-9	Acenaphthene	BRL		µg/l	6.02	1	"	"	"	"	"
86-73-7	Fluorene	BRL		µg/l	6.02	1	"	"	"	"	"
85-01-8	Phenanthrene	BRL		µg/l	6.02	1	"	"	"	"	"
120-12-7	Anthracene	BRL		µg/l	6.02	1	"	"	"	"	"
206-44-0	Fluoranthene	BRL		µg/l	6.02	1	"	"	"	"	"
129-00-0	Pyrene	BRL		µg/l	6.02	1	"	"	"	"	"
56-55-3	Benzo (a) anthracene	BRL		µg/l	6.02	1	"	"	"	"	"
218-01-9	Chrysene	BRL		µg/l	6.02	1	"	"	"	"	"
205-99-2	Benzo (b) fluoranthene	BRL		µg/l	6.02	1	"	"	"	"	"
207-08-9	Benzo (k) fluoranthene	BRL		µg/l	6.02	1	"	"	"	"	"
50-32-8	Benzo (a) pyrene	BRL		µg/l	6.02	1	"	"	"	"	"
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/l	6.02	1	"	"	"	"	"
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/l	6.02	1	"	"	"	"	"
191-24-2	Benzo (g,h,i) perylene	BRL		µg/l	6.02	1	"	"	"	"	"
<u>Surrogate recoveries:</u>											
3386-33-2	1-Chlorooctadecane	52.5			40-140 %		"	"	"	"	"
84-15-1	Ortho-Terphenyl	51.8			40-140 %		"	"	"	"	"
580-13-2	2-Bromonaphthalene	51.0			40-140 %		"	"	"	"	"
321-60-8	2-Fluorobiphenyl	65.4			40-140 %		"	"	"	"	"
Total Metals by EPA 6000/7000 Series Methods											
7440-22-4	Silver	BRL		mg/l	0.0050	1	SW846 6010B	22-Feb-07	23-Feb-07	7021187	LR
7440-38-2	Arsenic	BRL		mg/l	0.0040	1	"	"	"	"	"
7440-39-3	Barium	0.0344		mg/l	0.0050	1	"	"	"	"	"
7440-43-9	Cadmium	BRL		mg/l	0.0025	1	"	"	"	"	"
7440-47-3	Chromium	0.0163		mg/l	0.0050	1	"	"	"	"	"
7439-92-1	Lead	BRL		mg/l	0.0075	1	"	"	"	"	"
7782-49-2	Selenium	BRL		mg/l	0.0150	1	"	"	"	"	"
Total Metals by EPA 200 Series Methods											
7439-97-6	Mercury	BRL		mg/l	0.00020	1	EPA 245.1/7470A	22-Feb-07	23-Feb-07	7021189	YP

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample IdentificationTB
SA58154-02Client Project #
12700673Matrix
Ground WaterCollection Date/Time
13-Feb-07 11:05Received
14-Feb-07

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Volatile Organic Compounds											
<u>Volatile Organic Compounds</u>											
Prepared by method SW846 5030 Water MS											
76-13-1	1,1,2-Trichlorotrifluoroethane (Frec 113)	BRL		µg/l	1.0	1	SW 846 8260B	20-Feb-07	21-Feb-07	7021084	JRO
67-64-1	Acetone	BRL		µg/l	10.0	1	"	"	"	"	"
107-13-1	Acrylonitrile	BRL		µg/l	1.0	1	"	"	"	"	"
71-43-2	Benzene	BRL		µg/l	1.0	1	"	"	"	"	"
108-86-1	Bromobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
74-97-5	Bromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-27-4	Bromodichloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-25-2	Bromoform	BRL		µg/l	1.0	1	"	"	"	"	"
74-83-9	Bromomethane	BRL		µg/l	2.0	1	"	"	"	"	"
78-93-3	2-Butanone (MEK)	BRL		µg/l	10.0	1	"	"	"	"	"
104-51-8	n-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
135-98-8	sec-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
98-06-6	tert-Butylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-15-0	Carbon disulfide	BRL		µg/l	5.0	1	"	"	"	"	"
56-23-5	Carbon tetrachloride	BRL		µg/l	1.0	1	"	"	"	"	"
108-90-7	Chlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-00-3	Chloroethane	BRL		µg/l	2.0	1	"	"	"	"	"
67-66-3	Chloroform	BRL		µg/l	1.0	1	"	"	"	"	"
74-87-3	Chloromethane	BRL		µg/l	2.0	1	"	"	"	"	"
95-49-8	2-Chlorotoluene	BRL		µg/l	1.0	1	"	"	"	"	"
106-43-4	4-Chlorotoluene	BRL		µg/l	1.0	1	"	"	"	"	"
96-12-8	1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0	1	"	"	"	"	"
124-48-1	Dibromochloromethane	BRL		µg/l	1.0	1	"	"	"	"	"
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/l	1.0	1	"	"	"	"	"
74-95-3	Dibromomethane	BRL		µg/l	1.0	1	"	"	"	"	"
95-50-1	1,2-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
541-73-1	1,3-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0	1	"	"	"	"	"
75-34-3	1,1-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
107-06-2	1,2-Dichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
75-35-4	1,1-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
156-59-2	cis-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
156-60-5	trans-1,2-Dichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
78-87-5	1,2-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
142-28-9	1,3-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
594-20-7	2,2-Dichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
563-58-6	1,1-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/l	1.0	1	"	"	"	"	"
100-41-4	Ethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
87-68-3	Hexachlorobutadiene	BRL		µg/l	1.0	1	"	"	"	"	"
591-78-6	2-Hexanone (MBK)	BRL		µg/l	10.0	1	"	"	"	"	"
98-82-8	Isopropylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
99-87-6	4-Isopropyltoluene	BRL		µg/l	1.0	1	"	"	"	"	"
1634-04-4	Methyl tert-butyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0	1	"	"	"	"	"
75-09-2	Methylene chloride	BRL		µg/l	10.0	1	"	"	"	"	"
91-20-3	Naphthalene	BRL		µg/l	1.0	1	"	"	"	"	"

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* Reportable Detection Limit

BRL = Below Reporting Limit

Page 5 of 23

Sample Identification

TB
SA58154-02

Client Project #
12700673

Matrix
Ground Water

Collection Date/Time
13-Feb-07 11:05

Received
14-Feb-07

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Volatile Organic Compounds											
<u>Volatile Organic Compounds</u>											
Prepared by method SW846 5030 Water MS											
103-65-1	n-Propylbenzene	BRL		µg/l	1.0	1	SW 846 8260B	20-Feb-07	21-Feb-07	7021084	JRO
100-42-5	Styrene	BRL		µg/l	1.0	1	"	"	"	"	"
630-20-6	1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-34-5	1,1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
127-18-4	Tetrachloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
108-88-3	Toluene	BRL		µg/l	1.0	1	"	"	"	"	"
87-61-6	1,2,3-Trichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/l	1.0	1	"	"	"	"	"
71-55-6	1,1,1-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-00-5	1,1,2-Trichloroethane	BRL		µg/l	1.0	1	"	"	"	"	"
79-01-6	Trichloroethene	BRL		µg/l	1.0	1	"	"	"	"	"
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0	1	"	"	"	"	"
96-18-4	1,2,3-Trichloropropane	BRL		µg/l	1.0	1	"	"	"	"	"
95-63-6	1,2,4-Trimethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
108-67-8	1,3,5-Trimethylbenzene	BRL		µg/l	1.0	1	"	"	"	"	"
75-01-4	Vinyl chloride	BRL		µg/l	1.0	1	"	"	"	"	"
1330-20-7	m,p-Xylene	BRL		µg/l	2.0	1	"	"	"	"	"
95-47-6	o-Xylene	BRL		µg/l	1.0	1	"	"	"	"	"
109-99-9	Tetrahydrofuran	BRL		µg/l	10.0	1	"	"	"	"	"
60-29-7	Ethyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
994-05-8	Tert-amyl methyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
637-92-3	Ethyl tert-butyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
108-20-3	Di-isopropyl ether	BRL		µg/l	1.0	1	"	"	"	"	"
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/l	10.0	1	"	"	"	"	"
123-91-1	1,4-Dioxane	BRL		µg/l	20.0	1	"	"	"	"	"
<i>Surrogate recoveries:</i>											
460-00-4	4-Bromofluorobenzene	99			70-130 %		"	"	"	"	"
2037-26-5	Toluene-d8	99			70-130 %		"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	92			70-130 %		"	"	"	"	"
1868-53-7	Dibromofluoromethane	104			70-130 %		"	"	"	"	"

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7020930 - VPH - EPA 5030B										
<u>Blank (7020930-BLK1)</u>										
Prepared & Analyzed: 16-Feb-07										
C5-C8 Aliphatic Hydrocarbons	BRL		mg/l	0.0750						
C9-C12 Aliphatic Hydrocarbons	BRL		mg/l	0.0250						
C9-C10 Aromatic Hydrocarbons	BRL		mg/l	0.0250						
Unadjusted C5-C8 Aliphatic Hydrocarbons	BRL		mg/l	0.0750						
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/l	0.0250						
Benzene	BRL		µg/l	5.0						
Ethylbenzene	BRL		µg/l	5.0						
Methyl tert-butyl ether	BRL		µg/l	5.0						
Naphthalene	BRL		µg/l	5.0						
Toluene	BRL		µg/l	5.0						
m,p-Xylene	BRL		µg/l	10.0						
o-Xylene	BRL		µg/l	5.0						
2-Methylpentane	BRL		µg/l	5.0						
n-Nonane	BRL		µg/l	10.0						
n-Pentane	BRL		µg/l	10.0						
1,2,4-Trimethylbenzene	BRL		µg/l	5.0						
2,2,4-Trimethylpentane	BRL		µg/l	5.0						
n-Butylcyclohexane	BRL		µg/l	5.0						
n-Decane	BRL		µg/l	5.0						
<i>Surrogate: 2,5-Dibromotoluene (FID)</i>	48.3		µg/l		50.0		96.6	70-130		
<i>Surrogate: 2,5-Dibromotoluene (PID)</i>	42.6		µg/l		50.0		85.2	70-130		
<u>LCS (7020930-BS1)</u>										
Prepared & Analyzed: 16-Feb-07										
C5-C8 Aliphatic Hydrocarbons	111		mg/l		140		79.3	70-130		
C9-C12 Aliphatic Hydrocarbons	63.5		mg/l		55.2		115	70-130		
C9-C10 Aromatic Hydrocarbons	34.5		mg/l		40.0		86.2	70-130		
Unadjusted C5-C8 Aliphatic Hydrocarbons	233		mg/l		280		83.2	70-130		
Unadjusted C9-C12 Aliphatic Hydrocarbons	98.0		mg/l		84.8		116	70-130		
Benzene	17.2		µg/l		20.0		86.0	70-130		
Ethylbenzene	16.9		µg/l		20.0		84.5	70-130		
Methyl tert-butyl ether	18.1		µg/l		20.0		90.5	70-130		
Naphthalene	19.3		µg/l		20.0		96.5	70-130		
Toluene	16.8		µg/l		20.0		84.0	70-130		
m,p-Xylene	34.8		µg/l		40.0		87.0	70-130		
o-Xylene	17.6		µg/l		20.0		88.0	70-130		
2-Methylpentane	19.7		µg/l		20.0		98.5	70-130		
n-Nonane	19.3		µg/l		20.0		96.5	70-130		
n-Pentane	17.9		µg/l		20.0		89.5	70-130		
1,2,4-Trimethylbenzene	19.4		µg/l		20.0		97.0	70-130		
2,2,4-Trimethylpentane	19.1		µg/l		20.0		95.5	70-130		
n-Butylcyclohexane	21.1		µg/l		20.0		106	70-130		
n-Decane	17.8		µg/l		20.0		89.0	70-130		
<i>Surrogate: 2,5-Dibromotoluene (FID)</i>	51.2		µg/l		50.0		102	70-130		
<i>Surrogate: 2,5-Dibromotoluene (PID)</i>	44.3		µg/l		50.0		88.6	70-130		
<u>LCS Dup (7020930-BSD1)</u>										
Prepared & Analyzed: 16-Feb-07										
C5-C8 Aliphatic Hydrocarbons	110		mg/l		140		78.6	70-130	0.887	25
C9-C12 Aliphatic Hydrocarbons	61.0		mg/l		55.2		111	70-130	3.54	25
C9-C10 Aromatic Hydrocarbons	32.0		mg/l		40.0		80.0	70-130	7.46	25
Unadjusted C5-C8 Aliphatic Hydrocarbons	226		mg/l		280		80.7	70-130	3.05	25
Unadjusted C9-C12 Aliphatic Hydrocarbons	93.0		mg/l		84.8		110	70-130	5.31	25
Benzene	16.4		µg/l		20.0		82.0	70-130	4.76	25

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7020930 - VPH - EPA 5030B										
<u>LCS Dup (7020930-BSD1)</u>										
Prepared & Analyzed: 16-Feb-07										
Ethylbenzene	16.1		µg/l		20.0		80.5	70-130	4.85	25
Methyl tert-butyl ether	17.6		µg/l		20.0		88.0	70-130	2.80	25
Naphthalene	18.3		µg/l		20.0		91.5	70-130	5.32	25
Toluene	16.1		µg/l		20.0		80.5	70-130	4.26	25
m,p-Xylene	32.4		µg/l		40.0		81.0	70-130	7.14	25
o-Xylene	16.8		µg/l		20.0		84.0	70-130	4.65	25
2-Methylpentane	17.5		µg/l		20.0		87.5	70-130	11.8	25
n-Nonane	18.7		µg/l		20.0		93.5	70-130	3.16	25
n-Pentane	15.5		µg/l		20.0		77.5	70-130	14.4	25
1,2,4-Trimethylbenzene	18.2		µg/l		20.0		91.0	70-130	6.38	25
2,2,4-Trimethylpentane	16.7		µg/l		20.0		83.5	70-130	13.4	25
n-Butylcyclohexane	20.9		µg/l		20.0		104	70-130	1.90	25
n-Decane	20.2		µg/l		20.0		101	70-130	12.6	25
Surrogate: 2,5-Dibromotoluene (FID)	51.3		µg/l		50.0		103	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	43.9		µg/l		50.0		87.8	70-130		
<u>Duplicate (7020930-DUP1)</u> Source: SA58189-04										
Prepared & Analyzed: 16-Feb-07										
C5-C8 Aliphatic Hydrocarbons	0.00859	J	mg/l	0.0750		0.00810			5.87	50
C9-C12 Aliphatic Hydrocarbons	BRL		mg/l	0.0250		BRL				50
C9-C10 Aromatic Hydrocarbons	BRL		mg/l	0.0250		BRL				50
Unadjusted C5-C8 Aliphatic Hydrocarbons	0.00859	J	mg/l	0.0750		0.00810			5.87	50
Unadjusted C9-C12 Aliphatic Hydrocarbons	BRL		mg/l	0.0250		BRL				50
Benzene	BRL		µg/l	5.0		BRL				50
Ethylbenzene	BRL		µg/l	5.0		BRL				50
Methyl tert-butyl ether	BRL		µg/l	5.0		BRL				50
Naphthalene	BRL		µg/l	5.0		BRL				50
Toluene	BRL		µg/l	5.0		BRL				50
m,p-Xylene	BRL		µg/l	10.0		BRL				50
o-Xylene	BRL		µg/l	5.0		BRL				50
Surrogate: 2,5-Dibromotoluene (FID)	54.5		µg/l		50.0		109	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	47.8		µg/l		50.0		95.6	70-130		
<u>Matrix Spike (7020930-MS1)</u> Source: SA58189-04										
Prepared & Analyzed: 16-Feb-07										
Benzene	17.3		µg/l		20.0	BRL	86.5	70-130		
Ethylbenzene	17.1		µg/l		20.0	BRL	85.5	70-130		
Methyl tert-butyl ether	18.8		µg/l		20.0	BRL	94.0	70-130		
Naphthalene	18.8		µg/l		20.0	BRL	94.0	70-130		
Toluene	17.0		µg/l		20.0	BRL	85.0	70-130		
m,p-Xylene	34.1		µg/l		40.0	BRL	85.2	70-130		
o-Xylene	17.6		µg/l		20.0	BRL	88.0	70-130		
2-Methylpentane	18.6		µg/l		20.0	BRL	93.0	70-130		
n-Nonane	16.3		µg/l		20.0	BRL	81.5	70-130		
n-Pentane	17.6		µg/l		20.0	BRL	88.0	70-130		
1,2,4-Trimethylbenzene	19.0		µg/l		20.0	BRL	95.0	70-130		
2,2,4-Trimethylpentane	18.9		µg/l		20.0	BRL	94.5	70-130		
n-Butylcyclohexane	16.1		µg/l		20.0	0.0	80.5	70-130		
n-Decane	15.5		µg/l		20.0	0.0	77.5	70-130		
Surrogate: 2,5-Dibromotoluene (FID)	64.8		µg/l		50.0		130	70-130		
Surrogate: 2,5-Dibromotoluene (PID)	58.6		µg/l		50.0		117	70-130		
Batch 7021084 - SW846 5030 Water MS										
<u>Blank (7021084-BLK1)</u>										

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021084 - SW846 5030 Water MS										
Prepared & Analyzed: 20-Feb-07										
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		µg/l	1.0						
Acetone	BRL		µg/l	10.0						
Acrylonitrile	BRL		µg/l	1.0						
Benzene	BRL		µg/l	1.0						
Bromobenzene	BRL		µg/l	1.0						
Bromochloromethane	BRL		µg/l	1.0						
Bromodichloromethane	BRL		µg/l	1.0						
Bromoform	BRL		µg/l	1.0						
Bromomethane	BRL		µg/l	2.0						
2-Butanone (MEK)	BRL		µg/l	10.0						
n-Butylbenzene	BRL		µg/l	1.0						
sec-Butylbenzene	BRL		µg/l	1.0						
tert-Butylbenzene	BRL		µg/l	1.0						
Carbon disulfide	BRL		µg/l	5.0						
Carbon tetrachloride	BRL		µg/l	1.0						
Chlorobenzene	BRL		µg/l	1.0						
Chloroethane	BRL		µg/l	2.0						
Chloroform	BRL		µg/l	1.0						
Chloromethane	BRL		µg/l	2.0						
2-Chlorotoluene	BRL		µg/l	1.0						
4-Chlorotoluene	BRL		µg/l	1.0						
1,2-Dibromo-3-chloropropane	BRL		µg/l	2.0						
Dibromochloromethane	BRL		µg/l	1.0						
1,2-Dibromoethane (EDB)	BRL		µg/l	1.0						
Dibromomethane	BRL		µg/l	1.0						
1,2-Dichlorobenzene	BRL		µg/l	1.0						
1,3-Dichlorobenzene	BRL		µg/l	1.0						
1,4-Dichlorobenzene	BRL		µg/l	1.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/l	2.0						
1,1-Dichloroethane	BRL		µg/l	1.0						
1,2-Dichloroethane	BRL		µg/l	1.0						
1,1-Dichloroethene	BRL		µg/l	1.0						
cis-1,2-Dichloroethene	BRL		µg/l	1.0						
trans-1,2-Dichloroethene	BRL		µg/l	1.0						
1,2-Dichloropropane	BRL		µg/l	1.0						
1,3-Dichloropropane	BRL		µg/l	1.0						
2,2-Dichloropropane	BRL		µg/l	1.0						
1,1-Dichloropropene	BRL		µg/l	1.0						
cis-1,3-Dichloropropene	BRL		µg/l	1.0						
trans-1,3-Dichloropropene	BRL		µg/l	1.0						
Ethylbenzene	BRL		µg/l	1.0						
Hexachlorobutadiene	BRL		µg/l	1.0						
2-Hexanone (MBK)	BRL		µg/l	10.0						
Isopropylbenzene	BRL		µg/l	1.0						
4-Isopropyltoluene	BRL		µg/l	1.0						
Methyl tert-butyl ether	BRL		µg/l	1.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/l	10.0						
Methylene chloride	BRL		µg/l	10.0						
Naphthalene	BRL		µg/l	1.0						
n-Propylbenzene	BRL		µg/l	1.0						
Styrene	BRL		µg/l	1.0						
1,1,1,2-Tetrachloroethane	BRL		µg/l	1.0						
1,1,1,2,2-Tetrachloroethane	BRL		µg/l	1.0						
Tetrachloroethene	BRL		µg/l	1.0						
Toluene	BRL		µg/l	1.0						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021084 - SW846 5030 Water MS										
Blank (7021084-BLK1)										
Prepared & Analyzed: 20-Feb-07										
1,2,3-Trichlorobenzene	BRL		µg/l	1.0						
1,2,4-Trichlorobenzene	BRL		µg/l	1.0						
1,1,1-Trichloroethane	BRL		µg/l	1.0						
1,1,2-Trichloroethane	BRL		µg/l	1.0						
Trichloroethene	BRL		µg/l	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/l	1.0						
1,2,3-Trichloropropane	BRL		µg/l	1.0						
1,2,4-Trimethylbenzene	BRL		µg/l	1.0						
1,3,5-Trimethylbenzene	BRL		µg/l	1.0						
Vinyl chloride	BRL		µg/l	1.0						
m,p-Xylene	BRL		µg/l	2.0						
o-Xylene	BRL		µg/l	1.0						
Tetrahydrofuran	BRL		µg/l	10.0						
Ethyl ether	BRL		µg/l	1.0						
Tert-amyl methyl ether	BRL		µg/l	1.0						
Ethyl tert-butyl ether	BRL		µg/l	1.0						
Di-isopropyl ether	BRL		µg/l	1.0						
Tert-Butanol / butyl alcohol	BRL		µg/l	10.0						
1,4-Dioxane	BRL		µg/l	20.0						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>50.4</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>49.8</i>		<i>µg/l</i>		<i>50.0</i>		<i>100</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>45.2</i>		<i>µg/l</i>		<i>50.0</i>		<i>90</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>52.4</i>		<i>µg/l</i>		<i>50.0</i>		<i>105</i>	<i>70-130</i>		
LCS (7021084-BS1)										
Prepared & Analyzed: 20-Feb-07										
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.5		µg/l		20.0		92	70-130		
Acetone	15.3		µg/l		20.0		76	32.4-154		
Acrylonitrile	17.4		µg/l		20.0		87	70-130		
Benzene	20.6		µg/l		20.0		103	70-130		
Bromobenzene	24.4		µg/l		20.0		122	70-130		
Bromochloromethane	22.0		µg/l		20.0		110	70-130		
Bromodichloromethane	19.2		µg/l		20.0		96	70-130		
Bromoform	23.0		µg/l		20.0		115	70-130		
Bromomethane	18.7		µg/l		20.0		94	57.6-150		
2-Butanone (MEK)	14.4		µg/l		20.0		72	46.5-137		
n-Butylbenzene	16.6		µg/l		20.0		83	70-130		
sec-Butylbenzene	19.4		µg/l		20.0		97	70-130		
tert-Butylbenzene	20.6		µg/l		20.0		103	70-130		
Carbon disulfide	18.0		µg/l		20.0		90	70-130		
Carbon tetrachloride	17.0		µg/l		20.0		85	70-130		
Chlorobenzene	23.7		µg/l		20.0		118	70-130		
Chloroethane	18.9		µg/l		20.0		94	57.6-143		
Chloroform	19.6		µg/l		20.0		98	70-130		
Chloromethane	23.4		µg/l		20.0		117	70-130		
2-Chlorotoluene	23.3		µg/l		20.0		116	70-130		
4-Chlorotoluene	22.4		µg/l		20.0		112	70-130		
1,2-Dibromo-3-chloropropane	16.4		µg/l		20.0		82	70-130		
Dibromochloromethane	19.9		µg/l		20.0		100	62.5-139		
1,2-Dibromoethane (EDB)	20.3		µg/l		20.0		102	70-130		
Dibromomethane	19.7		µg/l		20.0		98	70-130		
1,2-Dichlorobenzene	22.8		µg/l		20.0		114	70-130		
1,3-Dichlorobenzene	23.6		µg/l		20.0		118	70-130		
1,4-Dichlorobenzene	21.3		µg/l		20.0		106	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021084 - SW846 5030 Water MS										
<u>LCS (7021084-BS1)</u>										
Prepared & Analyzed: 20-Feb-07										
Dichlorodifluoromethane (Freon12)	20.0		µg/l		20.0		100	34.6-198		
1,1-Dichloroethane	19.3		µg/l		20.0		96	70-130		
1,2-Dichloroethane	18.7		µg/l		20.0		94	70-130		
1,1-Dichloroethene	19.2		µg/l		20.0		96	70-130		
cis-1,2-Dichloroethene	21.9		µg/l		20.0		110	70-130		
trans-1,2-Dichloroethene	20.2		µg/l		20.0		101	70-130		
1,2-Dichloropropane	19.0		µg/l		20.0		95	70-130		
1,3-Dichloropropane	19.5		µg/l		20.0		98	70-130		
2,2-Dichloropropane	15.7		µg/l		20.0		78	70-130		
1,1-Dichloropropene	17.8		µg/l		20.0		89	70-130		
cis-1,3-Dichloropropene	20.6		µg/l		20.0		103	70-130		
trans-1,3-Dichloropropene	16.9		µg/l		20.0		84	70-130		
Ethylbenzene	22.1		µg/l		20.0		110	70-130		
Hexachlorobutadiene	19.5		µg/l		20.0		98	63.4-142		
2-Hexanone (MBK)	14.4		µg/l		20.0		72	70-130		
Isopropylbenzene	21.0		µg/l		20.0		105	70-130		
4-Isopropyltoluene	19.6		µg/l		20.0		98	70-130		
Methyl tert-butyl ether	18.7		µg/l		20.0		94	70-130		
4-Methyl-2-pentanone (MIBK)	15.6		µg/l		20.0		78	51-135		
Methylene chloride	18.7		µg/l		20.0		94	70-130		
Naphthalene	20.0		µg/l		20.0		100	70-130		
n-Propylbenzene	20.1		µg/l		20.0		100	70-130		
Styrene	22.6		µg/l		20.0		113	70-130		
1,1,1,2-Tetrachloroethane	24.1		µg/l		20.0		120	70-130		
1,1,2,2-Tetrachloroethane	21.9		µg/l		20.0		110	70-130		
Tetrachloroethene	20.4		µg/l		20.0		102	70-130		
Toluene	20.2		µg/l		20.0		101	70-130		
1,2,3-Trichlorobenzene	22.7		µg/l		20.0		114	70-130		
1,2,4-Trichlorobenzene	21.3		µg/l		20.0		106	70-130		
1,1,1-Trichloroethane	18.3		µg/l		20.0		92	70-130		
1,1,2-Trichloroethane	20.8		µg/l		20.0		104	70-130		
Trichloroethene	20.6		µg/l		20.0		103	70-130		
Trichlorofluoromethane (Freon 11)	17.0		µg/l		20.0		85	63.2-153		
1,2,3-Trichloropropane	22.8		µg/l		20.0		114	70-130		
1,2,4-Trimethylbenzene	22.0		µg/l		20.0		110	70-130		
1,3,5-Trimethylbenzene	21.4		µg/l		20.0		107	70-130		
Vinyl chloride	23.2		µg/l		20.0		116	70-130		
m,p-Xylene	45.8		µg/l		40.0		114	70-130		
o-Xylene	24.4		µg/l		20.0		122	70-130		
Tetrahydrofuran	15.5		µg/l		20.0		78	70-130		
Ethyl ether	19.5		µg/l		20.0		98	57.2-135		
Tert-amyl methyl ether	16.1		µg/l		20.0		80	70-130		
Ethyl tert-butyl ether	18.9		µg/l		20.0		94	70-130		
Di-isopropyl ether	16.7		µg/l		20.0		84	70-130		
Tert-Butanol / butyl alcohol	160		µg/l		200		80	70-130		
1,4-Dioxane	168		µg/l		200		84	41.5-136		
Surrogate: 4-Bromofluorobenzene	52.1		µg/l		50.0		104	70-130		
Surrogate: Toluene-d8	49.7		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	43.3		µg/l		50.0		87	70-130		
Surrogate: Dibromofluoromethane	50.8		µg/l		50.0		102	70-130		
<u>LCS Dup (7021084-BSD1)</u>										
Prepared & Analyzed: 20-Feb-07										
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.0		µg/l		20.0		85	70-130	8	25

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021084 - SW846 5030 Water MS										
<u>LCS Dup (7021084-BSD1)</u>										
Prepared & Analyzed: 20-Feb-07										
Acetone	15.1		µg/l		20.0		76	32.4-154	0	50
Acrylonitrile	17.3		µg/l		20.0		86	70-130	1	25
Benzene	19.5		µg/l		20.0		98	70-130	5	25
Bromobenzene	23.4		µg/l		20.0		117	70-130	4	25
Bromochloromethane	21.3		µg/l		20.0		106	70-130	4	25
Bromodichloromethane	19.3		µg/l		20.0		96	70-130	0	25
Bromoform	22.4		µg/l		20.0		112	70-130	3	25
Bromomethane	17.9		µg/l		20.0		90	57.6-150	4	50
2-Butanone (MEK)	14.1		µg/l		20.0		70	46.5-137	3	50
n-Butylbenzene	15.4		µg/l		20.0		77	70-130	8	25
sec-Butylbenzene	18.1		µg/l		20.0		90	70-130	7	25
tert-Butylbenzene	19.2		µg/l		20.0		96	70-130	7	25
Carbon disulfide	16.3		µg/l		20.0		82	70-130	9	25
Carbon tetrachloride	16.0		µg/l		20.0		80	70-130	6	25
Chlorobenzene	22.5		µg/l		20.0		112	70-130	5	25
Chloroethane	18.3		µg/l		20.0		92	57.6-143	2	50
Chloroform	18.9		µg/l		20.0		94	70-130	4	25
Chloromethane	21.5		µg/l		20.0		108	70-130	8	25
2-Chlorotoluene	21.8		µg/l		20.0		109	70-130	6	25
4-Chlorotoluene	21.5		µg/l		20.0		108	70-130	4	25
1,2-Dibromo-3-chloropropane	16.5		µg/l		20.0		82	70-130	0	25
Dibromochloromethane	19.8		µg/l		20.0		99	62.5-139	1	50
1,2-Dibromoethane (EDB)	20.0		µg/l		20.0		100	70-130	2	25
Dibromomethane	19.1		µg/l		20.0		96	70-130	2	25
1,2-Dichlorobenzene	21.5		µg/l		20.0		108	70-130	5	25
1,3-Dichlorobenzene	23.0		µg/l		20.0		115	70-130	3	25
1,4-Dichlorobenzene	20.5		µg/l		20.0		102	70-130	4	25
Dichlorodifluoromethane (Freon12)	18.0		µg/l		20.0		90	34.6-198	11	50
1,1-Dichloroethane	18.0		µg/l		20.0		90	70-130	6	25
1,2-Dichloroethane	18.3		µg/l		20.0		92	70-130	2	25
1,1-Dichloroethene	18.0		µg/l		20.0		90	70-130	6	25
cis-1,2-Dichloroethene	20.6		µg/l		20.0		103	70-130	7	25
trans-1,2-Dichloroethene	18.6		µg/l		20.0		93	70-130	8	25
1,2-Dichloropropane	18.6		µg/l		20.0		93	70-130	2	25
1,3-Dichloropropane	19.3		µg/l		20.0		96	70-130	2	25
2,2-Dichloropropane	14.3		µg/l		20.0		72	70-130	8	25
1,1-Dichloropropene	16.7		µg/l		20.0		84	70-130	6	25
cis-1,3-Dichloropropene	19.9		µg/l		20.0		100	70-130	3	25
trans-1,3-Dichloropropene	17.1		µg/l		20.0		86	70-130	2	25
Ethylbenzene	20.6		µg/l		20.0		103	70-130	7	25
Hexachlorobutadiene	18.0		µg/l		20.0		90	63.4-142	9	50
2-Hexanone (MBK)	14.3		µg/l		20.0		72	70-130	0	25
Isopropylbenzene	19.6		µg/l		20.0		98	70-130	7	25
4-Isopropyltoluene	18.3		µg/l		20.0		92	70-130	6	25
Methyl tert-butyl ether	18.2		µg/l		20.0		91	70-130	3	25
4-Methyl-2-pentanone (MIBK)	15.9		µg/l		20.0		80	51-135	3	50
Methylene chloride	18.2		µg/l		20.0		91	70-130	3	25
Naphthalene	19.3		µg/l		20.0		96	70-130	4	25
n-Propylbenzene	18.7		µg/l		20.0		94	70-130	6	25
Styrene	21.5		µg/l		20.0		108	70-130	5	25
1,1,1,2-Tetrachloroethane	22.7		µg/l		20.0		114	70-130	5	25
1,1,1,2,2-Tetrachloroethane	21.2		µg/l		20.0		106	70-130	4	25
Tetrachloroethene	19.1		µg/l		20.0		96	70-130	6	25

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021084 - SW846 5030 Water MS										
<u>LCS Dup (7021084-BSD1)</u>										
Prepared & Analyzed: 20-Feb-07										
Toluene	19.0		µg/l		20.0		95	70-130	6	25
1,2,3-Trichlorobenzene	20.9		µg/l		20.0		104	70-130	9	25
1,2,4-Trichlorobenzene	20.2		µg/l		20.0		101	70-130	5	25
1,1,1-Trichloroethane	16.7		µg/l		20.0		84	70-130	9	25
1,1,2-Trichloroethane	19.9		µg/l		20.0		100	70-130	4	25
Trichloroethene	19.0		µg/l		20.0		95	70-130	8	25
Trichlorofluoromethane (Freon 11)	15.8		µg/l		20.0		79	63.2-153	7	50
1,2,3-Trichloropropane	23.0		µg/l		20.0		115	70-130	0.9	25
1,2,4-Trimethylbenzene	20.9		µg/l		20.0		104	70-130	6	25
1,3,5-Trimethylbenzene	20.2		µg/l		20.0		101	70-130	6	25
Vinyl chloride	21.3		µg/l		20.0		106	70-130	9	25
m,p-Xylene	43.7		µg/l		40.0		109	70-130	4	25
o-Xylene	23.1		µg/l		20.0		116	70-130	5	25
Tetrahydrofuran	15.6		µg/l		20.0		78	70-130	0	25
Ethyl ether	18.9		µg/l		20.0		94	57.2-135	4	50
Tert-amyl methyl ether	15.8		µg/l		20.0		79	70-130	1	25
Ethyl tert-butyl ether	18.4		µg/l		20.0		92	70-130	2	25
Di-isopropyl ether	16.2		µg/l		20.0		81	70-130	4	25
Tert-Butanol / butyl alcohol	165		µg/l		200		82	70-130	2	25
1,4-Dioxane	150		µg/l		200		75	41.5-136	11	25
Surrogate: 4-Bromofluorobenzene	52.4		µg/l		50.0		105	70-130		
Surrogate: Toluene-d8	49.2		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	42.9		µg/l		50.0		86	70-130		
Surrogate: Dibromofluoromethane	50.2		µg/l		50.0		100	70-130		
<u>Matrix Spike (7021084-MS1)</u> Source: SA58154-01										
Prepared: 20-Feb-07 Analyzed: 21-Feb-07										
Benzene	18.2		µg/l		20.0	BRL	91	70-130		
Chlorobenzene	22.6		µg/l		20.0	BRL	113	70-130		
1,1-Dichloroethene	21.2		µg/l		20.0	BRL	106	70-130		
Toluene	19.2		µg/l		20.0	BRL	96	70-130		
Trichloroethene	19.7		µg/l		20.0	BRL	98	70-130		
Surrogate: 4-Bromofluorobenzene	49.3		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	49.2		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	44.4		µg/l		50.0		89	70-130		
Surrogate: Dibromofluoromethane	50.5		µg/l		50.0		101	70-130		
<u>Matrix Spike Dup (7021084-MSD1)</u> Source: SA58154-01										
Prepared: 20-Feb-07 Analyzed: 21-Feb-07										
Benzene	18.4		µg/l		20.0	BRL	92	70-130	1	30
Chlorobenzene	22.9		µg/l		20.0	BRL	114	70-130	0.9	30
1,1-Dichloroethene	21.9		µg/l		20.0	BRL	110	70-130	4	30
Toluene	19.4		µg/l		20.0	BRL	97	70-130	1	30
Trichloroethene	20.1		µg/l		20.0	BRL	100	70-130	2	30
Surrogate: 4-Bromofluorobenzene	49.1		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8	49.8		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	44.5		µg/l		50.0		89	70-130		
Surrogate: Dibromofluoromethane	51.1		µg/l		50.0		102	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 7020840 - SW846 3510C									
Blank (7020840-BLK1)									
Prepared: 15-Feb-07 Analyzed: 20-Feb-07									
C9-C18 Aliphatic Hydrocarbons	BRL		mg/l	0.2					
C19-C36 Aliphatic Hydrocarbons	BRL		mg/l	0.2					
C11-C22 Aromatic Hydrocarbons	BRL		mg/l	0.2					
Unadjusted C11-C22 Aromatic Hydrocarbon	BRL		mg/l	0.2					
Naphthalene	BRL		µg/l	2.75					
2-Methylnaphthalene	BRL		µg/l	2.75					
Acenaphthylene	BRL		µg/l	2.75					
Acenaphthene	BRL		µg/l	2.75					
Fluorene	BRL		µg/l	2.75					
Phenanthrene	BRL		µg/l	2.75					
Anthracene	BRL		µg/l	2.75					
Fluoranthene	BRL		µg/l	2.75					
Pyrene	BRL		µg/l	2.75					
Benzo (a) anthracene	BRL		µg/l	2.75					
Chrysene	BRL		µg/l	2.75					
Benzo (b) fluoranthene	BRL		µg/l	2.75					
Benzo (k) fluoranthene	BRL		µg/l	2.75					
Benzo (a) pyrene	BRL		µg/l	2.75					
Indeno (1,2,3-cd) pyrene	BRL		µg/l	2.75					
Dibenzo (a,h) anthracene	BRL		µg/l	2.75					
Benzo (g,h,i) perylene	BRL		µg/l	2.75					
n-Hexadecane	0.00		µg/l						
n-Tetradecane	0.00		µg/l						
n-Eicosane	0.00		µg/l						
n-Nonadecane	0.00		µg/l						
n-Octacosane	0.00		µg/l						
Naphthalene (aliphatic fraction)	0.00		µg/l						
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l						
Surrogate: 1-Chlorooctadecane	30.7		µg/l		54.9		55.9	40-140	
Surrogate: Ortho-Terphenyl	42.7		µg/l		54.9		77.8	40-140	
Surrogate: 2-Bromonaphthalene	29.0		µg/l		44.0		65.9	40-140	
Surrogate: 2-Fluorobiphenyl	34.2		µg/l		44.0		77.7	40-140	
LCS (7020840-BS1)									
Prepared: 15-Feb-07 Analyzed: 20-Feb-07									
C9-C18 Aliphatic Hydrocarbons	0.278		mg/l	0.2	0.645		43.1	40-140	
C19-C36 Aliphatic Hydrocarbons	0.587		mg/l	0.2	0.860		68.3	40-140	
C11-C22 Aromatic Hydrocarbons	1.47		mg/l	0.2	1.83		80.3	40-140	
Naphthalene	47.1		µg/l	2.69	108		43.6	40-140	
2-Methylnaphthalene	52.3		µg/l	2.69	108		48.4	40-140	
Acenaphthylene	59.8		µg/l	2.69	108		55.4	40-140	
Acenaphthene	58.7		µg/l	2.69	108		54.4	40-140	
Fluorene	64.6		µg/l	2.69	108		59.8	40-140	
Phenanthrene	76.1		µg/l	2.69	108		70.5	40-140	
Anthracene	77.2		µg/l	2.69	108		71.5	40-140	
Fluoranthene	85.3		µg/l	2.69	108		79.0	40-140	
Pyrene	86.3		µg/l	2.69	108		79.9	40-140	
Benzo (a) anthracene	89.9		µg/l	2.69	108		83.2	40-140	
Chrysene	91.1		µg/l	2.69	108		84.4	40-140	
Benzo (b) fluoranthene	91.2		µg/l	2.69	108		84.4	40-140	
Benzo (k) fluoranthene	99.3		µg/l	2.69	108		91.9	40-140	
Benzo (a) pyrene	95.6		µg/l	2.69	108		88.5	40-140	
Indeno (1,2,3-cd) pyrene	107		µg/l	2.69	108		99.1	40-140	
Dibenzo (a,h) anthracene	106		µg/l	2.69	108		98.1	40-140	

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* Reportable Detection Limit

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Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 7020840 - SW846 3510C									
<u>LCS (7020840-BS1)</u>									
Prepared: 15-Feb-07 Analyzed: 20-Feb-07									
Benzo (g,h,i) perylene	108		µg/l	2.69	108		100 40-140		
Naphthalene (aliphatic fraction)	0.00		µg/l		108		0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l		108		0-200		
Surrogate: 1-Chlorooctadecane	29.3		µg/l		53.8		54.5 40-140		
Surrogate: Ortho-Terphenyl	41.1		µg/l		53.8		76.4 40-140		
Surrogate: 2-Bromonaphthalene	27.9		µg/l		43.0		64.9 40-140		
Surrogate: 2-Fluorobiphenyl	34.2		µg/l		43.0		79.5 40-140		
Naphthalene Breakthrough	0.00		%				0-5		
2-Methylnaphthalene Breakthrough	0.00		%				0-5		
<u>LCS (7020840-BS2)</u>									
Prepared: 15-Feb-07 Analyzed: 20-Feb-07									
C9-C18 Aliphatic Hydrocarbons	0.304		mg/l	0.2	0.600		50.7 40-140		
C19-C36 Aliphatic Hydrocarbons	0.648		mg/l	0.2	0.800		81.0 40-140		
C11-C22 Aromatic Hydrocarbons	1.53		mg/l	0.2	1.70		90.0 40-140		
Naphthalene	50.3		µg/l	2.50	100		50.3 40-140		
2-Methylnaphthalene	52.7		µg/l	2.50	100		52.7 40-140		
Acenaphthylene	60.9		µg/l	2.50	100		60.9 40-140		
Acenaphthene	60.9		µg/l	2.50	100		60.9 40-140		
Fluorene	64.9		µg/l	2.50	100		64.9 40-140		
Phenanthrene	76.6		µg/l	2.50	100		76.6 40-140		
Anthracene	78.2		µg/l	2.50	100		78.2 40-140		
Fluoranthene	85.0		µg/l	2.50	100		85.0 40-140		
Pyrene	88.4		µg/l	2.50	100		88.4 40-140		
Benzo (a) anthracene	88.8		µg/l	2.50	100		88.8 40-140		
Chrysene	91.6		µg/l	2.50	100		91.6 40-140		
Benzo (b) fluoranthene	98.6		µg/l	2.50	100		98.6 40-140		
Benzo (k) fluoranthene	100		µg/l	2.50	100		100 40-140		
Benzo (a) pyrene	101		µg/l	2.50	100		101 40-140		
Indeno (1,2,3-cd) pyrene	111		µg/l	2.50	100		111 40-140		
Dibenzo (a,h) anthracene	105		µg/l	2.50	100		105 40-140		
Benzo (g,h,i) perylene	113		µg/l	2.50	100		113 40-140		
Naphthalene (aliphatic fraction)	0.00		µg/l		100		0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l		100		0-200		
Surrogate: 1-Chlorooctadecane	30.6		µg/l		50.0		61.2 40-140		
Surrogate: Ortho-Terphenyl	39.8		µg/l		50.0		79.6 40-140		
Surrogate: 2-Bromonaphthalene	27.0		µg/l		40.0		67.5 40-140		
Surrogate: 2-Fluorobiphenyl	26.9		µg/l		40.0		67.2 40-140		
Naphthalene Breakthrough	0.00		%				0-5		
2-Methylnaphthalene Breakthrough	0.00		%				0-5		
<u>LCS Dup (7020840-BSD1)</u>									
Prepared: 15-Feb-07 Analyzed: 20-Feb-07									
C9-C18 Aliphatic Hydrocarbons	0.283		mg/l	0.2	0.645		43.9 40-140	1.84	25
C19-C36 Aliphatic Hydrocarbons	0.612		mg/l	0.2	0.860		71.2 40-140	4.16	25
C11-C22 Aromatic Hydrocarbons	1.42		mg/l	0.2	1.83		77.6 40-140	3.42	25
Naphthalene	43.4		µg/l	2.69	108		40.2 40-140	8.11	20
2-Methylnaphthalene	47.4		µg/l	2.69	108		43.9 40-140	9.75	20
Acenaphthylene	54.6		µg/l	2.69	108		50.6 40-140	9.06	20
Acenaphthene	55.3		µg/l	2.69	108		51.2 40-140	6.06	20
Fluorene	61.4		µg/l	2.69	108		56.9 40-140	4.97	20
Phenanthrene	72.7		µg/l	2.69	108		67.3 40-140	4.64	20
Anthracene	73.9		µg/l	2.69	108		68.4 40-140	4.43	20
Fluoranthene	82.1		µg/l	2.69	108		76.0 40-140	3.87	20
Pyrene	82.1		µg/l	2.69	108		76.0 40-140	5.00	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7020840 - SW846 3510C										
<u>LCS Dup (7020840-BSD1)</u>										
Prepared: 15-Feb-07 Analyzed: 20-Feb-07										
Benzo (a) anthracene	87.4		µg/l	2.69	108		80.9	40-140	2.80	20
Chrysene	89.6		µg/l	2.69	108		83.0	40-140	1.67	20
Benzo (b) fluoranthene	91.6		µg/l	2.69	108		84.8	40-140	0.473	20
Benzo (k) fluoranthene	99.0		µg/l	2.69	108		91.7	40-140	0.218	20
Benzo (a) pyrene	95.3		µg/l	2.69	108		88.2	40-140	0.340	20
Indeno (1,2,3-cd) pyrene	110		µg/l	2.69	108		102	40-140	2.88	20
Dibenzo (a,h) anthracene	106		µg/l	2.69	108		98.1	40-140	0.00	20
Benzo (g,h,i) perylene	106		µg/l	2.69	108		98.1	40-140	1.92	20
Naphthalene (aliphatic fraction)	0.00		µg/l		108			0-200		200
2-Methylnaphthalene (aliphatic fraction)	0.00		µg/l		108			0-200		200
Surrogate: 1-Chlorooctadecane	30.8		µg/l		53.8		57.2	40-140		
Surrogate: Ortho-Terphenyl	39.7		µg/l		53.8		73.8	40-140		
Surrogate: 2-Bromonaphthalene	24.1		µg/l		43.0		56.0	40-140		
Surrogate: 2-Fluorobiphenyl	31.3		µg/l		43.0		72.8	40-140		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 7021187 - SW846 3005A									
Blank (7021187-BLK1)									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Selenium	BRL		mg/l	0.0150					
Lead	BRL		mg/l	0.0075					
Arsenic	BRL		mg/l	0.0040					
Chromium	BRL		mg/l	0.0050					
Cadmium	BRL		mg/l	0.0025					
Barium	BRL		mg/l	0.0050					
Silver	BRL		mg/l	0.0050					
LCS (7021187-BS1)									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Selenium	0.475		mg/l	0.0150	0.500		95.0 85-115		
Lead	0.481		mg/l	0.0075	0.500		96.2 85-115		
Silver	0.480		mg/l	0.0050	0.500		96.0 85-115		
Barium	0.506		mg/l	0.0050	0.500		101 85-115		
Chromium	0.501		mg/l	0.0050	0.500		100 85-115		
Cadmium	0.506		mg/l	0.0025	0.500		101 85-115		
Arsenic	0.475		mg/l	0.0040	0.500		95.0 85-115		
LCS Dup (7021187-BSD1)									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Selenium	0.475		mg/l	0.0150	0.500		95.0 85-115	0.00	20
Lead	0.482		mg/l	0.0075	0.500		96.4 85-115	0.208	20
Cadmium	0.504		mg/l	0.0025	0.500		101 85-115	0.396	20
Barium	0.504		mg/l	0.0050	0.500		101 85-115	0.396	20
Arsenic	0.474		mg/l	0.0040	0.500		94.8 85-115	0.211	20
Silver	0.482		mg/l	0.0050	0.500		96.4 85-115	0.416	20
Chromium	0.495		mg/l	0.0050	0.500		99.0 85-115	1.20	20
Duplicate (7021187-DUP1) Source: SA58154-01									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Lead	BRL		mg/l	0.0075		BRL			20
Selenium	BRL		mg/l	0.0150		BRL			20
Chromium	0.0155		mg/l	0.0050		0.0163		5.03	20
Silver	0.0016	J,QR1	mg/l	0.0050		0.0010		46.2	20
Arsenic	BRL		mg/l	0.0040		BRL			20
Barium	0.0339		mg/l	0.0050		0.0344		1.46	20
Cadmium	BRL		mg/l	0.0025		0.0002			20
Matrix Spike (7021187-MS1) Source: SA58280-13									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Lead	0.448		mg/l	0.0075	0.500	BRL	89.6 75-125		
Selenium	0.482		mg/l	0.0150	0.500	BRL	96.4 75-125		
Chromium	0.477		mg/l	0.0050	0.500	BRL	95.4 75-125		
Cadmium	0.481		mg/l	0.0025	0.500	0.0006	96.1 75-125		
Barium	0.642		mg/l	0.0050	0.500	0.149	98.6 75-125		
Arsenic	0.478		mg/l	0.0040	0.500	BRL	95.6 75-125		
Silver	0.483		mg/l	0.0050	0.500	0.0010	96.4 75-125		
Matrix Spike Dup (7021187-MSD1) Source: SA58280-13									
Prepared: 22-Feb-07 Analyzed: 23-Feb-07									
Lead	0.457		mg/l	0.0075	0.500	BRL	91.4 75-125	1.99	20
Selenium	0.486		mg/l	0.0150	0.500	BRL	97.2 75-125	0.826	20
Barium	0.654		mg/l	0.0050	0.500	0.149	101 75-125	1.85	20
Cadmium	0.492		mg/l	0.0025	0.500	0.0006	98.3 75-125	2.26	20
Chromium	0.490		mg/l	0.0050	0.500	BRL	98.0 75-125	2.69	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021187 - SW846 3005A										
Matrix Spike Dup (7021187-MSD1) Source: SA58280-13										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Arsenic	0.490		mg/l	0.0040	0.500	BRL	98.0	75-125	2.48	20
Silver	0.495		mg/l	0.0050	0.500	0.0010	98.8	75-125	2.45	20
Post Spike (7021187-PS1) Source: SA58280-13										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Selenium	0.478		mg/l	0.0150	0.500	BRL	95.6	80-120		
Lead	0.450		mg/l	0.0075	0.500	BRL	90.0	80-120		
Arsenic	0.482		mg/l	0.0040	0.500	BRL	96.4	80-120		
Cadmium	0.484		mg/l	0.0025	0.500	0.0006	96.7	80-120		
Chromium	0.481		mg/l	0.0050	0.500	BRL	96.2	80-120		
Silver	0.457		mg/l	0.0050	0.500	0.0010	91.2	80-120		
Barium	0.647		mg/l	0.0050	0.500	0.149	99.6	80-120		

Total Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 7021189 - EPA200/SW7000 Series										
Blank (7021189-BLK1)										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	BRL		mg/l	0.00020						
LCS (7021189-BS1)										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	0.00227		mg/l	0.00020	0.00250		90.8	85-115		
Duplicate (7021189-DUP1) Source: SA58154-01										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	0.00004	J	mg/l	0.00020		BRL				20
Matrix Spike (7021189-MS1) Source: SA58280-08										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	0.00212		mg/l	0.00020	0.00250	BRL	84.8	75-125		
Matrix Spike Dup (7021189-MSD1) Source: SA58280-08										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	0.00214		mg/l	0.00020	0.00250	BRL	85.6	75-125	0.939	20
Post Spike (7021189-PS1) Source: SA58280-08										
Prepared: 22-Feb-07 Analyzed: 23-Feb-07										
Mercury	0.00215		mg/l	0.00020	0.00250	BRL	86.0	85-115		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte	Average RF	CCRF	% D	Limit
Batch 0702135				
Calibration Check (0702135-CCV1)				
C9-C18 Aliphatic Hydrocarbons	2.34448E+11	1.43518E+08	-16.7	25.00
C19-C36 Aliphatic Hydrocarbons	1.45867E+11	1.09335E+08	-4.12	25.00
C11-C22 Aromatic Hydrocarbons	20189.4	15.8676	1.74	25.00
Naphthalene	6.31085	5.91125	-6.33	20.00
2-Methylnaphthalene	4.09959	3.90549	-4.73	20.00
Acenaphthylene	6.55725	6.42817	-1.97	20.00
Acenaphthene	4.27105	4.06427	-4.84	20.00
Fluorene	4.73311	4.64077	-1.95	20.00
Phenanthrene	5.87466	6.2765	6.84	20.00
Anthracene	6.16391	6.60018	7.08	20.00
Fluoranthene	6.12441	7.19791	17.5	20.00
Pyrene	6.22571	7.38615	18.6	20.00
Benzo (a) anthracene	4.5397	5.76306	18.0	20.00
Chrysene	4.98321	5.78196	16.0	20.00
Benzo (b) fluoranthene	3.56379	4.32721	13.0	20.00
Benzo (k) fluoranthene	4.42138	5.20687	17.8	20.00
Benzo (a) pyrene	3.48472	4.38003	16.0	20.00
Indeno (1,2,3-cd) pyrene	3.42776	4.82317	15.0	20.00
Dibenzo (a,h) anthracene	2.87158	4.00635	14.0	20.00
Benzo (g,h,i) perylene	2.96997	4.00069	12.0	20.00

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* Reportable Detection Limit BRL = Below Reporting Limit

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte	Average RF	CCRF	% D	Limit
Batch 0702166				
Calibration Check (0702166-CCV1)				
C9-C18 Aliphatic Hydrocarbons	2.87033E+11	2.05153E+08	-1.67	25.00
C19-C36 Aliphatic Hydrocarbons	2.0296E+11	1.6536E+08	6.47	25.00
C11-C22 Aromatic Hydrocarbons	17675	17.1813	8.72	25.00
Naphthalene	9.05982	8.80787	-2.78	20.00
2-Methylnaphthalene	5.26133	5.0185	-4.62	20.00
Acenaphthylene	8.29995	7.96812	-4.00	20.00
Acenaphthene	5.12088	4.88544	-4.60	20.00
Fluorene	5.35028	5.25058	-1.86	20.00
Phenanthrene	5.94394	6.15694	3.58	20.00
Anthracene	6.70815	6.51202	-2.92	20.00
Fluoranthene	5.84484	6.17557	5.66	20.00
Pyrene	5.999	6.34362	5.74	20.00
Benzo (a) anthracene	4.37319	5.09376	16.5	20.00
Chrysene	4.91077	5.36509	9.25	20.00
Benzo (b) fluoranthene	2.92005	3.63908	11.0	20.00
Benzo (k) fluoranthene	5.44427	5.93279	8.97	20.00
Benzo (a) pyrene	3.86196	4.45851	15.4	20.00
Indeno (1,2,3-cd) pyrene	4.49749	5.06311	12.6	20.00
Dibenzo (a,h) anthracene	3.79797	4.47082	17.7	20.00
Benzo (g,h,i) perylene	4.24407	4.34542	2.39	20.00

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* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

FP	Field Preserved
PH	Insufficient preservative to reduce the sample pH to less than 2.
QR1	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

MADEP MCP ANALYTICAL METHOD REPORT CERTIFICATION FORM

MADEP RTN ¹ :						
This form provides certifications for the following Spectrum Analytical, Inc. work order #: SA58154						
Matrix	<input type="checkbox"/> Groundwater		<input type="checkbox"/> Soil/Sediment		<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Other
MCP SW-846 Methods Used	<input type="checkbox"/> 8260B	<input type="checkbox"/> 8151A	<input type="checkbox"/> 8330	<input type="checkbox"/> 6010B	<input type="checkbox"/> 7470A/1A	
	<input type="checkbox"/> 8270C	<input type="checkbox"/> 8081A	<input type="checkbox"/> VPH	<input type="checkbox"/> 6020	<input type="checkbox"/> 9014M ²	
	<input type="checkbox"/> 8082	<input type="checkbox"/> 8021B	<input type="checkbox"/> EPH	<input type="checkbox"/> 7000S ³	<input type="checkbox"/> 7196A	
<p>1 List Release Tracking Number (RTN), if known 2 M - SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method 3 S - SW-846 Methods 7000 Series List individual method and analyte</p>						
<i>An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status</i>						
A	Were all samples received by the laboratory in a condition consistent with that described on the Chain of Custody documentation for the data set?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
D	<i>VPH and EPH methods only:</i> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective methods)?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>A response to questions E and F below is required for "Presumptive Certainty" status</i>						
E	Were all analytical QC performance standards and recommendations for the specified methods achieved?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?				<input type="checkbox"/> Yes <input type="checkbox"/> No	
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>						
<p>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</p> <div style="text-align: right; margin-top: 20px;">  Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 2/26/2007 </div>						

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SPECTRUM ANALYTICAL, INC.
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HANDIRAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

SA 3815412

- Special Handling:
- Standard TAT - 7 to 10 business days
 - Rush TAT - Date Needed: _____
 - All TATs subject to laboratory approval.
 - Min. 24-hour notification needed for rushes.
 - Samples disposed of after 60 days unless otherwise instructed.

Report To: DIMITRI GOUNIS

Invoice To: RIZZO ASSOCIATES
1 GRANT STREET
FRAMINGHAM, MA

Project No.: 12700673
Site Name: Organix
Location: 240 Salem St. State: Woburn MA
Sampler(s): DIMITRI GOUNIS

Project Mgr.: _____

P.O. No.: _____ RQN: _____

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=_____ 10=_____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1=_____ X2=_____ X3=_____

G=Grab C=Composite

Containers:

Analyses:

QA Reporting Notes:
(check if needed)

- State specific reporting standards
If applicable, please list below.
- Provide MCP CAM Report
 - Were all field QC requirements met as per MADEP CAM Section 2.0?
 Yes No
 - (Response required for CAM report)

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	RCRA 8 Metals	VOCS by 8260	EPH + Targets	MA VPH + Targets
SA38154101	PH-1	2-13-07	11:00	G	GN	()	4	3	0	1	(9)	(23)	(23)	(23)
102	TB	2-13-07	11:05	G	GN		1							

HOLDING TIME
FEB 21 2006
EXPIRES

Fax results when available to ()
 E-mail to dimitri.gounis@tetra tech.com
EDD Format pdf, MS access

Relinquished by: Dimitri Gounis
Big Harry

Received by: Big Harry
[Signature]

Date: 2/14/07 Time: 10:15
2/14/07 15:05

Condition upon receipt: Iced Ambient 6.3
CLR

Report Date:
18-Aug-08 11:30



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

Tetra Tech Rizzo
One Grant Street - P.O. Box 9005
Framingham, MA 01701
Attn: Dimitri Gounis

Project: Organix - 240 Salem St - Woburn, MA
Project 127-13417-08001

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA82632-01	B201-COMP	Soil	04-Aug-08 13:45	05-Aug-08 15:58
SA82632-02	B201-5.5-6'	Soil	04-Aug-08 13:10	05-Aug-08 15:58
SA82632-03	B201-6-6.5	Soil	04-Aug-08 13:15	05-Aug-08 15:58
SA82632-04	B201-6.5-7'	Soil	04-Aug-08 13:25	05-Aug-08 15:58
SA82632-05	B201-7-7.5'	Soil	04-Aug-08 13:30	05-Aug-08 15:58

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Spectrum Analytical holds certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes.

Please note that this report contains 37 pages of analytical data plus Chain of Custody document(s).

This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

CASE NARRATIVE:

The samples were received 3.4 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 2.0 degrees Celsius was used immediately upon receipt of the samples.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method.

According to WSC-CAM 5/2004 Rev.4, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW 846 8260B

Laboratory Control Samples:

8080618-BS1

Analyte out of acceptance range.

Vinyl chloride

8080618-BSD1

RPD out of acceptance range.

Vinyl chloride

Samples:

SA82632-02 *B201-5.5-6'*

The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio. This variance may affect the final reporting limit.

SW846 1030

Samples:

SA82632-01 *B201-COMP*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.

Ignitability by Definition

SW846 1311/6010B

Duplicates:

8080921-DUP1 *Source: SA82632-01*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Cadmium

Lead

SW846 1311/8270C

SW846 1311/8270C

Laboratory Control Samples:

8080976-BS1

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

Pyridine

SW846 6010B

Spikes:

8080481-MSD1 *Source: SA82701-01*

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for batch duplicate.

Chromium

SW846 8270C

Duplicates:

8080685-DUP1 *Source: SA82843-01*

Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.

Phenanthrene

SW846 9045C

Samples:

SA82632-01 *B201-COMP*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for pH is not specified within the method other than to state that the samples should be analyzed as soon as possible.

pH

Sample Identification**B201-COMP**

SA82632-01

Client Project #
127-13417-08001Matrix
SoilCollection Date/Time
04-Aug-08 13:45Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds											
	TCLP Extraction	Completed		N/A		1	SW846 1311	12-Aug-08	12-Aug-08	8080961	
<u>TCLP Volatile Organic Compounds by 8260B (TCL)</u>											
Prepared by method SW846 5030 Water MS											
71-43-2	Benzene	BRL		µg/l	5.0	5	SW846 1311/8260B	14-Aug-08	14-Aug-08	8081060	
78-93-3	2-Butanone (MEK)	BRL		µg/l	50.0	5	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/l	5.0	5	"	"	"	"	
108-90-7	Chlorobenzene	BRL		µg/l	5.0	5	"	"	"	"	
67-66-3	Chloroform	BRL		µg/l	5.0	5	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		µg/l	5.0	5	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL		µg/l	5.0	5	"	"	"	"	
127-18-4	Tetrachloroethene	BRL		µg/l	5.0	5	"	"	"	"	
108-88-3	Toluene	BRL		µg/l	5.0	5	"	"	"	"	
79-01-6	Trichloroethene	BRL		µg/l	5.0	5	"	"	"	"	
75-01-4	Vinyl chloride	BRL		µg/l	5.0	5	"	"	"	"	
<i>Surrogate recoveries:</i>											
460-00-4	4-Bromofluorobenzene	92			70-130 %		"	"	"	"	
2037-26-5	Toluene-d8	99			70-130 %		"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	101			70-130 %		"	"	"	"	
1868-53-7	Dibromofluoromethane	97			70-130 %		"	"	"	"	
Semivolatile Organic Compounds by GCMS											
	TCLP Extraction	Completed		N/A		1	SW846 1311	12-Aug-08	12-Aug-08	8080894	
<u>TCLP Semivolatiles by SW846 1311/8270C (TCL)</u>											
Prepared by method SW846 3535											
106-46-7	1,4-Dichlorobenzene	BRL		µg/l	5.00	1	SW846 1311/8270C	13-Aug-08	14-Aug-08	8080976	
121-14-2	2,4-Dinitrotoluene	BRL		µg/l	5.00	1	"	"	"	"	
118-74-1	Hexachlorobenzene	BRL		µg/l	5.00	1	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/l	5.00	1	"	"	"	"	
67-72-1	Hexachloroethane	BRL		µg/l	5.00	1	"	"	"	"	
95-48-7	2-Methylphenol	BRL		µg/l	5.00	1	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BRL		µg/l	10.0	1	"	"	"	"	
98-95-3	Nitrobenzene	BRL		µg/l	5.00	1	"	"	"	"	
87-86-5	Pentachlorophenol	BRL		µg/l	5.00	1	"	"	"	"	
110-86-1	Pyridine	BRL		µg/l	5.00	1	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BRL		µg/l	5.00	1	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BRL		µg/l	5.00	1	"	"	"	"	
<i>Surrogate recoveries:</i>											
321-60-8	2-Fluorobiphenyl	68			30-130 %		"	"	"	"	
367-12-4	2-Fluorophenol	73			15-110 %		"	"	"	"	
4165-60-0	Nitrobenzene-d5	73			30-130 %		"	"	"	"	
1718-51-0	Terphenyl-d14	54			30-130 %		"	"	"	"	
Semivolatile Organic Compounds by GC											
	TCLP Extraction	Completed		N/A		1	SW846 1311	12-Aug-08	12-Aug-08	8080894	
<u>TCLP Pesticides by SW846 1311/8081A</u>											
Prepared by method SW846 3535											
58-89-9	gamma-BHC (Lindane)	BRL		µg/l	0.080	1	SW846 1311/8081A	13-Aug-08	14-Aug-08	8080977	
76-44-8	Heptachlor	BRL		µg/l	0.080	1	"	"	"	"	
1024-57-3	Heptachlor epoxide	BRL		µg/l	0.080	1	"	"	"	"	
60-57-1	Dieldrin	BRL		µg/l	0.080	1	"	"	"	"	
72-55-9	4,4'-DDE (p,p')	BRL		µg/l	0.080	1	"	"	"	"	
72-20-8	Endrin	BRL		µg/l	0.080	1	"	"	"	"	
72-54-8	4,4'-DDD (p,p')	BRL		µg/l	0.080	1	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification
B201-COMP
 SA82632-01

Client Project #
 127-13417-08001

Matrix
 Soil

Collection Date/Time
 04-Aug-08 13:45

Received
 05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GC											
<u>TCLP Pesticides by SW846 1311/8081A</u>											
Prepared by method SW846 3535											
50-29-3	4,4'-DDT (p,p')	BRL		µg/l	0.080	1	SW846 1311/8081A	13-Aug-08	14-Aug-08	8080977	
72-43-5	Methoxychlor	BRL		µg/l	0.080	1	"	"	"	"	
8001-35-2	Toxaphene	BRL		µg/l	0.400	1	"	"	"	"	
57-74-9	Chlordane	BRL		µg/l	0.400	1	"	"	"	"	
<i>Surrogate recoveries:</i>											
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	74			30-150 %		"	"	"	"	
2051-24-3	Decachlorobiphenyl (Sr)	78			30-150 %		"	"	"	"	
<u>TCLP Herbicides by SW846 1311/8151A</u>											
Prepared by method SW846 3535											
93-72-1	2,4,5-TP (Silvex)	BRL		µg/l	0.100	1	SW846 1311/8151A	13-Aug-08	14-Aug-08	8080979	
94-75-7	2,4-D	BRL		µg/l	0.100	1	"	"	"	"	
<i>Surrogate recoveries:</i>											
10386-84-2	4,4-DB-Octafluorobiphenyl (Sr)	72			30-150 %		"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	93.6		mg/kg dry	1.72	1	SW846 6010B	12-Aug-08	14-Aug-08	8080481	
7440-47-3	Chromium	4,120		mg/kg dry	1.14	1	"	"	"	"	
7439-92-1	Lead	393		mg/kg dry	1.72	1	"	"	"	"	
TCLP Metals by EPA 1311 & 6000/7000 Series Methods											
	TCLP Extraction	Completed		N/A		1	SW846 1311	12-Aug-08	12-Aug-08	8080895	
7440-22-4	Silver	BRL		mg/l	0.0100	1	SW846 1311/6010B	13-Aug-08	13-Aug-08	8080921	
7440-38-2	Arsenic	BRL		mg/l	0.0100	1	"	"	"	"	
7440-39-3	Barium	0.698		mg/l	0.0100	1	"	"	"	"	
7440-43-9	Cadmium	BRL		mg/l	0.0050	1	"	"	"	"	
7440-47-3	Chromium	0.131		mg/l	0.0100	1	"	"	"	"	
7439-97-6	Mercury	BRL		mg/l	0.00020	1	SW846 1311/7470A	"	14-Aug-08	8080922	
7439-92-1	Lead	0.0647		mg/l	0.0150	1	SW846 1311/6010B	"	13-Aug-08	8080921	
7782-49-2	Selenium	BRL		mg/l	0.0300	1	"	"	"	"	
General Chemistry Parameters											
	% Solids	80.8		%		1	SM2540 G Mod.	08-Aug-08	08-Aug-08	8080657	
Toxicity Characteristics											
	Flashpoint	> 200		°F		1	SW846 1010	12-Aug-08	12-Aug-08	8080863	
	Ignitability by Definition	Negative	IgHT	N/A		1	SW846 1030	05-Aug-08 17:14	05-Aug-08 17:24	8080339	
	pH	7.26	pHHT	pH Units		1	SW846 9045C	06-Aug-08 12:02	06-Aug-08 16:11	8080422	
<u>Reactivity Cyanide/Sulfide</u>											
Prepared by method General Preparation											
	Reactivity	Nonreactive		mg/kg dry		1	SW846 Ch. 7.3	08-Aug-08	08-Aug-08	8080650	
	Reactive Cyanide	BRL		mg/kg dry	25.0	1	"	"	"	"	
	Reactive Sulfide	BRL		mg/kg dry	50.0	1	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

Sample Identification**B201-5.5-6'**

SA82632-02

Client Project #
127-13417-08001Matrix
SoilCollection Date/Time
04-Aug-08 13:10Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds											
	VOC Extraction	Field extracted		N/A		1	VOC Soil Extraction	05-Aug-08	05-Aug-08	8080344	
<u>Volatile Organic Compounds</u>											
Prepared by method SW846 5030 Soil (high level)											
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon113)	BRL		µg/kg dry	150	50	SW 846 8260B	08-Aug-08	08-Aug-08	8080618	
67-64-1	Acetone	BRL		µg/kg dry	1500	50	"	"	"	"	
107-13-1	Acrylonitrile	BRL		µg/kg dry	150	50	"	"	"	"	
71-43-2	Benzene	BRL		µg/kg dry	150	50	"	"	"	"	
108-86-1	Bromobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
74-97-5	Bromochloromethane	BRL		µg/kg dry	150	50	"	"	"	"	
75-27-4	Bromodichloromethane	BRL		µg/kg dry	150	50	"	"	"	"	
75-25-2	Bromoform	BRL		µg/kg dry	150	50	"	"	"	"	
74-83-9	Bromomethane	BRL		µg/kg dry	301	50	"	"	"	"	
78-93-3	2-Butanone (MEK)	BRL		µg/kg dry	1500	50	"	"	"	"	
104-51-8	n-Butylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
135-98-8	sec-Butylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
98-06-6	tert-Butylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
75-15-0	Carbon disulfide	BRL		µg/kg dry	752	50	"	"	"	"	
56-23-5	Carbon tetrachloride	BRL		µg/kg dry	150	50	"	"	"	"	
108-90-7	Chlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
75-00-3	Chloroethane	BRL		µg/kg dry	301	50	"	"	"	"	
67-66-3	Chloroform	BRL		µg/kg dry	150	50	"	"	"	"	
74-87-3	Chloromethane	BRL		µg/kg dry	301	50	"	"	"	"	
95-49-8	2-Chlorotoluene	BRL		µg/kg dry	150	50	"	"	"	"	
106-43-4	4-Chlorotoluene	BRL		µg/kg dry	150	50	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	BRL		µg/kg dry	301	50	"	"	"	"	
124-48-1	Dibromochloromethane	BRL		µg/kg dry	150	50	"	"	"	"	
106-93-4	1,2-Dibromoethane (EDB)	BRL		µg/kg dry	150	50	"	"	"	"	
74-95-3	Dibromomethane	BRL		µg/kg dry	150	50	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
75-71-8	Dichlorodifluoromethane (Freon12)	BRL		µg/kg dry	301	50	"	"	"	"	
75-34-3	1,1-Dichloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
107-06-2	1,2-Dichloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
75-35-4	1,1-Dichloroethene	BRL		µg/kg dry	150	50	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	BRL		µg/kg dry	150	50	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	BRL		µg/kg dry	150	50	"	"	"	"	
78-87-5	1,2-Dichloropropane	BRL		µg/kg dry	150	50	"	"	"	"	
142-28-9	1,3-Dichloropropane	BRL		µg/kg dry	150	50	"	"	"	"	
594-20-7	2,2-Dichloropropane	BRL		µg/kg dry	150	50	"	"	"	"	
563-58-6	1,1-Dichloropropene	BRL		µg/kg dry	150	50	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	BRL		µg/kg dry	150	50	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	BRL		µg/kg dry	150	50	"	"	"	"	
100-41-4	Ethylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/kg dry	150	50	"	"	"	"	
591-78-6	2-Hexanone (MBK)	BRL		µg/kg dry	1500	50	"	"	"	"	
98-82-8	Isopropylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
99-87-6	4-Isopropyltoluene	BRL		µg/kg dry	150	50	"	"	"	"	
1634-04-4	Methyl tert-butyl ether	BRL		µg/kg dry	150	50	"	"	"	"	
108-10-1	4-Methyl-2-pentanone (MIBK)	BRL		µg/kg dry	1500	50	"	"	"	"	
75-09-2	Methylene chloride	BRL		µg/kg dry	1500	50	"	"	"	"	
91-20-3	Naphthalene	250		µg/kg dry	150	50	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**B201-5.5-6'**

SA82632-02

Client Project #
127-13417-08001Matrix
SoilCollection Date/Time
04-Aug-08 13:10Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds											
<u>Volatile Organic Compounds</u>											
			VC10	Initial weight: 5.89 g							
Prepared by method SW846 5030 Soil (high level)											
103-65-1	n-Propylbenzene	BRL		µg/kg dry	150	50	SW 846 8260B	08-Aug-08	08-Aug-08	8080618	
100-42-5	Styrene	BRL		µg/kg dry	150	50	"	"	"	"	
630-20-6	1,1,1,2-Tetrachloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
79-34-5	1,1,1,2-Tetrachloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
127-18-4	Tetrachloroethene	BRL		µg/kg dry	150	50	"	"	"	"	
108-88-3	Toluene	BRL		µg/kg dry	150	50	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
108-70-3	1,3,5-Trichlorobenzene	BRL		µg/kg dry	150	50	"	"	"	"	
71-55-6	1,1,1-Trichloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	BRL		µg/kg dry	150	50	"	"	"	"	
79-01-6	Trichloroethene	BRL		µg/kg dry	150	50	"	"	"	"	
75-69-4	Trichlorofluoromethane (Freon 11)	BRL		µg/kg dry	150	50	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	BRL		µg/kg dry	150	50	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	BRL		µg/kg dry	150	50	"	"	"	"	
75-01-4	Vinyl chloride	BRL		µg/kg dry	150	50	"	"	"	"	
179601-23-1	m,p-Xylene	BRL		µg/kg dry	301	50	"	"	"	"	
95-47-6	o-Xylene	BRL		µg/kg dry	150	50	"	"	"	"	
109-99-9	Tetrahydrofuran	BRL		µg/kg dry	1500	50	"	"	"	"	
60-29-7	Ethyl ether	BRL		µg/kg dry	150	50	"	"	"	"	
994-05-8	Tert-amyl methyl ether	BRL		µg/kg dry	150	50	"	"	"	"	
637-92-3	Ethyl tert-butyl ether	BRL		µg/kg dry	150	50	"	"	"	"	
108-20-3	Di-isopropyl ether	BRL		µg/kg dry	150	50	"	"	"	"	
75-65-0	Tert-Butanol / butyl alcohol	BRL		µg/kg dry	1500	50	"	"	"	"	
123-91-1	1,4-Dioxane	BRL		µg/kg dry	3010	50	"	"	"	"	
110-57-6	trans-1,4-Dichloro-2-butene	BRL		µg/kg dry	752	50	"	"	"	"	
64-17-5	Ethanol	BRL		µg/kg dry	60100	50	"	"	"	"	
<i>Surrogate recoveries:</i>											
460-00-4	4-Bromofluorobenzene	103		70-130 %			"	"	"	"	
2037-26-5	Toluene-d8	97		70-130 %			"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	120		70-130 %			"	"	"	"	
1868-53-7	Dibromofluoromethane	100		70-130 %			"	"	"	"	
Semivolatile Organic Compounds by GCMS											
<u>Semivolatile Organic Compounds by SW846 8270C</u>											
Prepared by method SW846 3545A											
83-32-9	Acenaphthene	BRL		µg/kg dry	1850	10	SW846 8270C	11-Aug-08	13-Aug-08	8080685	
208-96-8	Acenaphthylene	BRL		µg/kg dry	1850	10	"	"	"	"	
62-53-3	Aniline	BRL		µg/kg dry	1850	10	"	"	"	"	
120-12-7	Anthracene	BRL		µg/kg dry	1850	10	"	"	"	"	
1912-24-9	Atrazine	BRL		µg/kg dry	1850	10	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazine	BRL		µg/kg dry	1850	10	"	"	"	"	
92-87-5	Benzidine	BRL		µg/kg dry	1850	10	"	"	"	"	
56-55-3	Benzo (a) anthracene	BRL		µg/kg dry	1850	10	"	"	"	"	
50-32-8	Benzo (a) pyrene	BRL		µg/kg dry	1850	10	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	BRL		µg/kg dry	1850	10	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	BRL		µg/kg dry	1850	10	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	BRL		µg/kg dry	1850	10	"	"	"	"	
65-85-0	Benzoic acid	BRL		µg/kg dry	1850	10	"	"	"	"	
100-51-6	Benzyl alcohol	BRL		µg/kg dry	1850	10	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**B201-5.5-6'**

SA82632-02

Client Project #
127-13417-08001Matrix
SoilCollection Date/Time
04-Aug-08 13:10Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS											
<u>Semivolatile Organic Compounds by SW846 8270C</u>											
Prepared by method SW846 3545A											
111-91-1	Bis(2-chloroethoxy)methane	BRL		µg/kg dry	1850	10	SW846 8270C	11-Aug-08	13-Aug-08	8080685	
111-44-4	Bis(2-chloroethyl)ether	BRL		µg/kg dry	1850	10	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	BRL		µg/kg dry	1850	10	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	BRL		µg/kg dry	1850	10	"	"	"	"	
85-68-7	Butyl benzyl phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
86-74-8	Carbazole	BRL		µg/kg dry	1850	10	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	BRL		µg/kg dry	1850	10	"	"	"	"	
106-47-8	4-Chloroaniline	BRL		µg/kg dry	1850	10	"	"	"	"	
91-58-7	2-Chloronaphthalene	BRL		µg/kg dry	1850	10	"	"	"	"	
95-57-8	2-Chlorophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	BRL		µg/kg dry	1850	10	"	"	"	"	
218-01-9	Chrysene	BRL		µg/kg dry	1850	10	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	BRL		µg/kg dry	1850	10	"	"	"	"	
132-64-9	Dibenzofuran	BRL		µg/kg dry	1850	10	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
91-94-1	3,3'-Dichlorobenzidine	BRL		µg/kg dry	1850	10	"	"	"	"	
120-83-2	2,4-Dichlorophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
84-66-2	Diethyl phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
131-11-3	Dimethyl phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
105-67-9	2,4-Dimethylphenol	BRL		µg/kg dry	1850	10	"	"	"	"	
84-74-2	Di-n-butyl phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	BRL		µg/kg dry	1850	10	"	"	"	"	
51-28-5	2,4-Dinitrophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	BRL		µg/kg dry	1850	10	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	BRL		µg/kg dry	1850	10	"	"	"	"	
117-84-0	Di-n-octyl phthalate	BRL		µg/kg dry	1850	10	"	"	"	"	
206-44-0	Fluoranthene	3,030		µg/kg dry	1850	10	"	"	"	"	
86-73-7	Fluorene	BRL		µg/kg dry	1850	10	"	"	"	"	
118-74-1	Hexachlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
87-68-3	Hexachlorobutadiene	BRL		µg/kg dry	1850	10	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	BRL		µg/kg dry	1850	10	"	"	"	"	
67-72-1	Hexachloroethane	BRL		µg/kg dry	1850	10	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	BRL		µg/kg dry	1850	10	"	"	"	"	
90-12-0	1-Methylnaphthalene	BRL		µg/kg dry	1850	10	"	"	"	"	
78-59-1	Isophorone	BRL		µg/kg dry	1850	10	"	"	"	"	
91-57-6	2-Methylnaphthalene	BRL		µg/kg dry	1850	10	"	"	"	"	
95-48-7	2-Methylphenol	BRL		µg/kg dry	1850	10	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	BRL		µg/kg dry	1850	10	"	"	"	"	
91-20-3	Naphthalene	BRL		µg/kg dry	1850	10	"	"	"	"	
88-74-4	2-Nitroaniline	BRL		µg/kg dry	1850	10	"	"	"	"	
99-09-2	3-Nitroaniline	BRL		µg/kg dry	1850	10	"	"	"	"	
100-01-6	4-Nitroaniline	BRL		µg/kg dry	7390	10	"	"	"	"	
98-95-3	Nitrobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
88-75-5	2-Nitrophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
100-02-7	4-Nitrophenol	BRL		µg/kg dry	7390	10	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	BRL		µg/kg dry	1850	10	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	BRL		µg/kg dry	1850	10	"	"	"	"	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification**B201-5.5-6'**

SA82632-02

Client Project #
127-13417-08001Matrix
SoilCollection Date/Time
04-Aug-08 13:10Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Semivolatile Organic Compounds by GCMS											
<u>Semivolatile Organic Compounds by SW846 8270C</u>											
Prepared by method SW846 3545A											
86-30-6	N-Nitrosodiphenylamine	BRL		µg/kg dry	1850	10	SW846 8270C	11-Aug-08	13-Aug-08	8080685	
87-86-5	Pentachlorophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
85-01-8	Phenanthrene	2,870		µg/kg dry	1850	10	"	"	"	"	
108-95-2	Phenol	BRL		µg/kg dry	1850	10	"	"	"	"	
129-00-0	Pyrene	2,100		µg/kg dry	1850	10	"	"	"	"	
110-86-1	Pyridine	BRL		µg/kg dry	1850	10	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	BRL		µg/kg dry	1850	10	"	"	"	"	
82-68-8	Pentachloronitrobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	BRL		µg/kg dry	1850	10	"	"	"	"	
<i>Surrogate recoveries:</i>											
321-60-8	2-Fluorobiphenyl	91			30-130 %		"	"	"	"	
367-12-4	2-Fluorophenol	58			15-110 %		"	"	"	"	
4165-60-0	Nitrobenzene-d5	78			30-130 %		"	"	"	"	
4165-62-2	Phenol-d5	64			15-110 %		"	"	"	"	
1718-51-0	Terphenyl-d14	66			30-130 %		"	"	"	"	
118-79-6	2,4,6-Tribromophenol	92			15-110 %		"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	6.31		mg/kg dry	1.50	1	SW846 6010B	12-Aug-08	14-Aug-08	8080481	
7440-47-3	Chromium	983		mg/kg dry	0.997	1	"	"	"	"	
7439-92-1	Lead	18.1		mg/kg dry	1.50	1	"	"	"	"	
General Chemistry Parameters											
	% Solids	88.5		%		1	SM2540 G Mod.	08-Aug-08	08-Aug-08	8080657	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

B201-6-6.5
SA82632-03

Client Project #
127-13417-08001

Matrix
Soil

Collection Date/Time
04-Aug-08 13:15

Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	7.53		mg/kg dry	1.43	1	SW846 6010B	12-Aug-08	14-Aug-08	8080481	
7440-47-3	Chromium	49.1		mg/kg dry	0.953	1	"	"	"	"	
7439-92-1	Lead	7.14		mg/kg dry	1.43	1	"	"	"	"	
General Chemistry Parameters											
	% Solids	92.0		%		1	SM2540 G Mod.	08-Aug-08	08-Aug-08	8080657	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

B201-6.5-7'
SA82632-04

Client Project #
127-13417-08001

Matrix
Soil

Collection Date/Time
04-Aug-08 13:25

Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	6.71		mg/kg dry	1.57	1	SW846 6010B	12-Aug-08	14-Aug-08	8080481	
7440-47-3	Chromium	54.7		mg/kg dry	1.05	1	"	"	"	"	
7439-92-1	Lead	7.25		mg/kg dry	1.57	1	"	"	"	"	
General Chemistry Parameters											
	% Solids	92.1		%		1	SM2540 G Mod.	08-Aug-08	08-Aug-08	8080657	

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* Reportable Detection Limit

BRL = Below Reporting Limit

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Sample Identification

B201-7-7.5'
SA82632-05

Client Project #
127-13417-08001

Matrix
Soil

Collection Date/Time
04-Aug-08 13:30

Received
05-Aug-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Cert.</i>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	8.53		mg/kg dry	1.37	1	SW846 6010B	12-Aug-08	14-Aug-08	8080481	
7440-47-3	Chromium	210		mg/kg dry	0.916	1	"	"	"	"	
7439-92-1	Lead	9.32		mg/kg dry	1.37	1	"	"	"	"	
General Chemistry Parameters											
	% Solids	95.2		%		1	SM2540 G Mod.	08-Aug-08	08-Aug-08	8080657	

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BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)										
Blank (8080618-BLK1)										
Prepared & Analyzed: 08-Aug-08										
1,1,2-Trichlorotrifluoroethane (Freon 113)	BRL		µg/kg wet	1.0						
Acetone	BRL		µg/kg wet	10.0						
Acrylonitrile	BRL		µg/kg wet	1.0						
Benzene	BRL		µg/kg wet	1.0						
Bromobenzene	BRL		µg/kg wet	1.0						
Bromochloromethane	BRL		µg/kg wet	1.0						
Bromodichloromethane	BRL		µg/kg wet	1.0						
Bromoform	BRL		µg/kg wet	1.0						
Bromomethane	BRL		µg/kg wet	2.0						
2-Butanone (MEK)	BRL		µg/kg wet	10.0						
n-Butylbenzene	BRL		µg/kg wet	1.0						
sec-Butylbenzene	BRL		µg/kg wet	1.0						
tert-Butylbenzene	BRL		µg/kg wet	1.0						
Carbon disulfide	BRL		µg/kg wet	5.0						
Carbon tetrachloride	BRL		µg/kg wet	1.0						
Chlorobenzene	BRL		µg/kg wet	1.0						
Chloroethane	BRL		µg/kg wet	2.0						
Chloroform	BRL		µg/kg wet	1.0						
Chloromethane	BRL		µg/kg wet	2.0						
2-Chlorotoluene	BRL		µg/kg wet	1.0						
4-Chlorotoluene	BRL		µg/kg wet	1.0						
1,2-Dibromo-3-chloropropane	BRL		µg/kg wet	2.0						
Dibromochloromethane	BRL		µg/kg wet	1.0						
1,2-Dibromoethane (EDB)	BRL		µg/kg wet	1.0						
Dibromomethane	BRL		µg/kg wet	1.0						
1,2-Dichlorobenzene	BRL		µg/kg wet	1.0						
1,3-Dichlorobenzene	BRL		µg/kg wet	1.0						
1,4-Dichlorobenzene	BRL		µg/kg wet	1.0						
Dichlorodifluoromethane (Freon12)	BRL		µg/kg wet	2.0						
1,1-Dichloroethane	BRL		µg/kg wet	1.0						
1,2-Dichloroethane	BRL		µg/kg wet	1.0						
1,1-Dichloroethene	BRL		µg/kg wet	1.0						
cis-1,2-Dichloroethene	BRL		µg/kg wet	1.0						
trans-1,2-Dichloroethene	BRL		µg/kg wet	1.0						
1,2-Dichloropropane	BRL		µg/kg wet	1.0						
1,3-Dichloropropane	BRL		µg/kg wet	1.0						
2,2-Dichloropropane	BRL		µg/kg wet	1.0						
1,1-Dichloropropene	BRL		µg/kg wet	1.0						
cis-1,3-Dichloropropene	BRL		µg/kg wet	1.0						
trans-1,3-Dichloropropene	BRL		µg/kg wet	1.0						
Ethylbenzene	BRL		µg/kg wet	1.0						
Hexachlorobutadiene	BRL		µg/kg wet	1.0						
2-Hexanone (MBK)	BRL		µg/kg wet	10.0						
Isopropylbenzene	BRL		µg/kg wet	1.0						
4-Isopropyltoluene	BRL		µg/kg wet	1.0						
Methyl tert-butyl ether	BRL		µg/kg wet	1.0						
4-Methyl-2-pentanone (MIBK)	BRL		µg/kg wet	10.0						
Methylene chloride	BRL		µg/kg wet	10.0						
Naphthalene	BRL		µg/kg wet	1.0						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)										
Blank (8080618-BLK1)										
Prepared & Analyzed: 08-Aug-08										
n-Propylbenzene	BRL		µg/kg wet	1.0						
Styrene	BRL		µg/kg wet	1.0						
1,1,1,2-Tetrachloroethane	BRL		µg/kg wet	1.0						
1,1,2,2-Tetrachloroethane	BRL		µg/kg wet	1.0						
Tetrachloroethene	BRL		µg/kg wet	1.0						
Toluene	BRL		µg/kg wet	1.0						
1,2,3-Trichlorobenzene	BRL		µg/kg wet	1.0						
1,2,4-Trichlorobenzene	BRL		µg/kg wet	1.0						
1,3,5-Trichlorobenzene	BRL		µg/kg wet	1.0						
1,1,1-Trichloroethane	BRL		µg/kg wet	1.0						
1,1,2-Trichloroethane	BRL		µg/kg wet	1.0						
Trichloroethene	BRL		µg/kg wet	1.0						
Trichlorofluoromethane (Freon 11)	BRL		µg/kg wet	1.0						
1,2,3-Trichloropropane	BRL		µg/kg wet	1.0						
1,2,4-Trimethylbenzene	BRL		µg/kg wet	1.0						
1,3,5-Trimethylbenzene	BRL		µg/kg wet	1.0						
Vinyl chloride	BRL		µg/kg wet	1.0						
m,p-Xylene	BRL		µg/kg wet	2.0						
o-Xylene	BRL		µg/kg wet	1.0						
Tetrahydrofuran	BRL		µg/kg wet	10.0						
Ethyl ether	BRL		µg/kg wet	1.0						
Tert-amyl methyl ether	BRL		µg/kg wet	1.0						
Ethyl tert-butyl ether	BRL		µg/kg wet	1.0						
Di-isopropyl ether	BRL		µg/kg wet	1.0						
Tert-Butanol / butyl alcohol	BRL		µg/kg wet	10.0						
1,4-Dioxane	BRL		µg/kg wet	20.0						
trans-1,4-Dichloro-2-butene	BRL		µg/kg wet	5.0						
Ethanol	BRL		µg/kg wet	400						
<i>Surrogate: 4-Bromofluorobenzene</i>	33.6		µg/kg wet		30.0		112	70-130		
<i>Surrogate: Toluene-d8</i>	31.0		µg/kg wet		30.0		103	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	35.6		µg/kg wet		30.0		119	70-130		
<i>Surrogate: Dibromofluoromethane</i>	31.2		µg/kg wet		30.0		104	70-130		
LCS (8080618-BS1)										
Prepared & Analyzed: 08-Aug-08										
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.5		µg/kg wet		20.0		107	70-130		
Acetone	18.3		µg/kg wet		20.0		91	15.9-162		
Acrylonitrile	19.4		µg/kg wet		20.0		97	70-130		
Benzene	19.0		µg/kg wet		20.0		95	70-130		
Bromobenzene	19.4		µg/kg wet		20.0		97	70-130		
Bromochloromethane	20.0		µg/kg wet		20.0		100	70-130		
Bromodichloromethane	20.7		µg/kg wet		20.0		103	70-130		
Bromoform	16.0		µg/kg wet		20.0		80	70-130		
Bromomethane	19.7		µg/kg wet		20.0		99	40.8-154		
2-Butanone (MEK)	16.8		µg/kg wet		20.0		84	27.2-154		
n-Butylbenzene	23.2		µg/kg wet		20.0		116	70-130		
sec-Butylbenzene	22.3		µg/kg wet		20.0		112	70-130		
tert-Butylbenzene	22.0		µg/kg wet		20.0		110	70-130		
Carbon disulfide	20.8		µg/kg wet		20.0		104	70-130		
Carbon tetrachloride	19.0		µg/kg wet		20.0		95	70-130		
Chlorobenzene	19.6		µg/kg wet		20.0		98	70-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)										
<u>LCS (8080618-BS1)</u>										
Prepared & Analyzed: 08-Aug-08										
Chloroethane	17.4		µg/kg wet		20.0		87	59.1-130		
Chloroform	17.6		µg/kg wet		20.0		88	70-130		
Chloromethane	20.5		µg/kg wet		20.0		103	70-130		
2-Chlorotoluene	20.8		µg/kg wet		20.0		104	70-130		
4-Chlorotoluene	20.8		µg/kg wet		20.0		104	70-130		
1,2-Dibromo-3-chloropropane	15.8		µg/kg wet		20.0		79	70-130		
Dibromochloromethane	19.7		µg/kg wet		20.0		98	67-133		
1,2-Dibromoethane (EDB)	18.6		µg/kg wet		20.0		93	70-130		
Dibromomethane	19.0		µg/kg wet		20.0		95	70-130		
1,2-Dichlorobenzene	20.4		µg/kg wet		20.0		102	70-130		
1,3-Dichlorobenzene	19.9		µg/kg wet		20.0		100	70-130		
1,4-Dichlorobenzene	20.6		µg/kg wet		20.0		103	70-130		
Dichlorodifluoromethane (Freon12)	17.8		µg/kg wet		20.0		89	33.9-180		
1,1-Dichloroethane	18.9		µg/kg wet		20.0		94	70-130		
1,2-Dichloroethane	20.2		µg/kg wet		20.0		101	70-130		
1,1-Dichloroethene	19.2		µg/kg wet		20.0		96	70-130		
cis-1,2-Dichloroethene	19.3		µg/kg wet		20.0		96	70-130		
trans-1,2-Dichloroethene	18.4		µg/kg wet		20.0		92	70-130		
1,2-Dichloropropane	19.8		µg/kg wet		20.0		99	70-130		
1,3-Dichloropropane	20.1		µg/kg wet		20.0		101	70-130		
2,2-Dichloropropane	19.4		µg/kg wet		20.0		97	70-130		
1,1-Dichloropropene	19.7		µg/kg wet		20.0		98	70-130		
cis-1,3-Dichloropropene	20.2		µg/kg wet		20.0		101	70-130		
trans-1,3-Dichloropropene	17.9		µg/kg wet		20.0		89	70-130		
Ethylbenzene	21.0		µg/kg wet		20.0		105	70-130		
Hexachlorobutadiene	21.0		µg/kg wet		20.0		105	57-138		
2-Hexanone (MBK)	17.2		µg/kg wet		20.0		86	70-130		
Isopropylbenzene	19.5		µg/kg wet		20.0		98	70-130		
4-Isopropyltoluene	22.4		µg/kg wet		20.0		112	70-130		
Methyl tert-butyl ether	18.6		µg/kg wet		20.0		93	70-130		
4-Methyl-2-pentanone (MIBK)	17.4		µg/kg wet		20.0		87	55.4-131		
Methylene chloride	21.4		µg/kg wet		20.0		107	70-130		
Naphthalene	20.4		µg/kg wet		20.0		102	70-130		
n-Propylbenzene	21.7		µg/kg wet		20.0		109	70-130		
Styrene	21.9		µg/kg wet		20.0		109	70-130		
1,1,1,2-Tetrachloroethane	15.2		µg/kg wet		20.0		76	70-130		
1,1,2,2-Tetrachloroethane	18.7		µg/kg wet		20.0		94	70-130		
Tetrachloroethene	20.2		µg/kg wet		20.0		101	70-130		
Toluene	20.5		µg/kg wet		20.0		103	70-130		
1,2,3-Trichlorobenzene	20.9		µg/kg wet		20.0		105	70-130		
1,2,4-Trichlorobenzene	21.2		µg/kg wet		20.0		106	70-130		
1,3,5-Trichlorobenzene	20.6		µg/kg wet		20.0		103	70-130		
1,1,1-Trichloroethane	19.1		µg/kg wet		20.0		96	70-130		
1,1,2-Trichloroethane	19.8		µg/kg wet		20.0		99	70-130		
Trichloroethene	19.8		µg/kg wet		20.0		99	70-130		
Trichlorofluoromethane (Freon 11)	19.8		µg/kg wet		20.0		99	52-154		
1,2,3-Trichloropropane	21.0		µg/kg wet		20.0		105	70-130		
1,2,4-Trimethylbenzene	21.5		µg/kg wet		20.0		108	70-130		
1,3,5-Trimethylbenzene	21.2		µg/kg wet		20.0		106	70-130		

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)									
<u>LCS (8080618-BS1)</u>									
Prepared & Analyzed: 08-Aug-08									
Vinyl chloride	39.8	QC1	µg/kg wet		20.0		199 70-130		
m,p-Xylene	41.9		µg/kg wet		40.0		105 70-130		
o-Xylene	21.0		µg/kg wet		20.0		105 70-130		
Tetrahydrofuran	18.7		µg/kg wet		20.0		94 70-130		
Ethyl ether	18.1		µg/kg wet		20.0		91 65.7-131		
Tert-amyl methyl ether	20.2		µg/kg wet		20.0		101 70-130		
Ethyl tert-butyl ether	20.2		µg/kg wet		20.0		101 70-130		
Di-isopropyl ether	18.1		µg/kg wet		20.0		91 70-130		
Tert-Butanol / butyl alcohol	185		µg/kg wet		200		92 70-130		
1,4-Dioxane	215		µg/kg wet		200		107 50.9-140		
trans-1,4-Dichloro-2-butene	16.5		µg/kg wet		20.0		83 70-130		
Ethanol	398		µg/kg wet		400		100 70-130		
Surrogate: 4-Bromofluorobenzene	31.4		µg/kg wet		30.0		105 70-130		
Surrogate: Toluene-d8	32.3		µg/kg wet		30.0		108 70-130		
Surrogate: 1,2-Dichloroethane-d4	30.3		µg/kg wet		30.0		101 70-130		
Surrogate: Dibromofluoromethane	29.4		µg/kg wet		30.0		98 70-130		
<u>LCS Dup (8080618-BSD1)</u>									
Prepared & Analyzed: 08-Aug-08									
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.6		µg/kg wet		20.0		103 70-130	4	25
Acetone	17.0		µg/kg wet		20.0		85 15.9-162	7	50
Acrylonitrile	17.5		µg/kg wet		20.0		88 70-130	10	25
Benzene	19.4		µg/kg wet		20.0		97 70-130	2	25
Bromobenzene	20.1		µg/kg wet		20.0		101 70-130	4	25
Bromochloromethane	20.5		µg/kg wet		20.0		103 70-130	3	25
Bromodichloromethane	20.5		µg/kg wet		20.0		102 70-130	0.9	25
Bromoform	18.3		µg/kg wet		20.0		92 70-130	13	25
Bromomethane	18.1		µg/kg wet		20.0		90 40.8-154	9	50
2-Butanone (MEK)	16.6		µg/kg wet		20.0		83 27.2-154	2	50
n-Butylbenzene	22.7		µg/kg wet		20.0		113 70-130	2	25
sec-Butylbenzene	22.4		µg/kg wet		20.0		112 70-130	0.4	25
tert-Butylbenzene	22.2		µg/kg wet		20.0		111 70-130	0.7	25
Carbon disulfide	21.9		µg/kg wet		20.0		110 70-130	5	25
Carbon tetrachloride	18.1		µg/kg wet		20.0		90 70-130	5	25
Chlorobenzene	20.2		µg/kg wet		20.0		101 70-130	4	25
Chloroethane	16.8		µg/kg wet		20.0		84 59.1-130	4	50
Chloroform	17.7		µg/kg wet		20.0		88 70-130	0.7	25
Chloromethane	16.8		µg/kg wet		20.0		84 70-130	20	25
2-Chlorotoluene	20.4		µg/kg wet		20.0		102 70-130	2	25
4-Chlorotoluene	20.6		µg/kg wet		20.0		103 70-130	0.8	25
1,2-Dibromo-3-chloropropane	16.7		µg/kg wet		20.0		83 70-130	5	25
Dibromochloromethane	20.0		µg/kg wet		20.0		100 67-133	2	50
1,2-Dibromoethane (EDB)	18.6		µg/kg wet		20.0		93 70-130	0.1	25
Dibromomethane	19.0		µg/kg wet		20.0		95 70-130	0.2	25
1,2-Dichlorobenzene	20.4		µg/kg wet		20.0		102 70-130	0.4	25
1,3-Dichlorobenzene	20.3		µg/kg wet		20.0		102 70-130	2	25
1,4-Dichlorobenzene	20.5		µg/kg wet		20.0		103 70-130	0.2	25
Dichlorodifluoromethane (Freon12)	15.5		µg/kg wet		20.0		77 33.9-180	14	50
1,1-Dichloroethane	19.8		µg/kg wet		20.0		99 70-130	5	25
1,2-Dichloroethane	19.2		µg/kg wet		20.0		96 70-130	5	25
1,1-Dichloroethene	20.0		µg/kg wet		20.0		100 70-130	4	25

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)										
<u>LCS Dup (8080618-BSD1)</u>										
Prepared & Analyzed: 08-Aug-08										
cis-1,2-Dichloroethene	20.1		µg/kg wet		20.0		100	70-130	4	25
trans-1,2-Dichloroethene	18.5		µg/kg wet		20.0		92	70-130	0.3	25
1,2-Dichloropropane	19.9		µg/kg wet		20.0		99	70-130	0.5	25
1,3-Dichloropropane	20.0		µg/kg wet		20.0		100	70-130	0.7	25
2,2-Dichloropropane	19.0		µg/kg wet		20.0		95	70-130	2	25
1,1-Dichloropropene	19.8		µg/kg wet		20.0		99	70-130	0.8	25
cis-1,3-Dichloropropene	20.9		µg/kg wet		20.0		105	70-130	4	25
trans-1,3-Dichloropropene	17.8		µg/kg wet		20.0		89	70-130	0.3	25
Ethylbenzene	20.9		µg/kg wet		20.0		104	70-130	0.5	25
Hexachlorobutadiene	21.2		µg/kg wet		20.0		106	57-138	0.6	50
2-Hexanone (MBK)	16.1		µg/kg wet		20.0		80	70-130	7	25
Isopropylbenzene	19.6		µg/kg wet		20.0		98	70-130	0.6	25
4-Isopropyltoluene	22.4		µg/kg wet		20.0		112	70-130	0.09	25
Methyl tert-butyl ether	17.1		µg/kg wet		20.0		86	70-130	8	25
4-Methyl-2-pentanone (MIBK)	16.8		µg/kg wet		20.0		84	55.4-131	4	50
Methylene chloride	21.0		µg/kg wet		20.0		105	70-130	2	25
Naphthalene	19.5		µg/kg wet		20.0		98	70-130	5	25
n-Propylbenzene	21.4		µg/kg wet		20.0		107	70-130	2	25
Styrene	21.4		µg/kg wet		20.0		107	70-130	2	25
1,1,1,2-Tetrachloroethane	16.9		µg/kg wet		20.0		85	70-130	11	25
1,1,2,2-Tetrachloroethane	19.4		µg/kg wet		20.0		97	70-130	3	25
Tetrachloroethene	20.1		µg/kg wet		20.0		100	70-130	0.8	25
Toluene	19.4		µg/kg wet		20.0		97	70-130	6	25
1,2,3-Trichlorobenzene	20.7		µg/kg wet		20.0		103	70-130	1	25
1,2,4-Trichlorobenzene	21.0		µg/kg wet		20.0		105	70-130	1	25
1,3,5-Trichlorobenzene	21.1		µg/kg wet		20.0		106	70-130	2	25
1,1,1-Trichloroethane	19.0		µg/kg wet		20.0		95	70-130	1	25
1,1,2-Trichloroethane	19.3		µg/kg wet		20.0		96	70-130	2	25
Trichloroethene	19.8		µg/kg wet		20.0		99	70-130	0.1	25
Trichlorofluoromethane (Freon 11)	20.8		µg/kg wet		20.0		104	52-154	5	50
1,2,3-Trichloropropane	22.2		µg/kg wet		20.0		111	70-130	6	25
1,2,4-Trimethylbenzene	21.5		µg/kg wet		20.0		108	70-130	0.05	25
1,3,5-Trimethylbenzene	21.2		µg/kg wet		20.0		106	70-130	0.2	25
Vinyl chloride	16.8	QR5	µg/kg wet		20.0		84	70-130	81	25
m,p-Xylene	41.8		µg/kg wet		40.0		104	70-130	0.3	25
o-Xylene	20.7		µg/kg wet		20.0		104	70-130	1	25
Tetrahydrofuran	17.0		µg/kg wet		20.0		85	70-130	10	25
Ethyl ether	16.2		µg/kg wet		20.0		81	65.7-131	11	50
Tert-amyl methyl ether	19.4		µg/kg wet		20.0		97	70-130	4	25
Ethyl tert-butyl ether	20.1		µg/kg wet		20.0		100	70-130	0.8	25
Di-isopropyl ether	17.4		µg/kg wet		20.0		87	70-130	4	25
Tert-Butanol / butyl alcohol	175		µg/kg wet		200		87	70-130	6	25
1,4-Dioxane	181		µg/kg wet		200		90	50.9-140	17	25
trans-1,4-Dichloro-2-butene	17.4		µg/kg wet		20.0		87	70-130	5	25
Ethanol	352		µg/kg wet		400		88	70-130	12	30
Surrogate: 4-Bromofluorobenzene	30.1		µg/kg wet		30.0		100	70-130		
Surrogate: Toluene-d8	29.9		µg/kg wet		30.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	28.4		µg/kg wet		30.0		95	70-130		
Surrogate: Dibromofluoromethane	30.3		µg/kg wet		30.0		101	70-130		
Matrix Spike (8080618-MS1) Source: SA82647-05										

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* Reportable Detection Limit

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080618 - SW846 5030 Soil (high level)									
Prepared & Analyzed: 08-Aug-08									
Benzene	19.0		µg/kg dry		20.0	BRL	95 70-130		
Chlorobenzene	20.5		µg/kg dry		20.0	BRL	103 70-130		
1,1-Dichloroethene	18.4		µg/kg dry		20.0	BRL	92 70-130		
Toluene	22.5		µg/kg dry		20.0	BRL	113 70-130		
Trichloroethene	19.7		µg/kg dry		20.0	BRL	99 70-130		
Surrogate: 4-Bromofluorobenzene	31.9		µg/kg dry		30.0		106 70-130		
Surrogate: Toluene-d8	33.4		µg/kg dry		30.0		111 70-130		
Surrogate: 1,2-Dichloroethane-d4	31.6		µg/kg dry		30.0		105 70-130		
Surrogate: Dibromofluoromethane	31.0		µg/kg dry		30.0		103 70-130		
Matrix Spike Dup (8080618-MSD1) Source: SA82647-05									
Prepared & Analyzed: 08-Aug-08									
Benzene	19.3		µg/kg dry		20.0	BRL	97 70-130	1	30
Chlorobenzene	21.4		µg/kg dry		20.0	BRL	107 70-130	4	30
1,1-Dichloroethene	18.6		µg/kg dry		20.0	BRL	93 70-130	1	30
Toluene	23.2		µg/kg dry		20.0	BRL	116 70-130	3	30
Trichloroethene	20.2		µg/kg dry		20.0	BRL	101 70-130	2	30
Surrogate: 4-Bromofluorobenzene	32.1		µg/kg dry		30.0		107 70-130		
Surrogate: Toluene-d8	33.6		µg/kg dry		30.0		112 70-130		
Surrogate: 1,2-Dichloroethane-d4	32.6		µg/kg dry		30.0		109 70-130		
Surrogate: Dibromofluoromethane	31.5		µg/kg dry		30.0		105 70-130		
Batch 8081060 - SW846 5030 Water MS									
Blank (8081060-BLK1)									
Prepared & Analyzed: 14-Aug-08									
Benzene	BRL		µg/l	1.0					
2-Butanone (MEK)	BRL		µg/l	10.0					
Carbon tetrachloride	BRL		µg/l	1.0					
Chlorobenzene	BRL		µg/l	1.0					
Chloroform	BRL		µg/l	1.0					
1,2-Dichloroethane	BRL		µg/l	1.0					
1,1-Dichloroethene	BRL		µg/l	1.0					
Tetrachloroethene	BRL		µg/l	1.0					
Toluene	BRL		µg/l	1.0					
Trichloroethene	BRL		µg/l	1.0					
Vinyl chloride	BRL		µg/l	1.0					
Surrogate: 4-Bromofluorobenzene	46.0		µg/l		50.0		92 70-130		
Surrogate: Toluene-d8	49.6		µg/l		50.0		99 70-130		
Surrogate: 1,2-Dichloroethane-d4	51.4		µg/l		50.0		103 70-130		
Surrogate: Dibromofluoromethane	51.1		µg/l		50.0		102 70-130		
Blank (8081060-BLK2)									
Prepared & Analyzed: 14-Aug-08									
Benzene	BRL		µg/l	5.0					
2-Butanone (MEK)	BRL		µg/l	50.0					
Carbon tetrachloride	BRL		µg/l	5.0					
Chlorobenzene	BRL		µg/l	5.0					
Chloroform	BRL		µg/l	5.0					
1,2-Dichloroethane	BRL		µg/l	5.0					
1,1-Dichloroethene	BRL		µg/l	5.0					
Tetrachloroethene	BRL		µg/l	5.0					
Toluene	BRL		µg/l	5.0					
Trichloroethene	BRL		µg/l	5.0					
Vinyl chloride	BRL		µg/l	5.0					

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8081060 - SW846 5030 Water MS										
Blank (8081060-BLK2)										
Prepared & Analyzed: 14-Aug-08										
Surrogate: 4-Bromofluorobenzene	45.8		µg/l		50.0		92	70-130		
Surrogate: Toluene-d8	49.9		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	52.6		µg/l		50.0		105	70-130		
Surrogate: Dibromofluoromethane	51.1		µg/l		50.0		102	70-130		
LCS (8081060-BS1)										
Prepared & Analyzed: 14-Aug-08										
Benzene	21.4		µg/l		20.0		107	70-130		
2-Butanone (MEK)	22.4		µg/l		20.0		112	70-130		
Carbon tetrachloride	21.2		µg/l		20.0		106	70-130		
Chlorobenzene	22.6		µg/l		20.0		113	70-130		
Chloroform	19.8		µg/l		20.0		99	70-130		
1,2-Dichloroethane	21.4		µg/l		20.0		107	70-130		
1,1-Dichloroethene	25.1		µg/l		20.0		125	70-130		
Tetrachloroethene	22.2		µg/l		20.0		111	70-130		
Trichloroethene	19.8		µg/l		20.0		99	70-130		
Vinyl chloride	22.5		µg/l		20.0		113	70-130		
Surrogate: 4-Bromofluorobenzene	50.5		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	49.0		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.2		µg/l		50.0		100	70-130		
Surrogate: Dibromofluoromethane	50.1		µg/l		50.0		100	70-130		
LCS Dup (8081060-BSD1)										
Prepared & Analyzed: 14-Aug-08										
Benzene	20.3		µg/l		20.0		102	70-130	5	30
2-Butanone (MEK)	18.0		µg/l		20.0		90	70-130	22	30
Carbon tetrachloride	19.9		µg/l		20.0		100	70-130	6	30
Chlorobenzene	21.4		µg/l		20.0		107	70-130	6	30
Chloroform	18.8		µg/l		20.0		94	70-130	5	30
1,2-Dichloroethane	20.4		µg/l		20.0		102	70-130	5	30
1,1-Dichloroethene	23.1		µg/l		20.0		115	70-130	8	30
Tetrachloroethene	20.9		µg/l		20.0		105	70-130	6	30
Trichloroethene	18.8		µg/l		20.0		94	70-130	5	30
Vinyl chloride	18.0		µg/l		20.0		90	70-130	22	30
Surrogate: 4-Bromofluorobenzene	49.3		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	48.6		µg/l		50.0		97	70-130		
Surrogate: 1,2-Dichloroethane-d4	48.6		µg/l		50.0		97	70-130		
Surrogate: Dibromofluoromethane	50.6		µg/l		50.0		101	70-130		
Matrix Spike (8081060-MS1) Source: SA82827-06										
Prepared & Analyzed: 14-Aug-08										
Benzene	17.9		µg/l		20.0	BRL	89	70-130		
Chlorobenzene	19.7		µg/l		20.0	BRL	98	70-130		
1,1-Dichloroethene	22.0		µg/l		20.0	BRL	110	70-130		
Toluene	18.2		µg/l		20.0	BRL	91	70-130		
Trichloroethene	18.2		µg/l		20.0	BRL	91	70-130		
Surrogate: 4-Bromofluorobenzene	49.3		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	49.1		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.1		µg/l		50.0		102	70-130		
Surrogate: Dibromofluoromethane	50.0		µg/l		50.0		100	70-130		
Matrix Spike Dup (8081060-MSD1) Source: SA82827-06										
Prepared & Analyzed: 14-Aug-08										
Benzene	18.0		µg/l		20.0	BRL	90	70-130	0.8	30
Chlorobenzene	19.8		µg/l		20.0	BRL	99	70-130	0.4	30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8081060 - SW846 5030 Water MS										
Matrix Spike Dup (8081060-MSD1) Source: SA82827-06										
Prepared & Analyzed: 14-Aug-08										
1,1-Dichloroethene	21.6		µg/l		20.0	BRL	108	70-130	2	30
Toluene	17.5		µg/l		20.0	BRL	87	70-130	4	30
Trichloroethene	18.4		µg/l		20.0	BRL	92	70-130	2	30
Surrogate: 4-Bromofluorobenzene	48.2		µg/l		50.0		96	70-130		
Surrogate: Toluene-d8	49.2		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.9		µg/l		50.0		104	70-130		
Surrogate: Dibromofluoromethane	50.0		µg/l		50.0		100	70-130		

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A										
Blank (8080685-BLK1)										
Prepared & Analyzed: 11-Aug-08										
Acenaphthene	BRL		µg/kg wet	330						
Acenaphthylene	BRL		µg/kg wet	330						
Aniline	BRL		µg/kg wet	330						
Anthracene	BRL		µg/kg wet	330						
Atrazine	BRL		µg/kg wet	330						
Azobenzene/Diphenyldiazine	BRL		µg/kg wet	330						
Benzidine	BRL		µg/kg wet	330						
Benzo (a) anthracene	BRL		µg/kg wet	330						
Benzo (a) pyrene	BRL		µg/kg wet	330						
Benzo (b) fluoranthene	BRL		µg/kg wet	330						
Benzo (g,h,i) perylene	BRL		µg/kg wet	330						
Benzo (k) fluoranthene	BRL		µg/kg wet	330						
Benzoic acid	BRL		µg/kg wet	330						
Benzyl alcohol	BRL		µg/kg wet	330						
Bis(2-chloroethoxy)methane	BRL		µg/kg wet	330						
Bis(2-chloroethyl)ether	BRL		µg/kg wet	330						
Bis(2-chloroisopropyl)ether	BRL		µg/kg wet	330						
Bis(2-ethylhexyl)phthalate	BRL		µg/kg wet	330						
4-Bromophenyl phenyl ether	BRL		µg/kg wet	330						
Butyl benzyl phthalate	BRL		µg/kg wet	330						
Carbazole	BRL		µg/kg wet	330						
4-Chloro-3-methylphenol	BRL		µg/kg wet	330						
4-Chloroaniline	BRL		µg/kg wet	330						
2-Chloronaphthalene	BRL		µg/kg wet	330						
2-Chlorophenol	BRL		µg/kg wet	330						
4-Chlorophenyl phenyl ether	BRL		µg/kg wet	330						
Chrysene	BRL		µg/kg wet	330						
Dibenzo (a,h) anthracene	BRL		µg/kg wet	330						
Dibenzofuran	BRL		µg/kg wet	330						
1,2-Dichlorobenzene	BRL		µg/kg wet	330						
1,3-Dichlorobenzene	BRL		µg/kg wet	330						
1,4-Dichlorobenzene	BRL		µg/kg wet	330						
3,3'-Dichlorobenzidine	BRL		µg/kg wet	330						
2,4-Dichlorophenol	BRL		µg/kg wet	330						
Diethyl phthalate	BRL		µg/kg wet	330						
Dimethyl phthalate	BRL		µg/kg wet	330						
2,4-Dimethylphenol	BRL		µg/kg wet	330						
Di-n-butyl phthalate	BRL		µg/kg wet	330						
4,6-Dinitro-2-methylphenol	BRL		µg/kg wet	330						
2,4-Dinitrophenol	BRL		µg/kg wet	330						
2,4-Dinitrotoluene	BRL		µg/kg wet	330						
2,6-Dinitrotoluene	BRL		µg/kg wet	330						
Di-n-octyl phthalate	BRL		µg/kg wet	330						
Fluoranthene	BRL		µg/kg wet	330						
Fluorene	BRL		µg/kg wet	330						
Hexachlorobenzene	BRL		µg/kg wet	330						
Hexachlorobutadiene	BRL		µg/kg wet	330						
Hexachlorocyclopentadiene	BRL		µg/kg wet	330						
Hexachloroethane	BRL		µg/kg wet	330						

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A										
Blank (8080685-BLK1)										
Prepared & Analyzed: 11-Aug-08										
Indeno (1,2,3-cd) pyrene	BRL		µg/kg wet	330						
1-Methylnaphthalene	BRL		µg/kg wet	330						
Isophorone	BRL		µg/kg wet	330						
2-Methylnaphthalene	BRL		µg/kg wet	330						
2-Methylphenol	BRL		µg/kg wet	330						
3 & 4-Methylphenol	BRL		µg/kg wet	330						
Naphthalene	BRL		µg/kg wet	330						
2-Nitroaniline	BRL		µg/kg wet	330						
3-Nitroaniline	BRL		µg/kg wet	330						
4-Nitroaniline	BRL		µg/kg wet	1320						
Nitrobenzene	BRL		µg/kg wet	330						
2-Nitrophenol	BRL		µg/kg wet	330						
4-Nitrophenol	BRL		µg/kg wet	1320						
N-Nitrosodimethylamine	BRL		µg/kg wet	330						
N-Nitrosodi-n-propylamine	BRL		µg/kg wet	330						
N-Nitrosodiphenylamine	BRL		µg/kg wet	330						
Pentachlorophenol	BRL		µg/kg wet	330						
Phenanthrene	BRL		µg/kg wet	330						
Phenol	BRL		µg/kg wet	330						
Pyrene	BRL		µg/kg wet	330						
Pyridine	BRL		µg/kg wet	330						
1,2,4-Trichlorobenzene	BRL		µg/kg wet	330						
2,4,5-Trichlorophenol	BRL		µg/kg wet	330						
2,4,6-Trichlorophenol	BRL		µg/kg wet	330						
Pentachloronitrobenzene	BRL		µg/kg wet	330						
1,2,4,5-Tetrachlorobenzene	BRL		µg/kg wet	330						
<i>Surrogate: 2-Fluorobiphenyl</i>	2650		µg/kg wet		3330		80	30-130		
<i>Surrogate: 2-Fluorophenol</i>	2100		µg/kg wet		3330		63	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	2600		µg/kg wet		3330		78	30-130		
<i>Surrogate: Phenol-d5</i>	2430		µg/kg wet		3330		73	15-110		
<i>Surrogate: Terphenyl-dl4</i>	2190		µg/kg wet		3330		66	30-130		
<i>Surrogate: 2,4,6-Tribromophenol</i>	3020		µg/kg wet		3330		91	15-110		
LCS (8080685-BS1)										
Prepared & Analyzed: 11-Aug-08										
Acenaphthene	2870		µg/kg wet	330	3330		86	40-130		
Acenaphthylene	2640		µg/kg wet	330	3330		79	40-130		
Aniline	1400		µg/kg wet	330	3330		42	40-130		
Anthracene	2890		µg/kg wet	330	3330		87	40-130		
Atrazine	2910		µg/kg wet	330	3330		87	40-130		
Azobenzene/Diphenyldiazine	3510		µg/kg wet	330	3330		105	40-130		
Benzidine	BRL		µg/kg wet	330	3330			0-153		
Benzo (a) anthracene	2520		µg/kg wet	330	3330		75	40-130		
Benzo (a) pyrene	3340		µg/kg wet	330	3330		100	40-130		
Benzo (b) fluoranthene	3400		µg/kg wet	330	3330		102	40-130		
Benzo (g,h,i) perylene	3050		µg/kg wet	330	3330		92	40-130		
Benzo (k) fluoranthene	3290		µg/kg wet	330	3330		99	40-130		
Benzoic acid	1510		µg/kg wet	330	3330		45	0-130		
Benzyl alcohol	2030		µg/kg wet	330	3330		61	40-130		
Bis(2-chloroethoxy)methane	2290		µg/kg wet	330	3330		69	40-130		
Bis(2-chloroethyl)ether	2510		µg/kg wet	330	3330		75	40-130		

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* Reportable Detection Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A										
<u>LCS (8080685-BS1)</u>										
Prepared & Analyzed: 11-Aug-08										
Bis(2-chloroisopropyl)ether	3020		µg/kg wet	330	3330		91	40-130		
Bis(2-ethylhexyl)phthalate	2660		µg/kg wet	330	3330		80	40-130		
4-Bromophenyl phenyl ether	2590		µg/kg wet	330	3330		78	40-130		
Butyl benzyl phthalate	2500		µg/kg wet	330	3330		75	40-130		
Carbazole	2940		µg/kg wet	330	3330		88	40-130		
4-Chloro-3-methylphenol	2280		µg/kg wet	330	3330		68	40-130		
4-Chloroaniline	1650		µg/kg wet	330	3330		49	40-130		
2-Chloronaphthalene	2350		µg/kg wet	330	3330		70	40-130		
2-Chlorophenol	2220		µg/kg wet	330	3330		66	40-130		
4-Chlorophenyl phenyl ether	2720		µg/kg wet	330	3330		82	40-130		
Chrysene	2320		µg/kg wet	330	3330		70	40-130		
Dibenzo (a,h) anthracene	3330		µg/kg wet	330	3330		100	40-130		
Dibenzofuran	2600		µg/kg wet	330	3330		78	40-130		
1,2-Dichlorobenzene	2360		µg/kg wet	330	3330		71	40-130		
1,3-Dichlorobenzene	1990		µg/kg wet	330	3330		60	40-130		
1,4-Dichlorobenzene	2310		µg/kg wet	330	3330		69	40-130		
3,3'-Dichlorobenzidine	2150		µg/kg wet	330	3330		65	40-130		
2,4-Dichlorophenol	2160		µg/kg wet	330	3330		65	40-130		
Diethyl phthalate	2970		µg/kg wet	330	3330		89	40-130		
Dimethyl phthalate	2720		µg/kg wet	330	3330		82	40-130		
2,4-Dimethylphenol	2180		µg/kg wet	330	3330		65	40-130		
Di-n-butyl phthalate	3200		µg/kg wet	330	3330		96	40-130		
4,6-Dinitro-2-methylphenol	2710		µg/kg wet	330	3330		81	40-130		
2,4-Dinitrophenol	3050		µg/kg wet	330	3330		91	40-130		
2,4-Dinitrotoluene	2770		µg/kg wet	330	3330		83	40-130		
2,6-Dinitrotoluene	2840		µg/kg wet	330	3330		85	40-130		
Di-n-octyl phthalate	3930		µg/kg wet	330	3330		118	40-130		
Fluoranthene	3060		µg/kg wet	330	3330		92	40-130		
Fluorene	2550		µg/kg wet	330	3330		76	40-130		
Hexachlorobenzene	2550		µg/kg wet	330	3330		76	40-130		
Hexachlorobutadiene	2160		µg/kg wet	330	3330		65	40-130		
Hexachlorocyclopentadiene	2250		µg/kg wet	330	3330		67	40-130		
Hexachloroethane	2540		µg/kg wet	330	3330		76	40-130		
Indeno (1,2,3-cd) pyrene	3170		µg/kg wet	330	3330		95	40-130		
1-Methylnaphthalene	2540		µg/kg wet	330	3330		76	40-140		
Isophorone	2280		µg/kg wet	330	3330		68	40-130		
2-Methylnaphthalene	3030		µg/kg wet	330	3330		91	40-130		
2-Methylphenol	2250		µg/kg wet	330	3330		68	40-130		
3 & 4-Methylphenol	2350		µg/kg wet	330	3330		70	40-130		
Naphthalene	2360		µg/kg wet	330	3330		71	40-130		
2-Nitroaniline	2750		µg/kg wet	330	3330		82	40-130		
3-Nitroaniline	2430		µg/kg wet	330	3330		73	40-130		
4-Nitroaniline	2530		µg/kg wet	1320	3330		76	40-130		
Nitrobenzene	2460		µg/kg wet	330	3330		74	40-130		
2-Nitrophenol	2210		µg/kg wet	330	3330		66	40-130		
4-Nitrophenol	2170		µg/kg wet	1320	3330		65	40-130		
N-Nitrosodimethylamine	2050		µg/kg wet	330	3330		62	40-130		
N-Nitrosodi-n-propylamine	2730		µg/kg wet	330	3330		82	40-130		
N-Nitrosodiphenylamine	2920		µg/kg wet	330	3330		88	40-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A									
<u>LCS (8080685-BS1)</u>									
Prepared & Analyzed: 11-Aug-08									
Pentachlorophenol	2670		µg/kg wet	330	3330		80 40-130		
Phenanthrene	2880		µg/kg wet	330	3330		86 40-130		
Phenol	2480		µg/kg wet	330	3330		74 40-130		
Pyrene	2420		µg/kg wet	330	3330		72 40-130		
Pyridine	1050		µg/kg wet	330	3330		31 0-130		
1,2,4-Trichlorobenzene	2010		µg/kg wet	330	3330		60 40-130		
2,4,5-Trichlorophenol	2130		µg/kg wet	330	3330		64 40-130		
2,4,6-Trichlorophenol	2190		µg/kg wet	330	3330		66 40-130		
Pentachloronitrobenzene	2880		µg/kg wet	330	3330		86 40-140		
1,2,4,5-Tetrachlorobenzene	2350		µg/kg wet	330	3330		70 40-140		
Surrogate: 2-Fluorobiphenyl	2480		µg/kg wet		3330		74 30-130		
Surrogate: 2-Fluorophenol	1970		µg/kg wet		3330		59 15-110		
Surrogate: Nitrobenzene-d5	2550		µg/kg wet		3330		77 30-130		
Surrogate: Phenol-d5	2310		µg/kg wet		3330		69 15-110		
Surrogate: Terphenyl-d14	2170		µg/kg wet		3330		65 30-130		
Surrogate: 2,4,6-Tribromophenol	3050		µg/kg wet		3330		91 15-110		
<u>Duplicate (8080685-DUP1)</u> Source: SA82843-01									
Prepared: 11-Aug-08 Analyzed: 12-Aug-08									
Acenaphthene	BRL		µg/kg dry	174		BRL			50
Acenaphthylene	BRL		µg/kg dry	174		BRL			50
Aniline	BRL		µg/kg dry	174		BRL			50
Anthracene	26.0	J	µg/kg dry	174		BRL			50
Atrazine	BRL		µg/kg dry	174		BRL			50
Azobenzene/Diphenyldiazine	BRL		µg/kg dry	174		BRL			50
Benzidine	BRL		µg/kg dry	174		BRL			50
Benzo (a) anthracene	59.0	J	µg/kg dry	174		54.0		9	50
Benzo (a) pyrene	72.7	J	µg/kg dry	174		71.6		2	50
Benzo (b) fluoranthene	59.7	J	µg/kg dry	174		61.4		3	50
Benzo (g,h,i) perylene	40.0	J	µg/kg dry	174		44.6		11	50
Benzo (k) fluoranthene	73.7	J	µg/kg dry	174		74.4		0.9	50
Benzoic acid	BRL		µg/kg dry	174		BRL			50
Benzyl alcohol	BRL		µg/kg dry	174		BRL			50
Bis(2-chloroethoxy)methane	BRL		µg/kg dry	174		BRL			50
Bis(2-chloroethyl)ether	BRL		µg/kg dry	174		BRL			50
Bis(2-chloroisopropyl)ether	BRL		µg/kg dry	174		BRL			50
Bis(2-ethylhexyl)phthalate	BRL		µg/kg dry	174		BRL			50
4-Bromophenyl phenyl ether	BRL		µg/kg dry	174		BRL			50
Butyl benzyl phthalate	BRL		µg/kg dry	174		BRL			50
Carbazole	BRL		µg/kg dry	174		BRL			50
4-Chloro-3-methylphenol	BRL		µg/kg dry	174		BRL			50
4-Chloroaniline	BRL		µg/kg dry	174		BRL			50
2-Chloronaphthalene	BRL		µg/kg dry	174		BRL			50
2-Chlorophenol	BRL		µg/kg dry	174		BRL			50
4-Chlorophenyl phenyl ether	BRL		µg/kg dry	174		BRL			50
Chrysene	61.4	J	µg/kg dry	174		55.4		10	50
Dibenzo (a,h) anthracene	BRL		µg/kg dry	174		BRL			50
Dibenzofuran	BRL		µg/kg dry	174		BRL			50
1,2-Dichlorobenzene	BRL		µg/kg dry	174		BRL			50
1,3-Dichlorobenzene	BRL		µg/kg dry	174		BRL			50
1,4-Dichlorobenzene	BRL		µg/kg dry	174		BRL			50

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* Reportable Detection Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A									
Duplicate (8080685-DUP1)		Source: SA82843-01							
Prepared: 11-Aug-08 Analyzed: 12-Aug-08									
3,3'-Dichlorobenzidine	BRL		µg/kg dry	174		BRL			50
2,4-Dichlorophenol	BRL		µg/kg dry	174		BRL			50
Diethyl phthalate	BRL		µg/kg dry	174		BRL			50
Dimethyl phthalate	BRL		µg/kg dry	174		BRL			50
2,4-Dimethylphenol	BRL		µg/kg dry	174		BRL			50
Di-n-butyl phthalate	BRL		µg/kg dry	174		BRL			50
4,6-Dinitro-2-methylphenol	BRL		µg/kg dry	174		BRL			50
2,4-Dinitrophenol	BRL		µg/kg dry	174		BRL			50
2,4-Dinitrotoluene	BRL		µg/kg dry	174		BRL			50
2,6-Dinitrotoluene	BRL		µg/kg dry	174		BRL			50
Di-n-octyl phthalate	BRL		µg/kg dry	174		BRL			50
Fluoranthene	152	J	µg/kg dry	174		110		32	50
Fluorene	BRL		µg/kg dry	174		BRL			50
Hexachlorobenzene	BRL		µg/kg dry	174		BRL			50
Hexachlorobutadiene	BRL		µg/kg dry	174		BRL			50
Hexachlorocyclopentadiene	BRL		µg/kg dry	174		BRL			50
Hexachloroethane	BRL		µg/kg dry	174		BRL			50
Indeno (1,2,3-cd) pyrene	36.9	J	µg/kg dry	174		40.3		9	50
Isophorone	BRL		µg/kg dry	174		BRL			50
1-Methylnaphthalene	BRL		µg/kg dry	174		BRL			50
2-Methylnaphthalene	BRL		µg/kg dry	174		BRL			50
2-Methylphenol	BRL		µg/kg dry	174		BRL			50
3 & 4-Methylphenol	BRL		µg/kg dry	174		BRL			50
Naphthalene	BRL		µg/kg dry	174		BRL			50
2-Nitroaniline	BRL		µg/kg dry	174		BRL			50
3-Nitroaniline	BRL		µg/kg dry	174		BRL			50
4-Nitroaniline	BRL		µg/kg dry	695		BRL			50
Nitrobenzene	BRL		µg/kg dry	174		BRL			50
2-Nitrophenol	BRL		µg/kg dry	174		BRL			50
4-Nitrophenol	BRL		µg/kg dry	695		BRL			50
N-Nitrosodimethylamine	BRL		µg/kg dry	174		BRL			50
N-Nitrosodi-n-propylamine	BRL		µg/kg dry	174		BRL			50
N-Nitrosodiphenylamine	BRL		µg/kg dry	174		BRL			50
Pentachlorophenol	BRL		µg/kg dry	174		BRL			50
Phenanthrene	120	J,QM4	µg/kg dry	174		49.5		83	50
Phenol	BRL		µg/kg dry	174		BRL			50
Pyrene	112	J	µg/kg dry	174		94.7		17	50
Pyridine	BRL		µg/kg dry	174		BRL			50
1,2,4-Trichlorobenzene	BRL		µg/kg dry	174		BRL			50
2,4,5-Trichlorophenol	BRL		µg/kg dry	174		BRL			50
2,4,6-Trichlorophenol	BRL		µg/kg dry	174		BRL			50
Pentachloronitrobenzene	BRL		µg/kg dry	174		BRL			50
1,2,4,5-Tetrachlorobenzene	BRL		µg/kg dry	174		BRL			50
Surrogate: 2-Fluorobiphenyl	1030		µg/kg dry		1760		58	30-130	
Surrogate: 2-Fluorophenol	770		µg/kg dry		1760		44	15-110	
Surrogate: Nitrobenzene-d5	983		µg/kg dry		1760		56	30-130	
Surrogate: Phenol-d5	874		µg/kg dry		1760		50	15-110	
Surrogate: Terphenyl-d14	878		µg/kg dry		1760		50	30-130	
Surrogate: 2,4,6-Tribromophenol	1220		µg/kg dry		1760		69	15-110	
Matrix Spike (8080685-MS1)		Source: SA82843-01							

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* Reportable Detection Limit

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Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080685 - SW846 3545A									
Prepared: 11-Aug-08 Analyzed: 12-Aug-08									
Acenaphthene	1400		µg/kg dry	172	1740	BRL	81 40-140		
Benzo (b) fluoranthene	1990		µg/kg dry	172	1740	61.4	111 40-140		
Benzo (k) fluoranthene	1400		µg/kg dry	172	1740	74.4	76 40-140		
4-Chloro-3-methylphenol	1080		µg/kg dry	172	1740	BRL	62 30-130		
2-Chlorophenol	1050		µg/kg dry	172	1740	BRL	61 30-130		
Chrysene	1000		µg/kg dry	172	1740	55.4	55 40-140		
1,4-Dichlorobenzene	1100		µg/kg dry	172	1740	BRL	63 40-140		
Indeno (1,2,3-cd) pyrene	1600		µg/kg dry	172	1740	40.3	90 40-140		
Naphthalene	1120		µg/kg dry	172	1740	BRL	65 40-140		
4-Nitrophenol	990		µg/kg dry	688	1740	BRL	57 30-130		
N-Nitrosodi-n-propylamine	1290		µg/kg dry	172	1740	BRL	74 40-140		
Pentachlorophenol	1290		µg/kg dry	172	1740	BRL	74 30-130		
Phenol	1180		µg/kg dry	172	1740	BRL	68 30-130		
Pyrene	1270		µg/kg dry	172	1740	94.7	68 40-140		
1,2,4-Trichlorobenzene	963		µg/kg dry	172	1740	BRL	55 40-140		
Surrogate: 2-Fluorobiphenyl	1190		µg/kg dry		1740		69 30-130		
Surrogate: 2-Fluorophenol	913		µg/kg dry		1740		53 15-110		
Surrogate: Nitrobenzene-d5	1210		µg/kg dry		1740		69 30-130		
Surrogate: Phenol-d5	1060		µg/kg dry		1740		61 15-110		
Surrogate: Terphenyl-dl4	1070		µg/kg dry		1740		62 30-130		
Surrogate: 2,4,6-Tribromophenol	1520		µg/kg dry		1740		88 15-110		
Matrix Spike Dup (8080685-MSD1) Source: SA82843-01									
Prepared: 11-Aug-08 Analyzed: 12-Aug-08									
Acenaphthene	1370		µg/kg dry	175	1770	BRL	77 40-140	4	30
Benzo (b) fluoranthene	2000		µg/kg dry	175	1770	61.4	109 40-140	2	30
Benzo (k) fluoranthene	1460		µg/kg dry	175	1770	74.4	78 40-140	3	30
4-Chloro-3-methylphenol	1050		µg/kg dry	175	1770	BRL	60 30-130	4	30
2-Chlorophenol	1030		µg/kg dry	175	1770	BRL	58 30-130	4	30
Chrysene	1230		µg/kg dry	175	1770	55.4	66 40-140	19	30
1,4-Dichlorobenzene	1100		µg/kg dry	175	1770	BRL	62 40-140	2	30
Indeno (1,2,3-cd) pyrene	1580		µg/kg dry	175	1770	40.3	87 40-140	3	30
Naphthalene	1110		µg/kg dry	175	1770	BRL	62 40-140	3	30
4-Nitrophenol	825		µg/kg dry	701	1770	BRL	47 30-130	20	30
N-Nitrosodi-n-propylamine	1260		µg/kg dry	175	1770	BRL	71 40-140	5	30
Pentachlorophenol	1290		µg/kg dry	175	1770	BRL	73 30-130	2	30
Phenol	1140		µg/kg dry	175	1770	BRL	64 30-130	5	30
Pyrene	1320		µg/kg dry	175	1770	94.7	69 40-140	2	30
1,2,4-Trichlorobenzene	956		µg/kg dry	175	1770	BRL	54 40-140	3	30
Surrogate: 2-Fluorobiphenyl	1190		µg/kg dry		1770		67 30-130		
Surrogate: 2-Fluorophenol	868		µg/kg dry		1770		49 15-110		
Surrogate: Nitrobenzene-d5	1200		µg/kg dry		1770		68 30-130		
Surrogate: Phenol-d5	1010		µg/kg dry		1770		57 15-110		
Surrogate: Terphenyl-dl4	1050		µg/kg dry		1770		59 30-130		
Surrogate: 2,4,6-Tribromophenol	1490		µg/kg dry		1770		84 15-110		
Batch 8080976 - SW846 3535									
Blank (8080976-BLK1)									
Prepared: 13-Aug-08 Analyzed: 14-Aug-08									
1,4-Dichlorobenzene	BRL		µg/l	5.00					
2,4-Dinitrotoluene	BRL		µg/l	5.00					
Hexachlorobenzene	BRL		µg/l	5.00					
Hexachlorobutadiene	BRL		µg/l	5.00					
Hexachloroethane	BRL		µg/l	5.00					

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GCMS - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080976 - SW846 3535										
Blank (8080976-BLK1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
2-Methylphenol	BRL		µg/l	5.00						
3 & 4-Methylphenol	BRL		µg/l	10.0						
Nitrobenzene	BRL		µg/l	5.00						
Pentachlorophenol	BRL		µg/l	5.00						
Pyridine	BRL		µg/l	5.00						
2,4,5-Trichlorophenol	BRL		µg/l	5.00						
2,4,6-Trichlorophenol	BRL		µg/l	5.00						
<i>Surrogate: 2-Fluorobiphenyl</i>	167		µg/l		200		84	30-130		
<i>Surrogate: 2-Fluorophenol</i>	54.5		µg/l		200		27	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	142		µg/l		200		71	30-130		
<i>Surrogate: Terphenyl-dl4</i>	157		µg/l		200		79	30-130		
LCS (8080976-BS1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
1,4-Dichlorobenzene	110		µg/l	5.00	200		55	40-140		
2,4-Dinitrotoluene	156		µg/l	5.00	200		78	40-140		
Hexachlorobenzene	169		µg/l	5.00	200		85	40-140		
Hexachlorobutadiene	114		µg/l	5.00	200		57	40-140		
Hexachloroethane	128		µg/l	5.00	200		64	40-140		
2-Methylphenol	107		µg/l	5.00	200		54	30-130		
3 & 4-Methylphenol	127		µg/l	10.0	200		64	40-130		
Nitrobenzene	126		µg/l	5.00	200		63	40-140		
Pentachlorophenol	203		µg/l	5.00	200		101	30-130		
Pyridine	8.92	QC2	µg/l	5.00	200		4	40-140		
2,4,5-Trichlorophenol	143		µg/l	5.00	200		71	30-130		
2,4,6-Trichlorophenol	155		µg/l	5.00	200		77	30-130		
<i>Surrogate: 2-Fluorobiphenyl</i>	151		µg/l		200		76	30-130		
<i>Surrogate: 2-Fluorophenol</i>	41.8		µg/l		200		21	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	126		µg/l		200		63	30-130		
<i>Surrogate: Terphenyl-dl4</i>	134		µg/l		200		67	30-130		
Duplicate (8080976-DUP1) Source: SA82632-01										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
1,4-Dichlorobenzene	BRL		µg/l	5.00		BRL				50
2,4-Dinitrotoluene	BRL		µg/l	5.00		BRL				50
Hexachlorobenzene	BRL		µg/l	5.00		BRL				50
Hexachlorobutadiene	BRL		µg/l	5.00		BRL				50
Hexachloroethane	BRL		µg/l	5.00		BRL				50
2-Methylphenol	BRL		µg/l	5.00		BRL				50
3 & 4-Methylphenol	BRL		µg/l	10.0		BRL				50
Nitrobenzene	BRL		µg/l	5.00		BRL				50
Pentachlorophenol	BRL		µg/l	5.00		BRL				50
Pyridine	BRL		µg/l	5.00		BRL				50
2,4,5-Trichlorophenol	BRL		µg/l	5.00		BRL				50
2,4,6-Trichlorophenol	BRL		µg/l	5.00		BRL				50
<i>Surrogate: 2-Fluorobiphenyl</i>	138		µg/l		200		69	30-130		
<i>Surrogate: 2-Fluorophenol</i>	149		µg/l		200		74	15-110		
<i>Surrogate: Nitrobenzene-d5</i>	148		µg/l		200		74	30-130		
<i>Surrogate: Terphenyl-dl4</i>	109		µg/l		200		55	30-130		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080977 - SW846 3535										
Blank (8080977-BLK1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
gamma-BHC (Lindane)	BRL		µg/l	0.040						
gamma-BHC (Lindane) [2C]	BRL		µg/l	0.040						
Heptachlor	BRL		µg/l	0.040						
Heptachlor [2C]	BRL		µg/l	0.040						
Heptachlor epoxide	BRL		µg/l	0.040						
Heptachlor Epoxide [2C]	BRL		µg/l	0.040						
Dieldrin	BRL		µg/l	0.040						
Dieldrin [2C]	BRL		µg/l	0.040						
4,4'-DDE (p,p')	BRL		µg/l	0.040						
4,4'-DDE (p,p') [2C]	BRL		µg/l	0.040						
Endrin	BRL		µg/l	0.040						
Endrin [2C]	BRL		µg/l	0.040						
4,4'-DDD (p,p')	BRL		µg/l	0.040						
4,4'-DDD (p,p') [2C]	BRL		µg/l	0.040						
4,4'-DDT (p,p')	BRL		µg/l	0.040						
4,4'-DDT (p,p') [2C]	BRL		µg/l	0.040						
Methoxychlor	BRL		µg/l	0.040						
Methoxychlor [2C]	BRL		µg/l	0.040						
Toxaphene	BRL		µg/l	0.200						
Toxaphene [2C]	BRL		µg/l	0.200						
Chlordane	BRL		µg/l	0.200						
Chlordane [2C]	BRL		µg/l	0.200						
<i>Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)</i>	0.0610		µg/l		0.0800		76	30-150		
<i>Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:</i>	0.107		µg/l		0.0800		133	30-150		
<i>Surrogate: Decachlorobiphenyl (Sr)</i>	0.0582		µg/l		0.0800		73	30-150		
<i>Surrogate: Decachlorobiphenyl (Sr) [2C]</i>	0.0836		µg/l		0.0800		104	30-150		
LCS (8080977-BS1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
gamma-BHC (Lindane)	0.060		µg/l	0.040	0.0800		75	40-140		
gamma-BHC (Lindane) [2C]	0.057		µg/l	0.040	0.0800		71	40-140		
Heptachlor	0.070		µg/l	0.040	0.0800		87	40-140		
Heptachlor [2C]	0.063		µg/l	0.040	0.0800		79	40-140		
Heptachlor epoxide	0.065		µg/l	0.040	0.0800		81	40-140		
Heptachlor Epoxide [2C]	0.066		µg/l	0.040	0.0800		82	40-140		
Dieldrin	0.065		µg/l	0.040	0.0800		81	40-140		
Dieldrin [2C]	0.068		µg/l	0.040	0.0800		84	40-140		
4,4'-DDE (p,p')	0.066		µg/l	0.040	0.0800		83	40-140		
4,4'-DDE (p,p') [2C]	0.071		µg/l	0.040	0.0800		88	40-140		
Endrin	0.066		µg/l	0.040	0.0800		83	40-140		
Endrin [2C]	0.071		µg/l	0.040	0.0800		89	40-140		
4,4'-DDD (p,p')	0.061		µg/l	0.040	0.0800		76	40-140		
4,4'-DDD (p,p') [2C]	0.069		µg/l	0.040	0.0800		87	40-140		
4,4'-DDT (p,p')	0.061		µg/l	0.040	0.0800		77	40-140		
4,4'-DDT (p,p') [2C]	0.062		µg/l	0.040	0.0800		78	40-140		
Methoxychlor	0.073		µg/l	0.040	0.0800		92	40-140		
Methoxychlor [2C]	0.072		µg/l	0.040	0.0800		90	40-140		
<i>Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)</i>	0.0385		µg/l		0.0800		48	30-150		
<i>Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:</i>	0.0413		µg/l		0.0800		52	30-150		
<i>Surrogate: Decachlorobiphenyl (Sr)</i>	0.0517		µg/l		0.0800		65	30-150		
<i>Surrogate: Decachlorobiphenyl (Sr) [2C]</i>	0.0564		µg/l		0.0800		71	30-150		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit
Batch 8080977 - SW846 3535										
<u>LCS Dup (8080977-BSD1)</u>										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
gamma-BHC (Lindane)	0.059		µg/l	0.040	0.0800		74	40-140	2	30
gamma-BHC (Lindane) [2C]	0.055		µg/l	0.040	0.0800		69	40-140	3	30
Heptachlor	0.068		µg/l	0.040	0.0800		85	40-140	2	30
Heptachlor [2C]	0.060		µg/l	0.040	0.0800		76	40-140	5	30
Heptachlor epoxide	0.064		µg/l	0.040	0.0800		80	40-140	0.6	30
Heptachlor Epoxide [2C]	0.060		µg/l	0.040	0.0800		75	40-140	9	30
Dieldrin	0.065		µg/l	0.040	0.0800		81	40-140	0.1	30
Dieldrin [2C]	0.060		µg/l	0.040	0.0800		76	40-140	11	30
4,4'-DDE (p,p')	0.067		µg/l	0.040	0.0800		83	40-140	0.08	30
4,4'-DDE (p,p') [2C]	0.066		µg/l	0.040	0.0800		83	40-140	6	30
Endrin	0.065		µg/l	0.040	0.0800		82	40-140	1	30
Endrin [2C]	0.062		µg/l	0.040	0.0800		77	40-140	14	30
4,4'-DDD (p,p')	0.063		µg/l	0.040	0.0800		79	40-140	3	30
4,4'-DDD (p,p') [2C]	0.072		µg/l	0.040	0.0800		90	40-140	3	30
4,4'-DDT (p,p')	0.058		µg/l	0.040	0.0800		73	40-140	5	30
4,4'-DDT (p,p') [2C]	0.059		µg/l	0.040	0.0800		74	40-140	5	30
Methoxychlor	0.061		µg/l	0.040	0.0800		76	40-140	18	30
Methoxychlor [2C]	0.069		µg/l	0.040	0.0800		86	40-140	5	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.0383		µg/l		0.0800		48	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.0402		µg/l		0.0800		50	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.0580		µg/l		0.0800		73	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.0596		µg/l		0.0800		74	30-150		
<u>Duplicate (8080977-DUP1)</u> Source: SA82632-01										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
gamma-BHC (Lindane)	BRL		µg/l	0.080		BRL				30
gamma-BHC (Lindane) [2C]	BRL		µg/l	0.080		BRL				30
Heptachlor	BRL		µg/l	0.080		BRL				30
Heptachlor [2C]	BRL		µg/l	0.080		BRL				30
Heptachlor epoxide	BRL		µg/l	0.080		BRL				30
Heptachlor Epoxide [2C]	BRL		µg/l	0.080		BRL				30
Dieldrin	BRL		µg/l	0.080		BRL				30
Dieldrin [2C]	BRL		µg/l	0.080		BRL				30
4,4'-DDE (p,p')	BRL		µg/l	0.080		BRL				30
4,4'-DDE (p,p') [2C]	BRL		µg/l	0.080		BRL				30
Endrin	BRL		µg/l	0.080		BRL				30
Endrin [2C]	BRL		µg/l	0.080		BRL				30
4,4'-DDD (p,p')	BRL		µg/l	0.080		BRL				30
4,4'-DDD (p,p') [2C]	BRL		µg/l	0.080		BRL				30
4,4'-DDT (p,p')	BRL		µg/l	0.080		BRL				30
4,4'-DDT (p,p') [2C]	BRL		µg/l	0.080		BRL				30
Methoxychlor	BRL		µg/l	0.080		BRL				30
Methoxychlor [2C]	BRL		µg/l	0.080		BRL				30
Toxaphene	BRL		µg/l	0.400		BRL				30
Toxaphene [2C]	BRL		µg/l	0.400		BRL				30
Chlordane	BRL		µg/l	0.400		BRL				30
Chlordane [2C]	BRL		µg/l	0.400		BRL				30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.119		µg/l		0.160		75	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.0994		µg/l		0.160		62	30-150		
Surrogate: Decachlorobiphenyl (Sr)	0.123		µg/l		0.160		77	30-150		
Surrogate: Decachlorobiphenyl (Sr) [2C]	0.111		µg/l		0.160		70	30-150		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Semivolatile Organic Compounds by GC - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080979 - SW846 3535										
Blank (8080979-BLK1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
2,4,5-TP (Silvex)	BRL		µg/l	0.100						
2,4,5-TP (Silvex) [2C]	BRL		µg/l	0.100						
2,4-D	BRL		µg/l	0.100						
2,4-D [2C]	BRL		µg/l	0.100						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.144		µg/l		0.200		72	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.140		µg/l		0.200		70	30-150		
LCS (8080979-BS1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
2,4,5-TP (Silvex)	0.330		µg/l	0.100	0.500		66	40-140		
2,4,5-TP (Silvex) [2C]	0.339		µg/l	0.100	0.500		68	40-140		
2,4-D	0.315		µg/l	0.100	0.500		63	40-140		
2,4-D [2C]	0.308		µg/l	0.100	0.500		62	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.171		µg/l		0.200		86	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.168		µg/l		0.200		84	30-150		
LCS Dup (8080979-BSD1)										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
2,4,5-TP (Silvex)	0.329		µg/l	0.100	0.500		66	40-140	0.3	25
2,4,5-TP (Silvex) [2C]	0.355		µg/l	0.100	0.500		71	40-140	5	25
2,4-D	0.311		µg/l	0.100	0.500		62	40-140	1	25
2,4-D [2C]	0.313		µg/l	0.100	0.500		63	40-140	2	25
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.168		µg/l		0.200		84	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.176		µg/l		0.200		88	30-150		
Duplicate (8080979-DUP1) Source: SA82632-01										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
2,4,5-TP (Silvex)	BRL		µg/l	0.100		BRL				30
2,4,5-TP (Silvex) [2C]	BRL		µg/l	0.100		BRL				30
2,4-D	BRL		µg/l	0.100		BRL				30
2,4-D [2C]	BRL		µg/l	0.100		BRL				30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	0.134		µg/l		0.200		67	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [:	0.137		µg/l		0.200		68	30-150		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080481 - SW846 3050B										
Blank (8080481-BLK1)										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	BRL		mg/kg wet	1.33						
Arsenic	BRL		mg/kg wet	1.33						
Chromium	BRL		mg/kg wet	0.888						
Duplicate (8080481-DUP1) Source: SA82619-01										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	7.92		mg/kg dry	1.41		6.68			17	20
Chromium	16.3		mg/kg dry	0.939		17.6			8	20
Arsenic	2.05		mg/kg dry	1.41		1.99			3	20
Matrix Spike (8080481-MS1) Source: SA82701-01										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	99.1		mg/kg dry	1.37	114	6.81	81	75-125		
Chromium	110		mg/kg dry	0.913	114	11.3	86	75-125		
Arsenic	98.0		mg/kg dry	1.37	114	1.72	84	75-125		
Matrix Spike Dup (8080481-MSD1) Source: SA82701-01										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	113		mg/kg dry	1.53	128	6.81	83	75-125	13	20
Chromium	135	QR7	mg/kg dry	1.02	128	11.3	97	75-125	21	20
Arsenic	111		mg/kg dry	1.53	128	1.72	86	75-125	13	20
Post Spike (8080481-PS1) Source: SA82701-01										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	118		mg/kg dry	1.58	131	6.81	85	80-120		
Arsenic	115		mg/kg dry	1.58	131	1.72	86	80-120		
Chromium	124		mg/kg dry	1.05	131	11.3	86	80-120		
Reference (8080481-SRM1)										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	99.9		mg/kg wet	1.50	113		88	75.3-125.1		
Chromium	57.9		mg/kg wet	1.00	63.0		92	69.9-129.8		
Arsenic	102		mg/kg wet	1.50	114		89	71.1-128.9		
Reference (8080481-SRM2)										
Prepared: 12-Aug-08 Analyzed: 14-Aug-08										
Lead	104		mg/kg wet	1.50	113		92	75.3-125.1		
Arsenic	107		mg/kg wet	1.50	114		94	71.1-128.9		
Chromium	59.2		mg/kg wet	1.00	62.9		94	69.9-129.8		

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* Reportable Detection Limit

BRL = Below Reporting Limit

TCLP Metals by EPA 1311 & 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Batch 8080921 - SW846 3010A									
Blank (8080921-BLK1)									
Prepared & Analyzed: 13-Aug-08									
Lead	BRL		mg/l	0.0150					
Selenium	BRL		mg/l	0.0300					
Silver	BRL		mg/l	0.0100					
Cadmium	BRL		mg/l	0.0050					
Chromium	BRL		mg/l	0.0100					
Arsenic	BRL		mg/l	0.0100					
Barium	BRL		mg/l	0.0100					
LCS (8080921-BS1)									
Prepared & Analyzed: 13-Aug-08									
Lead	2.36		mg/l	0.0150	2.50		95 79.8-110		
Selenium	2.94		mg/l	0.0300	2.50		118 81-134		
Chromium	2.55		mg/l	0.0100	2.50		102 84.6-114		
Cadmium	2.50		mg/l	0.0050	2.50		100 86.9-113		
Silver	2.66		mg/l	0.0100	2.50		106 81-129		
Arsenic	2.73		mg/l	0.0100	2.50		109 81.2-125		
Barium	2.59		mg/l	0.0100	2.50		104 84.1-117		
LCS Dup (8080921-BSD1)									
Prepared & Analyzed: 13-Aug-08									
Selenium	2.94		mg/l	0.0300	2.50		117 81-134	0.2	20
Lead	2.36		mg/l	0.0150	2.50		94 79.8-110	0.3	20
Cadmium	2.50		mg/l	0.0050	2.50		100 86.9-113	0.06	20
Chromium	2.56		mg/l	0.0100	2.50		102 84.6-114	0.4	20
Arsenic	2.73		mg/l	0.0100	2.50		109 81.2-125	0	20
Silver	2.68		mg/l	0.0100	2.50		107 81-129	0.7	104
Barium	2.58		mg/l	0.0100	2.50		103 84.1-117	0.2	20
Duplicate (8080921-DUP1) Source: SA82632-01									
Prepared & Analyzed: 13-Aug-08									
Lead	0.0502	QR8	mg/l	0.0150		0.0647		25	20
Selenium	BRL		mg/l	0.0300		BRL			20
Arsenic	BRL		mg/l	0.0100		BRL			20
Cadmium	0.0013	J.QR8	mg/l	0.0050		0.0024		57	20
Chromium	0.117		mg/l	0.0100		0.131		11	20
Silver	BRL		mg/l	0.0100		BRL			20
Barium	0.711		mg/l	0.0100		0.698		2	20
Matrix Spike (8080921-MS1) Source: SA82817-02									
Prepared & Analyzed: 13-Aug-08									
Lead	5.08		mg/l	0.0150	2.50	2.74	94 67.6-120		
Selenium	2.94		mg/l	0.0300	2.50	BRL	118 79-137		
Silver	2.68		mg/l	0.0100	2.50	BRL	107 72.2-134		
Cadmium	2.47		mg/l	0.0050	2.50	0.0023	99 79.4-118		
Arsenic	2.74		mg/l	0.0100	2.50	BRL	110 78.8-128		
Chromium	2.54		mg/l	0.0100	2.50	BRL	102 74.9-120		
Barium	3.82		mg/l	0.0100	2.50	1.19	105 78.4-121		
Matrix Spike Dup (8080921-MSD1) Source: SA82817-02									
Prepared & Analyzed: 13-Aug-08									
Selenium	2.92		mg/l	0.0300	2.50	BRL	117 79-137	1	20
Lead	5.08		mg/l	0.0150	2.50	2.74	93 67.6-120	0.1	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

TCLP Metals by EPA 1311 & 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080921 - SW846 3010A										
<u>Matrix Spike Dup (8080921-MSD1)</u> Source: SA82817-02										
Prepared & Analyzed: 13-Aug-08										
Silver	2.66		mg/l	0.0100	2.50	BRL	107	72.2-134	0.7	20
Arsenic	2.70		mg/l	0.0100	2.50	BRL	108	78.8-128	1	20
Cadmium	2.46		mg/l	0.0050	2.50	0.0023	98	79.4-118	0.7	20
Chromium	2.52		mg/l	0.0100	2.50	BRL	101	74.9-120	1	20
Barium	3.74		mg/l	0.0100	2.50	1.19	102	78.4-121	2	20
<u>Post Spike (8080921-PS1)</u> Source: SA82817-02										
Prepared & Analyzed: 13-Aug-08										
Selenium	2.98		mg/l	0.0300	2.50	BRL	119	82.2-135		
Lead	5.15		mg/l	0.0150	2.50	2.74	97	71.5-120		
Arsenic	2.77		mg/l	0.0100	2.50	BRL	111	81.3-129		
Cadmium	2.52		mg/l	0.0050	2.50	0.0023	101	83.2-117		
Chromium	2.59		mg/l	0.0100	2.50	BRL	103	78.6-119		
Silver	2.73		mg/l	0.0100	2.50	BRL	109	84.3-130		
Barium	3.81		mg/l	0.0100	2.50	1.19	105	82.4-119		
Batch 8080922 - EPA200/SW7000 Series										
<u>Blank (8080922-BLK1)</u>										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	BRL		mg/l	0.00020						
<u>LCS (8080922-BS1)</u>										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	0.00451		mg/l	0.00020	0.00500		90	57-119		
<u>Duplicate (8080922-DUP1)</u> Source: SA82632-01										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	BRL		mg/l	0.00020		BRL				20
<u>Matrix Spike (8080922-MS1)</u> Source: SA82817-02										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	0.00463		mg/l	0.00020	0.00500	0.00008	91	54.7-121		
<u>Matrix Spike Dup (8080922-MSD1)</u> Source: SA82817-02										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	0.00464		mg/l	0.00020	0.00500	0.00008	91	54.7-121	0.2	20
<u>Post Spike (8080922-PS1)</u> Source: SA82817-02										
Prepared: 13-Aug-08 Analyzed: 14-Aug-08										
Mercury	0.00453		mg/l	0.00020	0.00500	0.00008	89	54.5-122		

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080657 - General Preparation										
<u>Duplicate (8080657-DUP1)</u> Source: SA82619-02										
Prepared & Analyzed: 08-Aug-08										
% Solids	91.6		%			91.9			0.4	20

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* Reportable Detection Limit

BRL = Below Reporting Limit

Toxicity Characteristics - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8080422 - General Preparation										
<u>Duplicate (8080422-DUP1)</u> Source: SA82615-06										
Prepared & Analyzed: 06-Aug-08										
pH	8.58		pH Units			8.53			0.6	5
<u>Reference (8080422-SRM1)</u>										
Prepared & Analyzed: 06-Aug-08										
pH	7.07		pH Units		7.00		101	97.5-102.5		
<u>Reference (8080422-SRM2)</u>										
Prepared & Analyzed: 06-Aug-08										
pH	7.09		pH Units		7.00		101	97.5-102.5		
Batch 8080650 - General Preparation										
<u>Blank (8080650-BLK1)</u>										
Prepared & Analyzed: 08-Aug-08										
Reactivity	Nonreactive		mg/kg wet							
Reactive Cyanide	BRL		mg/kg wet	25.0						
Reactive Sulfide	BRL		mg/kg wet	50.0						
<u>Duplicate (8080650-DUP1)</u> Source: SA82640-08										
Prepared & Analyzed: 08-Aug-08										
Reactivity	Nonreactive		mg/kg dry			0.00				200
Reactive Cyanide	BRL		mg/kg dry	25.0		BRL				35
Reactive Sulfide	BRL		mg/kg dry	50.0		BRL				35
<u>Reference (8080650-SRM1)</u>										
Prepared & Analyzed: 08-Aug-08										
Reactive Sulfide	173		mg/kg wet	50.0	670		26	0-200		
<u>Reference (8080650-SRM2)</u>										
Prepared & Analyzed: 08-Aug-08										
Reactive Cyanide	4.69		mg/kg wet	25.0	10.0		47	0-200		
Batch 8080863 - General Preparation										
<u>Duplicate (8080863-DUP1)</u> Source: SA82857-01										
Prepared & Analyzed: 12-Aug-08										
Flashpoint	> 200		°F			0				35
<u>Reference (8080863-SRM1)</u>										
Prepared & Analyzed: 12-Aug-08										
Flashpoint	81		°F		81.0		100	95-105		

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* Reportable Detection Limit

BRL = Below Reporting Limit

Notes and Definitions

IgHT	A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.
pHHT	A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for pH is not specified within the method other than to state that the samples should be analyzed as soon as possible.
QC1	Analyte out of acceptance range.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM4	Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.
QR5	RPD out of acceptance range.
QR7	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for batch duplicate.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
VC10	The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio. This variance may affect the final reporting limit.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2), (4), and (5); however, Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Rebecca Merz

MADEP MCP ANALYTICAL METHOD REPORT CERTIFICATION FORM

Laboratory Name: Spectrum Analytical, Inc. - Agawam, MA			Project #: 127-13417-08001		
Project Location: Organix - 240 Salem St - Woburn, MA			MADEP RTN ¹ :		
This form provides certifications for the following data set: SA82632-01 through SA82632-05					
Sample matrices:		Soil			
MCP SW-846 Methods Used	<input checked="" type="checkbox"/> 8260B	<input checked="" type="checkbox"/> 8151A	<input type="checkbox"/> 8330	<input checked="" type="checkbox"/> 6010B	<input checked="" type="checkbox"/> 7470A/1A
	<input checked="" type="checkbox"/> 8270C	<input checked="" type="checkbox"/> 8081A	<input type="checkbox"/> VPH	<input type="checkbox"/> 6020	<input type="checkbox"/> 9014M ²
	<input type="checkbox"/> 8082	<input type="checkbox"/> 8021B	<input type="checkbox"/> EPH	<input type="checkbox"/> 7000S ³	<input type="checkbox"/> 7196A
<small>1 List Release Tracking Number (RTN), if known 2 M - SW-846 Method 9014 or MADEP Physiologically Available Cyanide (PAC) Method 3 S - SW-846 Methods 7000 Series List individual method and analyte</small>					
<i>An affirmative response to questions A, B, C and D is required for "Presumptive Certainty" status</i>					
A	Were all samples received by the laboratory in a condition consistent with that described on the Chain of Custody documentation for the data set?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C	Does the data included in this report meet all the analytical requirements for "Presumptive Certainty", as described in Section 2.0 (a), (b), (c) and (d) of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
D	<u>VPH and EPH methods only:</u> Was the VPH or EPH method conducted without significant modifications (see Section 11.3 of respective methods)?				<input type="checkbox"/> Yes <input type="checkbox"/> No
<i>A response to questions E and F below is required for "Presumptive Certainty" status</i>					
E	Were all analytical QC performance standards and recommendations for the specified methods achieved?				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>All negative responses are addressed in a case narrative on the cover page of this report.</i>					
<p>I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.</p> <div style="text-align: right; margin-top: 20px;">  Hanibal C. Tayeh, Ph.D. President/Laboratory Director Date: 8/18/2008 </div>					

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SPECTRUM ANALYTICAL, INC.
Featuring
ANALYTICAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed: _____
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Dimitri Gougas

Invoice To: Tetra Tech Lizzo

Project No.: 127-13417-08001

Site Name: Organix

Location: 240 Salem St, Uxbridge State: MA

Sampler(s): Dimitri Gougas; Pen Hynick

Project Mgr.: _____

P.O. No.: _____ RQN: _____

1=Na₂S₂O₅ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9= None 10= _____

Containers:

Analyses:

QA Reporting Notes:
(check if needed)

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers:				Analyses:							QA Reporting Notes: (check if needed)	
							# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	TCMP Metals	TCMP Herbicides	TCMP Pesticides	TCMP Semi-Vol	TCMP Vol	pH Conductivity	Flowpoint Igittabody		Reactivity
<u>SAB203701</u>	<u>B201-Comp.</u>	<u>8-4-08</u>	<u>1:45 pm</u>	<u>C</u>	<u>SO</u>	<u>9</u>	<u>12</u>					<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>/</u>	<u>X</u>
<u>02</u>	<u>B201-5.5-6</u>		<u>1:10 pm</u>	<u>G</u>	<u>SO</u>	<u>7/9</u>	<u>2</u>	<u>2</u>	<u>X</u>	<u>X</u>									<u>X</u>
<u>03</u>	<u>B201-6-6.5</u>		<u>1:15 pm</u>	<u>G</u>	<u>SO</u>	<u>9</u>	<u>1</u>												<u>X</u>
<u>04</u>	<u>B201-6.5-7</u>		<u>1:25 pm</u>	<u>G</u>	<u>SO</u>	<u>9</u>	<u>1</u>												<u>X</u>
<u>05</u>	<u>B201-7-7.5</u>		<u>1:30 pm</u>	<u>G</u>	<u>SO</u>	<u>9</u>	<u>1</u>												<u>X</u>

- Provide MA DEP MCP CAM Report
- Provide CT DPH RCP Report

- QA/QC Reporting Level
- Standard No QC
 - Other _____

State specific reporting standards: _____

- Fax results when available to (_____) _____
- E-mail to dmitri.gougas@tetratech.com
- EDD Format pdf, xls, MS Access

Relinquished by: Janet Harris Received by: Bill Heston Date: 8/5/08 Time: 1042

Bill Heston Michael Graham 8-5-08 1558

Condition upon receipt: Iced Ambient 3.4

Report Date:
10-Jun-08 16:40



- Final Report
 Re-Issued Report
 Revised Report

SPECTRUM ANALYTICAL, INC.

Featuring

HANIBAL TECHNOLOGY

Laboratory Report

ENSR Corporation
2 Technology Park Drive
Westford, MA 01886-3140
Attn: Pete Cox

Project: Organix - Woburn, MA
Project 01787006-100

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SA79283-01	B101 0-1	Soil	28-May-08 16:12	29-May-08 09:30
SA79283-02	B101 1-2	Soil	28-May-08 16:15	29-May-08 09:30
SA79283-03	B102 2-3	Soil	28-May-08 16:22	29-May-08 09:30
SA79283-04	B102 5.5-6.5	Soil	28-May-08 16:25	29-May-08 09:30
SA79283-05	B103 0-1	Soil	28-May-08 16:00	29-May-08 09:30
SA79283-06	B103 3-4	Soil	28-May-08 16:02	29-May-08 09:30
SA79283-07	B104 0-1	Soil	28-May-08 15:50	29-May-08 09:30
SA79283-08	B105 0-1.25	Soil	28-May-08 17:15	29-May-08 09:30
SA79283-09	B105 1.5-2	Soil	28-May-08 17:17	29-May-08 09:30
SA79283-10	B106 0-1	Soil	28-May-08 15:40	29-May-08 09:30
SA79283-11	B107 2.3-3.0	Soil	28-May-08 17:50	29-May-08 09:30
SA79283-12	B108 0-1	Soil	28-May-08 17:30	29-May-08 09:30
SA79283-13	B109 0-2	Soil	28-May-08 17:25	29-May-08 09:30
SA79283-14	B110 0-1	Soil	28-May-08 16:55	29-May-08 09:30
SA79283-15	B111 0-1	Soil	28-May-08 16:50	29-May-08 09:30
SA79283-16	B112 3-4	Soil	28-May-08 16:37	29-May-08 09:30
SA79283-17	B113 0-1.5	Soil	28-May-08 17:40	29-May-08 09:30
SA79283-18	B113 2-3	Soil	28-May-08 17:42	29-May-08 09:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.

All applicable NELAC requirements have been met.

Please note that this report contains 9 pages of analytical data plus Chain of Custody document(s).

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Massachusetts Certification # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011/MA012
New York # 11393/11840
Rhode Island # 98
USDA # S-51435
Vermont # VT-11393



Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Technical Reviewer's Initial:

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).

Sample Identification**B101 0-1**

SA79283-01

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:12

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	15.5		mg/kg dry	1.58	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	93.5		mg/kg dry	1.05	1	"	"	"	"	"
7439-92-1	Lead	45.1		mg/kg dry	1.58	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	93.5		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	91.8		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.08	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B101 1-2**

SA79283-02

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:15

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	15.1		mg/kg dry	1.44	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	19.8		mg/kg dry	0.958	1	"	"	"	"	"
7439-92-1	Lead	5.50		mg/kg dry	1.44	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	19.8		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	96.9		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	0.989	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B102 2-3**

SA79283-03

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:22

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	38.0		mg/kg dry	1.62	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	3,040		mg/kg dry	1.08	1	"	"	"	"	"
7439-92-1	Lead	545		mg/kg dry	1.62	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	3,040		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	85.4		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.23	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B102 5.5-6.5**

SA79283-04

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:25

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	130		mg/kg dry	1.75	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	21,000		mg/kg dry	58.3	50	"	"	07-Jun-08	"	"
7439-92-1	Lead	797		mg/kg dry	1.75	1	"	"	06-Jun-08	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	21,000		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	78.3		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.33	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

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BRL = Below Reporting Limit

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Sample Identification**B103 0-1**

SA79283-05

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:00

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	18.3		mg/kg dry	1.83	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	366		mg/kg dry	1.22	1	"	"	"	"	"
7439-92-1	Lead	1,060		mg/kg dry	18.3	10	"	"	07-Jun-08	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	366		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	73.4		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.19	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B103 3-4**

SA79283-06

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:02

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	13.2		mg/kg dry	1.53	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	221		mg/kg dry	1.02	1	"	"	"	"	"
7439-92-1	Lead	606		mg/kg dry	1.53	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	221		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	86.3		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.33	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B104 0-1**

SA79283-07

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 15:50

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	8.78		mg/kg dry	1.74	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	49.9		mg/kg dry	1.16	1	"	"	"	"	"
7439-92-1	Lead	41.7		mg/kg dry	1.74	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	49.9		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	84.2		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.03	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B105 0-1.25**

SA79283-08

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:15

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	49.4		mg/kg dry	2.39	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	8,550		mg/kg dry	1.59	1	"	"	"	"	"
7439-92-1	Lead	503		mg/kg dry	2.39	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	8,550		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	60.3		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.81	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

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BRL = Below Reporting Limit

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Sample Identification**B105 1.5-2**

SA79283-09

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:17

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	93.5		mg/kg dry	2.90	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	23,300		mg/kg dry	38.7	20	"	"	07-Jun-08	"	"
7439-92-1	Lead	872		mg/kg dry	2.90	1	"	"	06-Jun-08	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	23,300		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	44.0		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	2.22	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B106 0-1**

SA79283-10

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 15:40

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	7.16		mg/kg dry	1.64	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	29.9		mg/kg dry	1.09	1	"	"	"	"	"
7439-92-1	Lead	38.4		mg/kg dry	1.64	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	29.9		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	78.7		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.22	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B107 2.3-3.0**

SA79283-11

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:50

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	7.59		mg/kg dry	1.58	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	565		mg/kg dry	1.05	1	"	"	"	"	"
7439-92-1	Lead	9.48		mg/kg dry	1.58	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	565		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	85.5		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.29	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B108 0-1**

SA79283-12

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:30

Received

29-May-08

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Batch</u>	<u>Analyst</u>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	7.52		mg/kg dry	1.80	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	83.1		mg/kg dry	1.20	1	"	"	"	"	"
7439-92-1	Lead	56.9		mg/kg dry	1.80	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	83.1		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	79.7		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.23	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

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Sample Identification**B109 0-2**

SA79283-13

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:25

Received

29-May-08

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	5.80		mg/kg dry	1.58	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	329		mg/kg dry	1.06	1	"	"	"	"	"
7439-92-1	Lead	36.9		mg/kg dry	1.58	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	329		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	85.5		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.09	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B110 0-1**

SA79283-14

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:55

Received

29-May-08

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	20.5		mg/kg dry	1.50	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	557		mg/kg dry	0.999	1	"	"	"	"	"
7439-92-1	Lead	189		mg/kg dry	1.50	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	557		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	86.0		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.06	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B111 0-1**

SA79283-15

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:50

Received

29-May-08

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	98.5		mg/kg dry	1.77	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	102		mg/kg dry	1.18	1	"	"	"	"	"
7439-92-1	Lead	84.4		mg/kg dry	1.77	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	102		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	79.1		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.12	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B112 3-4**

SA79283-16

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 16:37

Received

29-May-08

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	Dilution	Method Ref.	Prepared	Analyzed	Batch	Analyst
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	67.7		mg/kg dry	40.4	20	SW846 6010B	02-Jun-08	07-Jun-08	8052214	JMN
7440-47-3	Chromium	39,500		mg/kg dry	67.3	50	"	"	07-Jun-08	"	"
7439-92-1	Lead	291		mg/kg dry	101	50	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	39,500		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	64.9		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.57	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

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BRL = Below Reporting Limit

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Sample Identification**B113 0-1.5**

SA79283-17

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:40

Received

29-May-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	16.7		mg/kg dry	1.67	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	452		mg/kg dry	1.11	1	"	"	"	"	"
7439-92-1	Lead	456		mg/kg dry	8.36	5	"	"	07-Jun-08	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	452		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	80.2		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.30	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

Sample Identification**B113 2-3**

SA79283-18

Client Project #

01787006-100

Matrix

Soil

Collection Date/Time

28-May-08 17:42

Received

29-May-08

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Batch</i>	<i>Analyst</i>
Total Metals by EPA 6000/7000 Series Methods											
7440-38-2	Arsenic	7.00		mg/kg dry	1.60	1	SW846 6010B	02-Jun-08	06-Jun-08	8052214	JMN
7440-47-3	Chromium	30.9		mg/kg dry	1.07	1	"	"	"	"	"
7439-92-1	Lead	15.3		mg/kg dry	1.60	1	"	"	"	"	"
General Chemistry Parameters											
16065-83-1	Trivalent Chromium	30.9		mg/kg	1.00	1	Calculation	02-Jun-08	06-Jun-08	8052214	JMN
	% Solids	87.5		%		1	SM2540 G Mod.	30-May-08	30-May-08	8052221	JB
1854-029-9	Hexavalent Chromium	BRL		mg/kg dry	1.08	1	+SW846 7196A	07-Jun-08	07-Jun-08	8060554	QP

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Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8052214 - SW846 3050B										
<u>Blank (8052214-BLK1)</u>										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	BRL		mg/kg wet	1.29						
Arsenic	BRL		mg/kg wet	1.29						
Chromium	BRL		mg/kg wet	0.861						
<u>Duplicate (8052214-DUP1)</u> Source: SA79283-16										
Prepared: 02-Jun-08 Analyzed: 07-Jun-08										
Lead	263		mg/kg dry	106		291			10	20
Arsenic	59.2		mg/kg dry	42.4		67.7			13	20
Chromium	36900		mg/kg dry	70.6		39500			7	20
<u>Matrix Spike (8052214-MS1)</u> Source: SA79283-12										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	205		mg/kg dry	1.87	156	56.9	96	75-125		
Chromium	217		mg/kg dry	1.24	156	83.1	86	75-125		
Arsenic	155		mg/kg dry	1.87	156	7.52	95	75-125		
<u>Matrix Spike Dup (8052214-MSD1)</u> Source: SA79283-12										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	198		mg/kg dry	1.81	151	56.9	94	75-125	4	20
Chromium	218		mg/kg dry	1.20	151	83.1	90	75-125	0.4	20
Arsenic	156		mg/kg dry	1.81	151	7.52	98	75-125	0.6	20
<u>Post Spike (8052214-PS1)</u> Source: SA79283-12										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	191		mg/kg dry	1.66	139	56.9	97	80-120		
Arsenic	146		mg/kg dry	1.66	139	7.52	100	80-120		
Chromium	208		mg/kg dry	1.11	139	83.1	90	80-120		
<u>Reference (8052214-SRM1)</u>										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	80.9		mg/kg wet	1.50	85.5		95	81.5-118.4		
Chromium	100		mg/kg wet	1.00	111		90	81.7-117.8		
Arsenic	64.5		mg/kg wet	1.50	67.7		95	80.4-120.3		
<u>Reference (8052214-SRM2)</u>										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Lead	104	QC1	mg/kg wet	1.50	86.9		119	81.5-118.4		
Arsenic	70.6		mg/kg wet	1.50	68.8		103	80.4-120.3		
Chromium	106		mg/kg wet	1.00	113		93	81.7-117.8		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

General Chemistry Parameters - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 8052214 - SW846 3050B										
Blank (8052214-BLK1)										
Prepared: 02-Jun-08 Analyzed: 06-Jun-08										
Trivalent Chromium	BRL		mg/kg	1.00						
Batch 8052221 - General Preparation										
Duplicate (8052221-DUP1) Source: SA79283-01										
Prepared & Analyzed: 30-May-08										
% Solids	91.2		%			91.8			0.7	20
Batch 8060554 - General Preparation										
Blank (8060554-BLK1)										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	BRL		mg/kg wet	1.00						
Blank (8060554-BLK2)										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	BRL		mg/kg wet	1.00						
LCS (8060554-BS1)										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	20.9		mg/kg wet	1.00	20.0		105	90-110		
LCS (8060554-BS2)										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	20.6		mg/kg wet	1.00	20.0		103	90-110		
Duplicate (8060554-DUP1) Source: SA79283-18										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	0.514	J	mg/kg dry	1.17		0.603			16	35
Matrix Spike (8060554-MS1) Source: SA79283-18										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	2.18	QM8	mg/kg dry	1.19	23.7	0.603	7	75-125		
Matrix Spike Dup (8060554-MSD1) Source: SA79283-18										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	4.79	QM8	mg/kg dry	1.30	26.1	0.603	16	75-125	75	35
Post Spike (8060554-PS1) Source: SA79283-18										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	0.425		mg/kg dry		0.500	0.013	82	75-125		
Reference (8060554-SRM1)										
Prepared & Analyzed: 07-Jun-08										
Hexavalent Chromium	166		mg/kg wet	7.39	234		71	0.5-105		

This laboratory report is not valid without an authorized signature on the cover page.

* Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

QC1	Analyte out of acceptance range.
QM8	The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and/or LCS recovery.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown



SPECTRAL ANALYTICAL, INC.
Environmental Technology
Framingham, MA

CHAIN OF CUSTODY RECORD

Page 2 of 2

S.A. 79283

EM

Special Handling:

- Standard TAT - 7 to 10 business days
- Rush TAT - Date Needed:
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Peter Cox

ENSR
2 Technology Park Dr.
Westford MA 01886

Project Mgr.: 978-589-3000

Invoice To: _____

P.O. No.: _____

Project No.: 01787006-100
Site Name: Organic
Location: Webum
Sampler(s): Peter Cox
State: MA

Containers:

Analyses:

QA Reporting Notes:
(check if needed)

1-Na₂SO₄ 2-HCl 3-H₂SO₄ 4-HNO₃ 5-NaOH 6-Ascorbic Acid
 7-Cl₂O₂ 8-NaHSO₄ 9-
 10-
 DW=Drinking Water GW=Groundwater WW=Wastewater
 O-Oil SW=Surface Water SO=Soil SL=Sludge A-Air
 X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses:	QA Reporting Notes:
79283-01	B101 0-1	5/29/09	16:12	☒	SO	NH	1	1			Ar	<input type="checkbox"/> Provide MA DEP MCP CAM Report <input type="checkbox"/> Provide CT DEP RCP Report
02	B101 1-8	5/29/08	16:15		SO	NH	1	1			Cr T3	<input type="checkbox"/> QA/QC Reporting Level <input type="checkbox"/> Standard <input type="checkbox"/> No QC <input type="checkbox"/> Other
03	B102 2-3	5/29/08	16:22		SO	NH	1	1			Cr T5	<input type="checkbox"/> State specific reporting standards:
04	B102 5-5-6-5	5/28/08	16:25		SO	NH	1	1			Cr T6	
05	B103 0-1	5/29/08	16:00		SO	NH	1	1			Pb	
06	B103 3-4	5/28/09	16:02		SO	NH	1	1				
07	B104 0-1	5/29/08	15:50		SO	NH	1	1				
08	B105 0-1-1-2	5/29/08	17:15		SO	NH	1	1				
09	B105 1-5-2	5/29/08	17:17		SO	NH	1	1				
10	B106 0-1	5/29/08	15:40		SO	NH	1	1				

Relinquished by:

Received by:

Date:

Time:

Fax results when available to ()

E-mail to _____

EDD Format _____

Condition upon receipt: lead Ambient °C

John Eganck

MC

5/29/09

7:00
9:30

3.9



CHAIN OF CUSTODY RECORD

Page 2 of 2

SA 79283

EM

Special Handling:
 Standard TAT - 7 to 10 business days
 Rush TAT - Date Needed: _____
 All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes. Samples disposed of after 60 days unless otherwise instructed.

Report To: Pete Cox Invoice To: _____
ENSRA Project No.: 01757006-1B0
Technology Park Dr. Site Name: Organix
Wethered MA 01886 Location: Woburn MA State: MA
 Project Mgr.: 978-599-3000 P.O. No.: _____
 RQN: _____
 Sample(s): Peter Cox

1=NaHSO2, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Ascorbic Acid
 7=CH3OH, 8=NaHSO4, 9= _____, 10= _____
 DW=Drinking Water, GW=Groundwater, WW=Wastewater
 O=Oil, SW=Surface Water, SO=Soil, SL=Sludge, A=Air
 X1= _____, X2= _____, X3= _____

Lab Id.	Sample Id.	Date	Time	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Containers:	Analyses:	QA Reporting Notes: (check if needed)
79283-11	B107.2.3-30	5/28/08	17:50		50 WH	None	1	1				Pb	
	B108 0-1	5/29/08	17:30		50 WH	None	1	1				As	
	B109 0-2	5/29/08	17:25		50 WH	None	1	1				CS	
	B110 0-1	5/29/08	16:55		50 WH	None	1	1				CS	
	B111 0-1	5/28/08	16:50		50 WH	None	1	1					
	B112.3-4	5/28/08	16:37		50 WH	None	1	1					
	B113 0-1.5	5/29/08	17:40		50 WH	None	1	1					
	B113 2-3	5/28/08	17:42		50 WH	None	1	1					

Fax results when available to ()
 E-mail to _____
 EDD Format _____
 Condition upon receipt: Cool Ambient °C

Relinquished by: Edgar Espinosa Received by: Mike
 Date: 5/28/08 Time: 7:00
52905 930

FedEx US Airbill

Express

Page 8587 1593 2113

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3 To Recipients Name **Sample Receiving** Phone **413 789-9018**

Company **Spectra Analytical LLC**
Address **22 Almgren Drive**

City **Agawan** State **MA** Zip **01001**



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 FedEx 3Day Freight FedEx 4Day Freight

5 Packaging

FedEx Air FedEx Ground FedEx Home Delivery
 FedEx International Priority FedEx International Economy

6 Special Handling

SATURDAY Delivery HOLD Overnight
 RETAIN LOCATION HOLD Standard

No Yes No Yes No Yes

7 Payment

Prepaid This Party Cash On Delivery
 Credit Card Cash On Delivery

8 NEW Residential Delivery Signature Options

No Signature Direct Signature Indirect Signature
 Secured Signature Signature Required Signature Required



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ANALYTICAL REPORT

Lab Number:	L0818443
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01701-9005
ATTN:	Ron Myrick
Project Name:	FORMER JOHN J. RILEY SITE
Project Number:	127-13417-09001
Report Date:	12/24/08

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Alpha Sample ID	Client ID	Sample Location
L0818443-01	TP-201 (0-3)	WOBURN, MA
L0818443-02	TP-202 (0-5)	WOBURN, MA
L0818443-03	TP-203 (0-7.5)	WOBURN, MA
L0818443-04	TP-204 (0-4)	WOBURN, MA
L0818443-05	TP-205 (0-3)	WOBURN, MA
L0818443-06	TP-206 (0-3)	WOBURN, MA
L0818443-07	TP-207 (0-2)	WOBURN, MA
L0818443-08	B-202(SED)	WOBURN, MA

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-0900

Report Date: 12/24/08

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	YES
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	NO
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

MCP Related Narratives

EPH

L0818443-03, -04, -06 and -07 have elevated detection limits due to the dilutions required by matrix interferences encountered during the concentration of the samples.

In reference to question E:

The WG347480-2 LCS recovery associated with L0818443-01, -03, -04, -06 and -07 was outside the acceptance criteria for Decane(C10) (39%); however, the target carbon ranges and analytes were within method criteria. The results of the original analysis are reported.

The surrogate recovery for the WG347480-2 LCS is below the acceptance criteria for Chloro-octadecane (33%). The LCS spike compounds are within overall method allowances; therefore, no further action was taken.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Case Narrative (continued)

The surrogate recovery for the WG347480-4 MS is below the acceptance criteria for Chloro-Octadecane (29%). The MS spike compounds are within overall method allowances; therefore, no further action was taken. The WG347480-4/-5 MS/MSD recoveries for C19-C36 Aliphatics (0% for both) are outside the acceptance criteria. The unacceptable percent recoveries are attributed to the elevated concentrations of target compounds present in the sample utilized for the MS/MSD.

The WG347480-4/-5 MS/MSD RPDs associated with L0818443-03 are above the acceptance criteria for C11-C22 Aromatics (87%), Phenanthrene (95%), Fluoranthene (91%), Pyrene (78%), Benzo(a)anthracene (52%) and Chrysene (53%); however, the individual LCS/LCSD recoveries are within method limits. The results of the associated samples are reported.

Metals

In reference to question E:

The WG347724-1/-2 MS/MSD recoveries for Arsenic (63%/155%), Lead (0%/28%) and Chromium (193000%/29300%) are invalid because the sample concentrations are greater than four times the spike amount added.

The WG347724-1/-2 MS/MSD RPDs associated with L0818433-03 are above the acceptance criteria for Arsenic (84%), Chromium (147%) and Lead (200%). The results of the associated samples are reported.

In reference to question F:

All samples were analyzed for a subset of MCP compounds per the Chain of Custody.

Mercury

L0818443-02 through -04 required re-analyses on dilutions in order to quantitate the samples within the calibration range. The results are reported as "greater than" values for the initial analysis that exceeded the calibration curve. The re-analysis was performed only for Mercury.

In reference to question E:

The WG347720-4/-5 MS/MSD recoveries for Mercury (0%/9060%) are invalid because the sample concentration is greater than four times the spike amount added.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Case Narrative (continued)

The WG347720-4/-5 MS/MSD RPD associated with L0818433-01 through -08 is above the acceptance criteria for Mercury (200%). The results of the associated samples are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 12/24/08

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-01
Client ID: TP-201 (0-3)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 12:13
Analyst: AS
Percent Solids: 86%

Date Collected: 12/15/08 11:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 14:31
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	7.75	1
C19-C36 Aliphatics	ND		mg/kg	7.75	1
C11-C22 Aromatics	ND		mg/kg	7.75	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.75	1
Naphthalene	ND		mg/kg	0.388	1
2-Methylnaphthalene	ND		mg/kg	0.388	1
Acenaphthylene	ND		mg/kg	0.388	1
Acenaphthene	ND		mg/kg	0.388	1
Fluorene	ND		mg/kg	0.388	1
Phenanthrene	ND		mg/kg	0.388	1
Anthracene	ND		mg/kg	0.388	1
Fluoranthene	ND		mg/kg	0.388	1
Pyrene	ND		mg/kg	0.388	1
Benzo(a)anthracene	ND		mg/kg	0.388	1
Chrysene	ND		mg/kg	0.388	1
Benzo(b)fluoranthene	ND		mg/kg	0.388	1
Benzo(k)fluoranthene	ND		mg/kg	0.388	1
Benzo(a)pyrene	ND		mg/kg	0.388	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.388	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.388	1
Benzo(ghi)perylene	ND		mg/kg	0.388	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-01
 Client ID: TP-201 (0-3)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 11:05
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
-----------	--------	-----------	-------	-----	-----------------

Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	92		40-140
2-Bromonaphthalene	94		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-02
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 14:20
Analyst: AS
Percent Solids: 72%

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 15:04
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
-----------	--------	-----------	-------	-----	-----------------

Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	9.26	1
C19-C36 Aliphatics	69.5		mg/kg	9.26	1
C11-C22 Aromatics	63.6		mg/kg	9.26	1
C11-C22 Aromatics, Adjusted	55.4		mg/kg	9.26	1
Naphthalene	ND		mg/kg	0.463	1
2-Methylnaphthalene	ND		mg/kg	0.463	1
Acenaphthylene	ND		mg/kg	0.463	1
Acenaphthene	ND		mg/kg	0.463	1
Fluorene	ND		mg/kg	0.463	1
Phenanthrene	1.32		mg/kg	0.463	1
Anthracene	ND		mg/kg	0.463	1
Fluoranthene	1.62		mg/kg	0.463	1
Pyrene	1.33		mg/kg	0.463	1
Benzo(a)anthracene	0.634		mg/kg	0.463	1
Chrysene	0.642		mg/kg	0.463	1
Benzo(b)fluoranthene	0.634		mg/kg	0.463	1
Benzo(k)fluoranthene	0.607		mg/kg	0.463	1
Benzo(a)pyrene	0.599		mg/kg	0.463	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.463	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.463	1
Benzo(ghi)perylene	0.744		mg/kg	0.463	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-02
 Client ID: TP-202 (0-5)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 11:27
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
-----------	--------	-----------	-------	-----	-----------------

Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	45		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	84		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-03
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 14:51
Analyst: AS
Percent Solids: 70%

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 14:31
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
C9-C18 Aliphatics	ND		mg/kg	28.6	3
C19-C36 Aliphatics	309		mg/kg	28.6	3
C11-C22 Aromatics	275		mg/kg	28.6	3
C11-C22 Aromatics, Adjusted	222		mg/kg	28.6	3
Naphthalene	ND		mg/kg	1.43	3
2-Methylnaphthalene	ND		mg/kg	1.43	3
Acenaphthylene	ND		mg/kg	1.43	3
Acenaphthene	ND		mg/kg	1.43	3
Fluorene	ND		mg/kg	1.43	3
Phenanthrene	8.45		mg/kg	1.43	3
Anthracene	2.12		mg/kg	1.43	3
Fluoranthene	10.0		mg/kg	1.43	3
Pyrene	8.59		mg/kg	1.43	3
Benzo(a)anthracene	4.31		mg/kg	1.43	3
Chrysene	4.76		mg/kg	1.43	3
Benzo(b)fluoranthene	3.43		mg/kg	1.43	3
Benzo(k)fluoranthene	3.57		mg/kg	1.43	3
Benzo(a)pyrene	3.50		mg/kg	1.43	3
Indeno(1,2,3-cd)Pyrene	2.07		mg/kg	1.43	3
Dibenzo(a,h)anthracene	ND		mg/kg	1.43	3
Benzo(ghi)perylene	1.79		mg/kg	1.43	3

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-03
 Client ID: TP-203 (0-7.5)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 12:05
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	96		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	86		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-04
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 13:16
Analyst: AS
Percent Solids: 66%

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 14:31
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
C9-C18 Aliphatics	ND		mg/kg	50.5	5
C19-C36 Aliphatics	125		mg/kg	50.5	5
C11-C22 Aromatics	102		mg/kg	50.5	5
C11-C22 Aromatics, Adjusted	102		mg/kg	50.5	5
Naphthalene	ND		mg/kg	2.52	5
2-Methylnaphthalene	ND		mg/kg	2.52	5
Acenaphthylene	ND		mg/kg	2.52	5
Acenaphthene	ND		mg/kg	2.52	5
Fluorene	ND		mg/kg	2.52	5
Phenanthrene	ND		mg/kg	2.52	5
Anthracene	ND		mg/kg	2.52	5
Fluoranthene	ND		mg/kg	2.52	5
Pyrene	ND		mg/kg	2.52	5
Benzo(a)anthracene	ND		mg/kg	2.52	5
Chrysene	ND		mg/kg	2.52	5
Benzo(b)fluoranthene	ND		mg/kg	2.52	5
Benzo(k)fluoranthene	ND		mg/kg	2.52	5
Benzo(a)pyrene	ND		mg/kg	2.52	5
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	2.52	5
Dibenzo(a,h)anthracene	ND		mg/kg	2.52	5
Benzo(ghi)perylene	ND		mg/kg	2.52	5

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-04
 Client ID: TP-204 (0-4)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 13:35
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	86		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-05
Client ID: TP-205 (0-3)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/23/08 12:18
Analyst: AS
Percent Solids: 82%

Date Collected: 12/15/08 13:55
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/22/08 19:26
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/22/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.13	1
C19-C36 Aliphatics	ND		mg/kg	8.13	1
C11-C22 Aromatics	ND		mg/kg	8.13	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.13	1
Naphthalene	ND		mg/kg	0.406	1
2-Methylnaphthalene	ND		mg/kg	0.406	1
Acenaphthylene	ND		mg/kg	0.406	1
Acenaphthene	ND		mg/kg	0.406	1
Fluorene	ND		mg/kg	0.406	1
Phenanthrene	ND		mg/kg	0.406	1
Anthracene	ND		mg/kg	0.406	1
Fluoranthene	ND		mg/kg	0.406	1
Pyrene	ND		mg/kg	0.406	1
Benzo(a)anthracene	ND		mg/kg	0.406	1
Chrysene	ND		mg/kg	0.406	1
Benzo(b)fluoranthene	ND		mg/kg	0.406	1
Benzo(k)fluoranthene	ND		mg/kg	0.406	1
Benzo(a)pyrene	ND		mg/kg	0.406	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.406	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.406	1
Benzo(ghi)perylene	ND		mg/kg	0.406	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-05
 Client ID: TP-205 (0-3)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 13:55
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	41		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	85		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-06
Client ID: TP-206 (0-3)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 13:48
Analyst: AS
Percent Solids: 82%

Date Collected: 12/15/08 14:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 14:31
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
C9-C18 Aliphatics	ND		mg/kg	16.3	2
C19-C36 Aliphatics	ND		mg/kg	16.3	2
C11-C22 Aromatics	66.6		mg/kg	16.3	2
C11-C22 Aromatics, Adjusted	53.7		mg/kg	16.3	2
Naphthalene	ND		mg/kg	0.813	2
2-Methylnaphthalene	ND		mg/kg	0.813	2
Acenaphthylene	ND		mg/kg	0.813	2
Acenaphthene	ND		mg/kg	0.813	2
Fluorene	ND		mg/kg	0.813	2
Phenanthrene	2.48		mg/kg	0.813	2
Anthracene	ND		mg/kg	0.813	2
Fluoranthene	2.84		mg/kg	0.813	2
Pyrene	2.37		mg/kg	0.813	2
Benzo(a)anthracene	1.02		mg/kg	0.813	2
Chrysene	1.26		mg/kg	0.813	2
Benzo(b)fluoranthene	1.02		mg/kg	0.813	2
Benzo(k)fluoranthene	0.942		mg/kg	0.813	2
Benzo(a)pyrene	0.984		mg/kg	0.813	2
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.813	2
Dibenzo(a,h)anthracene	ND		mg/kg	0.813	2
Benzo(ghi)perylene	ND		mg/kg	0.813	2

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-06
 Client ID: TP-206 (0-3)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 14:05
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	84		40-140
2-Bromonaphthalene	87		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-07
Client ID: TP-207 (0-2)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/19/08 16:26
Analyst: AS
Percent Solids: 86%

Date Collected: 12/15/08 14:14
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/18/08 14:31
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	38.8	5
C19-C36 Aliphatics	51.1		mg/kg	38.8	5
C11-C22 Aromatics	50.5		mg/kg	38.8	5
C11-C22 Aromatics, Adjusted	50.5		mg/kg	38.8	5
Naphthalene	ND		mg/kg	1.94	5
2-Methylnaphthalene	ND		mg/kg	1.94	5
Acenaphthylene	ND		mg/kg	1.94	5
Acenaphthene	ND		mg/kg	1.94	5
Fluorene	ND		mg/kg	1.94	5
Phenanthrene	ND		mg/kg	1.94	5
Anthracene	ND		mg/kg	1.94	5
Fluoranthene	ND		mg/kg	1.94	5
Pyrene	ND		mg/kg	1.94	5
Benzo(a)anthracene	ND		mg/kg	1.94	5
Chrysene	ND		mg/kg	1.94	5
Benzo(b)fluoranthene	ND		mg/kg	1.94	5
Benzo(k)fluoranthene	ND		mg/kg	1.94	5
Benzo(a)pyrene	ND		mg/kg	1.94	5
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	1.94	5
Dibenzo(a,h)anthracene	ND		mg/kg	1.94	5
Benzo(ghi)perylene	ND		mg/kg	1.94	5

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-07
 Client ID: TP-207 (0-2)
 Sample Location: WOBURN, MA

Date Collected: 12/15/08 14:14
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	84		40-140
o-Terphenyl	79		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	68		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-08
Client ID: B-202(SED)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/23/08 12:49
Analyst: AS
Percent Solids: 68%

Date Collected: 12/15/08 14:45
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/22/08 19:26
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/22/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
C9-C18 Aliphatics	ND		mg/kg	9.80	1
C19-C36 Aliphatics	44.4		mg/kg	9.80	1
C11-C22 Aromatics	41.6		mg/kg	9.80	1
C11-C22 Aromatics, Adjusted	29.2		mg/kg	9.80	1
Naphthalene	ND		mg/kg	0.490	1
2-Methylnaphthalene	ND		mg/kg	0.490	1
Acenaphthylene	ND		mg/kg	0.490	1
Acenaphthene	ND		mg/kg	0.490	1
Fluorene	ND		mg/kg	0.490	1
Phenanthrene	0.929		mg/kg	0.490	1
Anthracene	ND		mg/kg	0.490	1
Fluoranthene	2.35		mg/kg	0.490	1
Pyrene	1.84		mg/kg	0.490	1
Benzo(a)anthracene	0.636		mg/kg	0.490	1
Chrysene	1.33		mg/kg	0.490	1
Benzo(b)fluoranthene	1.31		mg/kg	0.490	1
Benzo(k)fluoranthene	1.09		mg/kg	0.490	1
Benzo(a)pyrene	0.960		mg/kg	0.490	1
Indeno(1,2,3-cd)Pyrene	0.967		mg/kg	0.490	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.490	1
Benzo(ghi)perylene	0.916		mg/kg	0.490	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-08

Date Collected: 12/15/08 14:45

Client ID: B-202(SED)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	57		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	94		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 61,EPH-04-1
Analytical Date: 12/22/08 13:05
Analyst: AS

Extraction Method: EPA 3546
Extraction Date: 12/17/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/19/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 01,03-04,06-07 Batch: WG347480-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	53		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	72		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 61,EPH-04-1
Analytical Date: 12/18/08 17:45
Analyst: AS

Extraction Method: EPA 3546
Extraction Date: 12/18/08 11:14
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/18/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 02 Batch: WG347619-1				

Parameter	Result	Qualifier	Units	RDL
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	58		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	72		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
Analytical Date: 12/23/08 10:44
Analyst: AS

Extraction Method: EPA 3546
Extraction Date: 12/22/08 19:26
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/22/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 05,08 Batch: WG348062-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	55		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	85		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01,03-04,06-07 Batch: WG347480-2 WG347480-3					
C9-C18 Aliphatics	42	47	40-140	11	25
C19-C36 Aliphatics	47	54	40-140	14	25
C11-C22 Aromatics	54	63	40-140	15	25
Naphthalene	49	56	40-140	13	25
2-Methylnaphthalene	51	58	40-140	13	25
Acenaphthylene	46	51	40-140	10	25
Acenaphthene	51	58	40-140	13	25
Fluorene	48	57	40-140	17	25
Phenanthrene	52	61	40-140	16	25
Anthracene	57	66	40-140	15	25
Fluoranthene	53	63	40-140	17	25
Pyrene	56	66	40-140	16	25
Benzo(a)anthracene	50	60	40-140	18	25
Chrysene	52	62	40-140	18	25
Benzo(b)fluoranthene	52	61	40-140	16	25
Benzo(k)fluoranthene	51	62	40-140	19	25
Benzo(a)pyrene	47	55	40-140	16	25
Indeno(1,2,3-cd)Pyrene	47	57	40-140	19	25
Dibenzo(a,h)anthracene	47	56	40-140	17	25
Benzo(ghi)perylene	49	59	40-140	19	25
Nonane (C9)	34	38	30-140	11	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01,03-04,06-07 Batch: WG347480-2 WG347480-3					
Decane (C10)	39	44	40-140	12	25
Dodecane (C12)	42	48	40-140	13	25
Tetradecane (C14)	43	49	40-140	13	25
Hexadecane (C16)	44	51	40-140	15	25
Octadecane (C18)	46	52	40-140	12	25
Nonadecane (C19)	47	54	40-140	14	25
Eicosane (C20)	47	54	40-140	14	25
Docosane (C22)	48	55	40-140	14	25
Tetracosane (C24)	47	54	40-140	14	25
Hexacosane (C26)	49	57	40-140	15	25
Octacosane (C28)	47	55	40-140	16	25
Triacontane (C30)	49	56	40-140	13	25
Hexatriacontane (C36)	52	61	40-140	16	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	33		41		40-140
o-Terphenyl	57		70		40-140
2-Fluorobiphenyl	57		65		40-140
2-Bromonaphthalene	61		69		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 02 Batch: WG347619-2 WG347619-3					
C9-C18 Aliphatics	54	47	40-140	14	25
C19-C36 Aliphatics	64	63	40-140	2	25
C11-C22 Aromatics	59	57	40-140	3	25
Naphthalene	54	46	40-140	16	25
2-Methylnaphthalene	57	50	40-140	13	25
Acenaphthylene	53	48	40-140	10	25
Acenaphthene	56	51	40-140	9	25
Fluorene	58	54	40-140	7	25
Phenanthrene	61	58	40-140	5	25
Anthracene	66	65	40-140	2	25
Fluoranthene	62	61	40-140	2	25
Pyrene	62	61	40-140	2	25
Benzo(a)anthracene	61	59	40-140	3	25
Chrysene	61	59	40-140	3	25
Benzo(b)fluoranthene	61	61	40-140	0	25
Benzo(k)fluoranthene	62	60	40-140	3	25
Benzo(a)pyrene	56	55	40-140	2	25
Indeno(1,2,3-cd)Pyrene	56	54	40-140	4	25
Dibenzo(a,h)anthracene	56	53	40-140	6	25
Benzo(ghi)perylene	57	55	40-140	4	25
Nonane (C9)	53	43	30-140	21	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 02 Batch: WG347619-2 WG347619-3					
Decane (C10)	61	50	40-140	20	25
Dodecane (C12)	68	58	40-140	16	25
Tetradecane (C14)	70	61	40-140	14	25
Hexadecane (C16)	70	64	40-140	9	25
Octadecane (C18)	69	64	40-140	8	25
Nonadecane (C19)	69	65	40-140	6	25
Eicosane (C20)	68	65	40-140	5	25
Docosane (C22)	67	65	40-140	3	25
Tetracosane (C24)	64	62	40-140	3	25
Hexacosane (C26)	64	63	40-140	2	25
Octacosane (C28)	60	59	40-140	2	25
Triacontane (C30)	59	59	40-140	0	25
Hexatriacontane (C36)	60	63	40-140	5	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		60		40-140
o-Terphenyl	66		63		40-140
2-Fluorobiphenyl	69		66		40-140
2-Bromonaphthalene	71		68		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 05,08 Batch: WG348062-2 WG348062-3					
C9-C18 Aliphatics	49	52	40-140	6	25
C19-C36 Aliphatics	68	64	40-140	6	25
C11-C22 Aromatics	60	61	40-140	2	25
Naphthalene	49	56	40-140	13	25
2-Methylnaphthalene	50	59	40-140	17	25
Acenaphthylene	48	56	40-140	15	25
Acenaphthene	51	60	40-140	16	25
Fluorene	54	56	40-140	4	25
Phenanthrene	58	60	40-140	3	25
Anthracene	64	68	40-140	6	25
Fluoranthene	60	61	40-140	2	25
Pyrene	62	66	40-140	6	25
Benzo(a)anthracene	60	59	40-140	2	25
Chrysene	62	61	40-140	2	25
Benzo(b)fluoranthene	59	59	40-140	0	25
Benzo(k)fluoranthene	61	60	40-140	2	25
Benzo(a)pyrene	57	56	40-140	2	25
Indeno(1,2,3-cd)Pyrene	55	54	40-140	2	25
Dibenzo(a,h)anthracene	56	55	40-140	2	25
Benzo(ghi)perylene	56	55	40-140	2	25
Nonane (C9)	38	41	30-140	8	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 05,08 Batch: WG348062-2 WG348062-3					
Decane (C10)	43	48	40-140	11	25
Dodecane (C12)	46	52	40-140	12	25
Tetradecane (C14)	48	55	40-140	14	25
Hexadecane (C16)	58	60	40-140	3	25
Octadecane (C18)	63	62	40-140	2	25
Nonadecane (C19)	66	64	40-140	3	25
Eicosane (C20)	66	63	40-140	5	25
Docosane (C22)	69	64	40-140	8	25
Tetracosane (C24)	68	63	40-140	8	25
Hexacosane (C26)	72	66	40-140	9	25
Octacosane (C28)	68	63	40-140	8	25
Triacontane (C30)	69	65	40-140	6	25
Hexatriacontane (C36)	72	69	40-140	4	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		56		40-140
o-Terphenyl	73		63		40-140
2-Fluorobiphenyl	69		68		40-140
2-Bromonaphthalene	84		76		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Matrix Spike Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery	MSD			
Extractable Petroleum Hydrocarbons Associated sample(s): 01,03-04,06-07 QC Batch ID: WG347480-4 WG347480-5 QC Sample: L0818443-03 Client ID: TP-203 (0-7.5)										
C9-C18 Aliphatics	16.5J	57.1	37.9	66	44.2	77	40-140	15	50	
C19-C36 Aliphatics	309	76.2	239	0	264	0	40-140	NC	50	
C11-C22 Aromatics	275	162	342	41	444	104	40-140	87	50	
Naphthalene	ND	9.52	6.07	64	7.65	80	40-140	22	50	
2-Methylnaphthalene	ND	9.52	5.99	63	6.94	73	40-140	15	50	
Acenaphthylene	ND	9.52	5.55	58	6.06	64	40-140	10	50	
Acenaphthene	ND	9.52	6.37	67	7.64	80	40-140	18	50	
Fluorene	ND	9.52	6.20	65	7.21	76	40-140	16	50	
Phenanthrene	8.45	9.52	12.8	46	20.7	129	40-140	95	50	
Anthracene	2.12	9.52	7.60	58	10.0	83	40-140	35	50	
Fluoranthene	10.0	9.52	14.5	47	21.9	125	40-140	91	50	
Pyrene	8.59	9.52	13.3	49	19.3	112	40-140	78	50	
Benzo(a)anthracene	4.31	9.52	9.40	53	12.9	90	40-140	52	50	
Chrysene	4.76	9.52	10.0	55	13.8	95	40-140	53	50	
Benzo(b)fluoranthene	3.43	9.52	9.43	63	11.8	88	40-140	33	50	
Benzo(k)fluoranthene	3.57	9.52	8.93	56	11.2	80	40-140	35	50	
Benzo(a)pyrene	3.50	9.52	8.90	57	12.0	89	40-140	44	50	
Indeno(1,2,3-cd)Pyrene	2.07	9.52	7.75	60	9.66	80	40-140	29	50	
Dibenzo(a,h)anthracene	1.41J	9.52	6.51	68	7.32	77	40-140	12	50	
Benzo(ghi)perylene	1.79	9.52	8.07	66	10.0	86	40-140	26	50	
Nonane (C9)	ND	9.52	4.21	44	4.92	52	30-140	17	50	

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
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Extractable Petroleum Hydrocarbons Associated sample(s): 01,03-04,06-07 QC Batch ID: WG347480-4 WG347480-5 QC Sample: L0818443-03 Client ID: TP-203 (0-7.5)

Decane (C10)	ND	9.52	4.91	52	5.70	60	40-140	14	50
Dodecane (C12)	ND	9.52	5.38	56	6.13	64	40-140	13	50
Tetradecane (C14)	ND	9.52	5.43	57	6.20	65	40-140	13	50
Hexadecane (C16)	ND	9.52	5.44	57	6.23	65	40-140	13	50
Octadecane (C18)	ND	9.52	5.43	57	6.24	66	40-140	15	50
Nonadecane (C19)	ND	9.52	5.47	57	6.30	66	40-140	15	50
Eicosane (C20)	ND	9.52	5.45	57	6.20	65	40-140	13	50
Docosane (C22)	ND	9.52	5.38	56	6.20	65	40-140	15	50
Tetracosane (C24)	ND	9.52	5.53	58	6.21	65	40-140	11	50
Hexacosane (C26)	ND	9.52	5.71	60	6.47	68	40-140	13	50
Octacosane (C28)	ND	9.52	5.48	58	6.14	64	40-140	10	50
Triacontane (C30)	ND	9.52	5.75	60	6.40	67	40-140	11	50
Hexatriacontane (C36)	ND	9.52	6.23	65	6.85	72	40-140	10	50

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
2-Bromonaphthalene	66		73		40-140
2-Fluorobiphenyl	61		64		40-140
Chloro-Octadecane	29		41		40-140
o-Terphenyl	107		127		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Parameter	% Recovery	QC Criteria
C9-C18 Aliphatics	77	40-140
C19-C36 Aliphatics	76	40-140
C11-C22 Aromatics	86	40-140
Naphthalene	82	40-140
2-Methylnaphthalene	78	40-140
Acenaphthylene	76	40-140
Acenaphthene	80	40-140
Fluorene	79	40-140
Phenanthrene	78	40-140
Anthracene	82	40-140
Fluoranthene	84	40-140
Pyrene	84	40-140
Benzo(a)anthracene	82	40-140
Chrysene	88	40-140
Benzo(b)fluoranthene	81	40-140
Benzo(k)fluoranthene	97	40-140
Benzo(a)pyrene	78	40-140
Indeno(1,2,3-cd)Pyrene	76	40-140
Dibenzo(a,h)anthracene	83	40-140
Benzo(g,h,i)perylene	82	40-140
Nonane	72	30-140
Decane	77	40-140
Dodecane	80	40-140
Tetradecane	76	40-140
Hexadecane	78	40-140
Octadecane	76	40-140
Nonadecane	75	40-140
Eicosane	77	40-140
Docosane	79	40-140
Tetracosane	83	40-140
Hexacosane	78	40-140
Octacosane	77	40-140
triacontane	76	40-140
Hexatriacontane	75	40-140
% Naphthalene Breakthrough	0	0-5
% 2-Methylnaphthalene Breakthrough	0	0-5

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Surrogate	% Recovery	QC Criteria
Chloro-Octadecane	66	40-140
o-Terphenyl	83	40-140
2-Fluorobiphenyl	75	40-140
2-Bromonaphthalene	76	40-140

METALS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-01

Date Collected: 12/15/08 11:05

Client ID: TP-201 (0-3)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	5.6		mg/kg	0.53	1	12/17/08 17:00	12/19/08 14:46	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.53	1	12/17/08 17:00	12/19/08 14:46	EPA 3050B	60,6010B	MG
Chromium, Total	19		mg/kg	0.53	1	12/17/08 17:00	12/19/08 14:46	EPA 3050B	60,6010B	MG
Lead, Total	9.4		mg/kg	2.7	1	12/17/08 17:00	12/19/08 14:46	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	12/18/08 19:00	12/19/08 11:14	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-02

Date Collected: 12/15/08 11:27

Client ID: TP-202 (0-5)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 72%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	13		mg/kg	0.65	1	12/17/08 17:00	12/19/08 14:49	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.65	1	12/17/08 17:00	12/19/08 14:49	EPA 3050B	60,6010B	MG
Chromium, Total	12000		mg/kg	0.65	1	12/17/08 17:00	12/19/08 14:49	EPA 3050B	60,6010B	MG
Lead, Total	480		mg/kg	3.2	1	12/17/08 17:00	12/19/08 14:49	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.099	1	12/18/08 19:00	12/19/08 11:15	EPA 7471A	64,7471A	DM
Mercury, Total	11		mg/kg	0.99	10	12/18/08 19:00	12/19/08 11:37	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-03

Date Collected: 12/15/08 12:05

Client ID: TP-203 (0-7.5)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 70%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	43		mg/kg	0.69	1	12/18/08 19:00	12/20/08 22:50	EPA 3050B	60,6010B	TD
Cadmium, Total	ND		mg/kg	0.69	1	12/18/08 19:00	12/20/08 22:50	EPA 3050B	60,6010B	TD
Chromium, Total	32000		mg/kg	6.9	10	12/18/08 19:00	12/22/08 14:47	EPA 3050B	60,6010B	MG
Lead, Total	360		mg/kg	3.5	1	12/18/08 19:00	12/20/08 22:50	EPA 3050B	60,6010B	TD
Mercury, Total	>1.7		mg/kg	.12	1	12/18/08 19:00	12/19/08 11:17	EPA 7471A	64,7471A	DM
Mercury, Total	69		mg/kg	12	100	12/18/08 19:00	12/19/08 11:39	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-04
 Client ID: TP-204 (0-4)
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 66%

Date Collected: 12/15/08 13:35
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	15		mg/kg	0.73	1	12/17/08 17:00	12/19/08 14:52	EPA 3050B	60,6010B	MG
Cadmium, Total	0.78		mg/kg	0.73	1	12/17/08 17:00	12/19/08 14:52	EPA 3050B	60,6010B	MG
Chromium, Total	19000		mg/kg	0.73	1	12/17/08 17:00	12/19/08 14:52	EPA 3050B	60,6010B	MG
Lead, Total	290		mg/kg	3.6	1	12/17/08 17:00	12/19/08 14:52	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.12	1	12/18/08 19:00	12/19/08 11:24	EPA 7471A	64,7471A	DM
Mercury, Total	13		mg/kg	1.2	10	12/18/08 19:00	12/19/08 11:45	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-05

Date Collected: 12/15/08 13:55

Client ID: TP-205 (0-3)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 82%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	12		mg/kg	0.59	1	12/17/08 17:00	12/19/08 14:55	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.59	1	12/17/08 17:00	12/19/08 14:55	EPA 3050B	60,6010B	MG
Chromium, Total	39		mg/kg	0.59	1	12/17/08 17:00	12/19/08 14:55	EPA 3050B	60,6010B	MG
Lead, Total	18		mg/kg	3.0	1	12/17/08 17:00	12/19/08 14:55	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.10	1	12/18/08 19:00	12/19/08 11:26	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-06
 Client ID: TP-206 (0-3)
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 82%

Date Collected: 12/15/08 14:05
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	9.8		mg/kg	0.59	1	12/17/08 17:00	12/19/08 15:10	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.59	1	12/17/08 17:00	12/19/08 15:10	EPA 3050B	60,6010B	MG
Chromium, Total	170		mg/kg	0.59	1	12/17/08 17:00	12/19/08 15:10	EPA 3050B	60,6010B	MG
Lead, Total	27		mg/kg	3.0	1	12/17/08 17:00	12/19/08 15:10	EPA 3050B	60,6010B	MG
Mercury, Total	0.63		mg/kg	0.09	1	12/18/08 19:00	12/19/08 11:31	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-07
 Client ID: TP-207 (0-2)
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 86%

Date Collected: 12/15/08 14:14
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	7.4		mg/kg	0.58	1	12/17/08 17:00	12/19/08 15:13	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.58	1	12/17/08 17:00	12/19/08 15:13	EPA 3050B	60,6010B	MG
Chromium, Total	320		mg/kg	0.58	1	12/17/08 17:00	12/19/08 15:13	EPA 3050B	60,6010B	MG
Lead, Total	48		mg/kg	2.9	1	12/17/08 17:00	12/19/08 15:13	EPA 3050B	60,6010B	MG
Mercury, Total	0.89		mg/kg	0.09	1	12/18/08 19:00	12/19/08 11:33	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-08
 Client ID: B-202(SED)
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 68%

Date Collected: 12/15/08 14:45
 Date Received: 12/16/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	8.0		mg/kg	0.73	1	12/17/08 17:00	12/19/08 15:15	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.73	1	12/17/08 17:00	12/19/08 15:15	EPA 3050B	60,6010B	MG
Chromium, Total	780		mg/kg	0.73	1	12/17/08 17:00	12/19/08 15:15	EPA 3050B	60,6010B	MG
Lead, Total	66		mg/kg	3.6	1	12/17/08 17:00	12/19/08 15:15	EPA 3050B	60,6010B	MG
Mercury, Total	0.45		mg/kg	0.12	1	12/18/08 19:00	12/19/08 11:35	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-02,04-08 Batch: WG347554-1								
Arsenic, Total	ND	mg/kg	0.50	1	12/17/08 17:00	12/22/08 12:02	60,6010B	MG
Cadmium, Total	ND	mg/kg	0.50	1	12/17/08 17:00	12/19/08 13:39	60,6010B	MG
Chromium, Total	ND	mg/kg	0.50	1	12/17/08 17:00	12/19/08 13:39	60,6010B	MG
Lead, Total	ND	mg/kg	2.5	1	12/17/08 17:00	12/19/08 13:39	60,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-08 Batch: WG347720-1								
Mercury, Total	ND	mg/kg	0.08	1	12/18/08 19:00	12/19/08 11:08	64,7471A	DM

Prep Information

Digestion Method: EPA 7471A

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 03 Batch: WG347724-3								
Arsenic, Total	ND	mg/kg	0.50	1	12/18/08 19:00	12/20/08 22:31	60,6010B	TD
Cadmium, Total	ND	mg/kg	0.50	1	12/18/08 19:00	12/20/08 22:31	60,6010B	TD
Chromium, Total	ND	mg/kg	0.50	1	12/18/08 19:00	12/20/08 22:31	60,6010B	TD
Lead, Total	ND	mg/kg	2.5	1	12/18/08 19:00	12/20/08 22:31	60,6010B	TD

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818443

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 01-02,04-08 Batch: WG347554-2 WG347554-3					
Arsenic, Total	100	99	75-125	1	30
Cadmium, Total	102	98	75-125	4	30
Chromium, Total	100	100	75-125	0	30
Lead, Total	98	98	75-125	0	30
Total Metals by MCP 6000/7000 series Associated sample(s): 01-08 Batch: WG347720-2 WG347720-3					
Mercury, Total	103	97	75-125	6	30
Total Metals by MCP 6000/7000 series Associated sample(s): 03 Batch: WG347724-4 WG347724-5					
Arsenic, Total	102	107	75-125	5	30
Cadmium, Total	108	106	75-125	2	30
Chromium, Total	104	105	75-125	1	30
Lead, Total	104	102	75-125	2	30

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
Total Metals by MCP 6000/7000 series Associated sample(s): 01-08 QC Batch ID: WG347720-4 WG347720-5 QC Sample: L0818443-03 Client ID: TP-203 (0-7.5)										
Mercury, Total	>1.7	0.209	56	0	90	9060	75-125	200	35	
Total Metals by MCP 6000/7000 series Associated sample(s): 03 QC Batch ID: WG347724-1 WG347724-2 QC Sample: L0818443-03 Client ID: TP-203 (0-7.5)										
Arsenic, Total	43	7.91	48	63	56	155	75-125	84	35	
Cadmium, Total	ND	3.36	3.7	110	4.0	112	75-125	2	35	
Chromium, Total	32000	13.2	30000	193000	8600	29300	75-125	147	35	
Lead, Total	360	33.6	280	0	370	28	75-125	200	35	

INORGANICS & MISCELLANEOUS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-01

Date Collected: 12/15/08 11:05

Client ID: TP-201 (0-3)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	86		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-02

Date Collected: 12/15/08 11:27

Client ID: TP-202 (0-5)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	72		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818443-03
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	70		%	0.10	1	-	12/19/08 11:25	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS****Lab ID:** L0818443-04**Date Collected:** 12/15/08 13:35**Client ID:** TP-204 (0-4)**Date Received:** 12/16/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	66		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS****Lab ID:** L0818443-05**Date Collected:** 12/15/08 13:55**Client ID:** TP-205 (0-3)**Date Received:** 12/16/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	82		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-06

Date Collected: 12/15/08 14:05

Client ID: TP-206 (0-3)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	82		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-07

Date Collected: 12/15/08 14:14

Client ID: TP-207 (0-2)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	86		%	0.10	1	-	12/18/08 11:26	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818443**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818443-08

Date Collected: 12/15/08 14:45

Client ID: B-202(SED)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	68		%	0.10	1	-	12/18/08 12:17	30,2540G	SL



Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818443

Report Date: 12/24/08

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 01-02,04-07 QC Batch ID: WG347620-1 QC Sample: L0818372-01 Client ID: DUP Sample					
Solids, Total	90	88	%	2	20
Associated sample(s): 08 QC Batch ID: WG347626-1 QC Sample: L0818451-01 Client ID: DUP Sample					
Solids, Total	87	87	%	0	20
Associated sample(s): 03 QC Batch ID: WG347822-1 QC Sample: L0818443-03 Client ID: TP-203 (0-7.5)					
Solids, Total	70	72	%	3	20

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0818443-01A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-02A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-02B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-03A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-04A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-05A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-06A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-07A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818443-08A	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)

*Hold days indicated by values in parentheses

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

GLOSSARY

Acronyms

- EPA - Environmental Protection Agency.
 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
 LCSD- Laboratory Control Sample Duplicate: Refer to LCS.
 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
 MSD - Matrix Spike Sample Duplicate: Refer to MS.
 NA - Not Applicable.
 NI - Not Ignitable.
 NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
 ND - Not detected at the reported detection limit for the sample.
 RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
 RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818443
Report Date: 12/24/08

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.
- 61 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH). Massachusetts Department of Environmental Protection, DEA/ORS/BWSC. May 2004, Revision 1.1.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.





CHAIN OF CUSTODY

PAGE OF

Date Rec'd in Lab: 12/16/08 ALPHA Job #: LO81843

Westborough, MA Mansfield, MA
TEL: 508-898-9220 TEL: 508-822-9300
FAX: 508-898-9193 FAX: 508-822-3288

Project Information

Project Name: Former John J. Riey Site

Report Information **Data Deliverables** **Billing Information**
 FAX EMAIL Same as Client info PO #:
 ADEX Add'l Deliverables

Client Information

Client: Tetra Tech Rizzo
Address: One Grant Street
Framingham, MA
Phone: 508-903-2039
Fax: 508-903-2001
Email: ian.cannan@tetratech.com

Project Location: Woburn, MA

Project #: 127-13417-09001

Project Manager: Ron Myrick

ALPHA Quote #: 2008585

Regulatory Requirements/Report Limits

State/Fed Program: _____ Criteria: _____
MassDEP MCP CAM: _____ RCS-1: _____

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: 12/13/08 Time: _____

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:
DLs less than RCS-1
* Metals = arsenic, cadmium, chromium, lead and mercury

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	EPH w/ Target PAHs	Total Metals											SAMPLE HANDLING Filtration <input type="checkbox"/> Done <input checked="" type="checkbox"/> Not Needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	TOTAL # BOTTLES			
		Date	Time																			
<u>0143-01</u>	TP-201 (0-3)	12-15-08	1105	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-02</u>	TP-202 (0-5)	12-15-08	1127	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-03</u>	TP-203 (0-7.5)	12-15-08	1205	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-04</u>	TP-204 (0-4)	12-15-08	1335	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-05</u>	TP-205 (0-3)	12-15-08	1355	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-06</u>	TP-206 (0-3)	12-15-08	1405	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-07</u>	TP-207 (0-2)	12-15-08	1411	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
<u>-08</u>	B-202 (SED)	12-15-08	1445	S	ISC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1										
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
<u>0143-01</u>	TP-201 (0-3)	12-15-08	1105	S	ISC
<u>-02</u>	TP-202 (0-5)	12-15-08	1127	S	ISC
<u>-03</u>	TP-203 (0-7.5)	12-15-08	1205	S	ISC
<u>-04</u>	TP-204 (0-4)	12-15-08	1335	S	ISC
<u>-05</u>	TP-205 (0-3)	12-15-08	1355	S	ISC
<u>-06</u>	TP-206 (0-3)	12-15-08	1405	S	ISC
<u>-07</u>	TP-207 (0-2)	12-15-08	1411	S	ISC
<u>-08</u>	B-202 (SED)	12-15-08	1445	S	ISC

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-0111 (rev. 30-JUL-07)

Container Type	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Relinquished By:	Date/Time		Received By:		Date/Time																	
<u>[Signature]</u>	<u>12/16/08</u>		<u>Ron Brady</u>		<u>12/16/08 1140</u>		<u>[Signature]</u>		<u>12/16/08 1330</u>													

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time dock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



ANALYTICAL REPORT

Lab Number:	L0818721
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01701-9005
ATTN:	Ron Myrick
Project Name:	FORMER JOHN J. RILEY SITE
Project Number:	127-13417-09001
Report Date:	01/06/09

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Alpha Sample ID	Client ID	Sample Location
L0818721-01	B-200 0-5'	WOBURN, MA
L0818721-02	B-201 0-5'	WOBURN, MA
L0818721-03	B-202 0-5'	WOBURN, MA
L0818721-04	B-203 0-5'	WOBURN, MA
L0818721-05	B-204 0-5'	WOBURN, MA
L0818721-06	B-205 0-5'	WOBURN, MA
L0818721-07	B-206 0-5'	WOBURN, MA
L0818721-08	B-207 0-5'	WOBURN, MA
L0818721-09	B-208 0-3'	WOBURN, MA
L0818721-10	B-209 0-5'	WOBURN, MA
L0818721-11	B-210 0-5'	WOBURN, MA
L0818721-12	B-211 0-3'	WOBURN, MA
L0818721-13	B-212 0-5'	WOBURN, MA
L0818721-14	B-213 0-5'	WOBURN, MA
L0818721-15	B-214 0-5'	WOBURN, MA
L0818721-16	B-215 0-5'	WOBURN, MA
L0818721-17	B-216 0-5'	WOBURN, MA
L0818721-18	B-217 0-5'	WOBURN, MA
L0818721-19	B-218 0-5'	WOBURN, MA
L0818721-20	B-220 0-5'	WOBURN, MA
L0818721-21	DUP-1	WOBURN, MA
L0818721-22	DUP-2	WOBURN, MA
L0818721-23	B-221 0-5'	WOBURN, MA
L0818721-24	B-222 0-5'	WOBURN, MA
L0818721-25	B-223 0-5'	WOBURN, MA
L0818721-26	B-224 0-5'	WOBURN, MA
L0818721-27	B-224 5-10'	WOBURN, MA
L0818721-28	B-224 10-15'	WOBURN, MA
L0818721-29	B-225 0-5'	WOBURN, MA
L0818721-30	B-220 5-10'	WOBURN, MA
L0818721-31	B-225 5-10'	WOBURN, MA

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-0900

Report Date: 01/06/09

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	YES
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	NO
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

MCP Related Narratives

EPH

L0818721-18 has elevated detection limits due to the dilution required by matrix interferences encountered during the concentration of the sample.

In reference to question E:

The surrogate recoveries for L0818721-19, -21, and -22 were below the acceptance criteria for Chloro-Octadecane (29%, 28%, and 27%) and o-Terphenyl (36%, 35%, and 32%); however, re-extraction achieved similar results (Chloro-Octadecane at 28%, 30%, and 27%, and o-Terphenyl at 28%, 39%, and 29%). The results of both extractions are reported; however, all associated compounds are considered to have a potentially low bias.

The surrogate recovery for L0818721-26 was below the acceptance criteria for Chloro-Octadecane (32%);

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Case Narrative (continued)

however, re-extraction achieved similar results (1%). The results of both extractions are reported; however, all associated compounds are considered to have a potentially low bias.

Metals

L0818721-05 through -08, -11, -15, -26, and -27 required re-analysis on dilution in order to quantitate the samples within the calibration range. The result is reported as a "greater than" value for the initial analysis that exceeded the calibration curve. The re-analysis was performed only for Mercury.

L0818721-10, -11, -26, and -27 required re-analysis on dilution in order to quantitate the samples within the calibration range. The result is reported as a "greater than" value for the initial analysis that exceeded the calibration curve. The re-analysis was performed only for Chromium

In reference to question F:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 01/06/09

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-01
Client ID: B-200 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/30/08 21:48
Analyst: AS
Percent Solids: 86%

Date Collected: 12/18/08 13:55
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 10:02
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	7.75	1
C19-C36 Aliphatics	20.5		mg/kg	7.75	1
C11-C22 Aromatics	12.7		mg/kg	7.75	1
C11-C22 Aromatics, Adjusted	12.7		mg/kg	7.75	1
Naphthalene	ND		mg/kg	0.388	1
2-Methylnaphthalene	ND		mg/kg	0.388	1
Acenaphthylene	ND		mg/kg	0.388	1
Acenaphthene	ND		mg/kg	0.388	1
Fluorene	ND		mg/kg	0.388	1
Phenanthrene	ND		mg/kg	0.388	1
Anthracene	ND		mg/kg	0.388	1
Fluoranthene	ND		mg/kg	0.388	1
Pyrene	ND		mg/kg	0.388	1
Benzo(a)anthracene	ND		mg/kg	0.388	1
Chrysene	ND		mg/kg	0.388	1
Benzo(b)fluoranthene	ND		mg/kg	0.388	1
Benzo(k)fluoranthene	ND		mg/kg	0.388	1
Benzo(a)pyrene	ND		mg/kg	0.388	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.388	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.388	1
Benzo(ghi)perylene	ND		mg/kg	0.388	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-01

Date Collected: 12/18/08 13:55

Client ID: B-200 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	50		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	79		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-02
Client ID: B-201 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 22:53
Analyst: AS
Percent Solids: 73%

Date Collected: 12/18/08 12:35
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	9.13	1
C19-C36 Aliphatics	26.3		mg/kg	9.13	1
C11-C22 Aromatics	30.3		mg/kg	9.13	1
C11-C22 Aromatics, Adjusted	22.2		mg/kg	9.13	1
Naphthalene	ND		mg/kg	0.457	1
2-Methylnaphthalene	ND		mg/kg	0.457	1
Acenaphthylene	ND		mg/kg	0.457	1
Acenaphthene	ND		mg/kg	0.457	1
Fluorene	ND		mg/kg	0.457	1
Phenanthrene	0.586		mg/kg	0.457	1
Anthracene	ND		mg/kg	0.457	1
Fluoranthene	1.46		mg/kg	0.457	1
Pyrene	1.18		mg/kg	0.457	1
Benzo(a)anthracene	0.478		mg/kg	0.457	1
Chrysene	0.852		mg/kg	0.457	1
Benzo(b)fluoranthene	0.862		mg/kg	0.457	1
Benzo(k)fluoranthene	0.710		mg/kg	0.457	1
Benzo(a)pyrene	0.670		mg/kg	0.457	1
Indeno(1,2,3-cd)Pyrene	0.694		mg/kg	0.457	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.457	1
Benzo(ghi)perylene	0.575		mg/kg	0.457	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-02

Date Collected: 12/18/08 12:35

Client ID: B-201 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	87		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	81		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-03
Client ID: B-202 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 23:56
Analyst: AS
Percent Solids: 87%

Date Collected: 12/18/08 12:45
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	7.66	1
C19-C36 Aliphatics	59.7		mg/kg	7.66	1
C11-C22 Aromatics	45.6		mg/kg	7.66	1
C11-C22 Aromatics, Adjusted	34.4		mg/kg	7.66	1
Naphthalene	ND		mg/kg	0.383	1
2-Methylnaphthalene	ND		mg/kg	0.383	1
Acenaphthylene	ND		mg/kg	0.383	1
Acenaphthene	ND		mg/kg	0.383	1
Fluorene	ND		mg/kg	0.383	1
Phenanthrene	0.984		mg/kg	0.383	1
Anthracene	ND		mg/kg	0.383	1
Fluoranthene	2.07		mg/kg	0.383	1
Pyrene	1.59		mg/kg	0.383	1
Benzo(a)anthracene	0.613		mg/kg	0.383	1
Chrysene	1.19		mg/kg	0.383	1
Benzo(b)fluoranthene	1.24		mg/kg	0.383	1
Benzo(k)fluoranthene	0.910		mg/kg	0.383	1
Benzo(a)pyrene	0.890		mg/kg	0.383	1
Indeno(1,2,3-cd)Pyrene	0.951		mg/kg	0.383	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.383	1
Benzo(ghi)perylene	0.823		mg/kg	0.383	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-03

Date Collected: 12/18/08 12:45

Client ID: B-202 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	82		40-140
o-Terphenyl	93		40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	88		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-04
Client ID: B-203 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 13:07
Analyst: AS
Percent Solids: 76%

Date Collected: 12/18/08 12:50
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.77	1
C19-C36 Aliphatics	ND		mg/kg	8.77	1
C11-C22 Aromatics	ND		mg/kg	8.77	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.77	1
Naphthalene	ND		mg/kg	0.438	1
2-Methylnaphthalene	ND		mg/kg	0.438	1
Acenaphthylene	ND		mg/kg	0.438	1
Acenaphthene	ND		mg/kg	0.438	1
Fluorene	ND		mg/kg	0.438	1
Phenanthrene	ND		mg/kg	0.438	1
Anthracene	ND		mg/kg	0.438	1
Fluoranthene	ND		mg/kg	0.438	1
Pyrene	ND		mg/kg	0.438	1
Benzo(a)anthracene	ND		mg/kg	0.438	1
Chrysene	ND		mg/kg	0.438	1
Benzo(b)fluoranthene	ND		mg/kg	0.438	1
Benzo(k)fluoranthene	ND		mg/kg	0.438	1
Benzo(a)pyrene	ND		mg/kg	0.438	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.438	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.438	1
Benzo(ghi)perylene	ND		mg/kg	0.438	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-04

Date Collected: 12/18/08 12:50

Client ID: B-203 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	87		40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	90		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-05
Client ID: B-204 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 23:25
Analyst: AS
Percent Solids: 68%

Date Collected: 12/18/08 12:15
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.80	1
C19-C36 Aliphatics	56.2		mg/kg	9.80	1
C11-C22 Aromatics	120		mg/kg	9.80	1
C11-C22 Aromatics, Adjusted	82.4		mg/kg	9.80	1
Naphthalene	ND		mg/kg	0.490	1
2-Methylnaphthalene	ND		mg/kg	0.490	1
Acenaphthylene	ND		mg/kg	0.490	1
Acenaphthene	ND		mg/kg	0.490	1
Fluorene	ND		mg/kg	0.490	1
Phenanthrene	4.90		mg/kg	0.490	1
Anthracene	1.23		mg/kg	0.490	1
Fluoranthene	6.77		mg/kg	0.490	1
Pyrene	5.38		mg/kg	0.490	1
Benzo(a)anthracene	2.64		mg/kg	0.490	1
Chrysene	3.54		mg/kg	0.490	1
Benzo(b)fluoranthene	3.24		mg/kg	0.490	1
Benzo(k)fluoranthene	2.87		mg/kg	0.490	1
Benzo(a)pyrene	2.71		mg/kg	0.490	1
Indeno(1,2,3-cd)Pyrene	2.16		mg/kg	0.490	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.490	1
Benzo(ghi)perylene	1.91		mg/kg	0.490	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-05

Date Collected: 12/18/08 12:15

Client ID: B-204 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	96		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	83		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-06
Client ID: B-205 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 04:08
Analyst: AS
Percent Solids: 72%

Date Collected: 12/18/08 13:00
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.26	1
C19-C36 Aliphatics	72.1		mg/kg	9.26	1
C11-C22 Aromatics	82.8		mg/kg	9.26	1
C11-C22 Aromatics, Adjusted	66.4		mg/kg	9.26	1
Naphthalene	ND		mg/kg	0.463	1
2-Methylnaphthalene	ND		mg/kg	0.463	1
Acenaphthylene	ND		mg/kg	0.463	1
Acenaphthene	ND		mg/kg	0.463	1
Fluorene	ND		mg/kg	0.463	1
Phenanthrene	1.94		mg/kg	0.463	1
Anthracene	ND		mg/kg	0.463	1
Fluoranthene	3.18		mg/kg	0.463	1
Pyrene	2.54		mg/kg	0.463	1
Benzo(a)anthracene	1.35		mg/kg	0.463	1
Chrysene	1.63		mg/kg	0.463	1
Benzo(b)fluoranthene	1.32		mg/kg	0.463	1
Benzo(k)fluoranthene	1.38		mg/kg	0.463	1
Benzo(a)pyrene	1.28		mg/kg	0.463	1
Indeno(1,2,3-cd)Pyrene	0.962		mg/kg	0.463	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.463	1
Benzo(ghi)perylene	0.762		mg/kg	0.463	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-06

Date Collected: 12/18/08 13:00

Client ID: B-205 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	48		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	87		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-07
Client ID: B-206 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 03:05
Analyst: AS
Percent Solids: 71%

Date Collected: 12/18/08 13:05
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.39	1
C19-C36 Aliphatics	105		mg/kg	9.39	1
C11-C22 Aromatics	82.1		mg/kg	9.39	1
C11-C22 Aromatics, Adjusted	68.7		mg/kg	9.39	1
Naphthalene	ND		mg/kg	0.469	1
2-Methylnaphthalene	ND		mg/kg	0.469	1
Acenaphthylene	ND		mg/kg	0.469	1
Acenaphthene	ND		mg/kg	0.469	1
Fluorene	ND		mg/kg	0.469	1
Phenanthrene	1.21		mg/kg	0.469	1
Anthracene	ND		mg/kg	0.469	1
Fluoranthene	2.65		mg/kg	0.469	1
Pyrene	2.21		mg/kg	0.469	1
Benzo(a)anthracene	1.19		mg/kg	0.469	1
Chrysene	1.21		mg/kg	0.469	1
Benzo(b)fluoranthene	1.18		mg/kg	0.469	1
Benzo(k)fluoranthene	1.15		mg/kg	0.469	1
Benzo(a)pyrene	1.08		mg/kg	0.469	1
Indeno(1,2,3-cd)Pyrene	0.945		mg/kg	0.469	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.469	1
Benzo(ghi)perylene	0.606		mg/kg	0.469	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-07

Date Collected: 12/18/08 13:05

Client ID: B-206 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	88		40-140
2-Fluorobiphenyl	87		40-140
2-Bromonaphthalene	87		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-08
Client ID: B-207 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 01:31
Analyst: AS
Percent Solids: 74%

Date Collected: 12/18/08 09:45
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	9.01	1
C19-C36 Aliphatics	81.1		mg/kg	9.01	1
C11-C22 Aromatics	51.5		mg/kg	9.01	1
C11-C22 Aromatics, Adjusted	43.3		mg/kg	9.01	1
Naphthalene	ND		mg/kg	0.450	1
2-Methylnaphthalene	ND		mg/kg	0.450	1
Acenaphthylene	ND		mg/kg	0.450	1
Acenaphthene	ND		mg/kg	0.450	1
Fluorene	ND		mg/kg	0.450	1
Phenanthrene	0.702		mg/kg	0.450	1
Anthracene	ND		mg/kg	0.450	1
Fluoranthene	1.41		mg/kg	0.450	1
Pyrene	1.17		mg/kg	0.450	1
Benzo(a)anthracene	0.557		mg/kg	0.450	1
Chrysene	0.826		mg/kg	0.450	1
Benzo(b)fluoranthene	0.906		mg/kg	0.450	1
Benzo(k)fluoranthene	0.729		mg/kg	0.450	1
Benzo(a)pyrene	0.674		mg/kg	0.450	1
Indeno(1,2,3-cd)Pyrene	0.705		mg/kg	0.450	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.450	1
Benzo(ghi)perylene	0.548		mg/kg	0.450	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-08

Date Collected: 12/18/08 09:45

Client ID: B-207 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	81		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	77		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-09
Client ID: B-208 0-3'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 00:59
Analyst: AS
Percent Solids: 68%

Date Collected: 12/18/08 10:30
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.80	1
C19-C36 Aliphatics	125		mg/kg	9.80	1
C11-C22 Aromatics	99.7		mg/kg	9.80	1
C11-C22 Aromatics, Adjusted	79.1		mg/kg	9.80	1
Naphthalene	ND		mg/kg	0.490	1
2-Methylnaphthalene	ND		mg/kg	0.490	1
Acenaphthylene	ND		mg/kg	0.490	1
Acenaphthene	ND		mg/kg	0.490	1
Fluorene	ND		mg/kg	0.490	1
Phenanthrene	1.66		mg/kg	0.490	1
Anthracene	ND		mg/kg	0.490	1
Fluoranthene	3.80		mg/kg	0.490	1
Pyrene	3.00		mg/kg	0.490	1
Benzo(a)anthracene	1.27		mg/kg	0.490	1
Chrysene	2.20		mg/kg	0.490	1
Benzo(b)fluoranthene	2.37		mg/kg	0.490	1
Benzo(k)fluoranthene	1.77		mg/kg	0.490	1
Benzo(a)pyrene	1.72		mg/kg	0.490	1
Indeno(1,2,3-cd)Pyrene	1.62		mg/kg	0.490	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.490	1
Benzo(ghi)perylene	1.19		mg/kg	0.490	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-09

Date Collected: 12/18/08 10:30

Client ID: B-208 0-3'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		40-140
o-Terphenyl	93		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	86		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-10
Client ID: B-209 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 02:02
Analyst: AS
Percent Solids: 62%

Date Collected: 12/18/08 10:45
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	10.8	1
C19-C36 Aliphatics	116		mg/kg	10.8	1
C11-C22 Aromatics	79.6		mg/kg	10.8	1
C11-C22 Aromatics, Adjusted	67.7		mg/kg	10.8	1
Naphthalene	ND		mg/kg	0.538	1
2-Methylnaphthalene	ND		mg/kg	0.538	1
Acenaphthylene	ND		mg/kg	0.538	1
Acenaphthene	ND		mg/kg	0.538	1
Fluorene	ND		mg/kg	0.538	1
Phenanthrene	1.63		mg/kg	0.538	1
Anthracene	ND		mg/kg	0.538	1
Fluoranthene	2.20		mg/kg	0.538	1
Pyrene	1.81		mg/kg	0.538	1
Benzo(a)anthracene	0.879		mg/kg	0.538	1
Chrysene	1.12		mg/kg	0.538	1
Benzo(b)fluoranthene	0.972		mg/kg	0.538	1
Benzo(k)fluoranthene	0.994		mg/kg	0.538	1
Benzo(a)pyrene	0.919		mg/kg	0.538	1
Indeno(1,2,3-cd)Pyrene	0.794		mg/kg	0.538	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.538	1
Benzo(ghi)perylene	0.551		mg/kg	0.538	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-10

Date Collected: 12/18/08 10:45

Client ID: B-209 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	89		40-140
2-Fluorobiphenyl	89		40-140
2-Bromonaphthalene	89		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-11
Client ID: B-210 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/06/09 03:37
Analyst: AS
Percent Solids: 58%

Date Collected: 12/18/08 09:30
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	11.5	1
C19-C36 Aliphatics	134		mg/kg	11.5	1
C11-C22 Aromatics	138		mg/kg	11.5	1
C11-C22 Aromatics, Adjusted	107		mg/kg	11.5	1
Naphthalene	ND		mg/kg	0.575	1
2-Methylnaphthalene	ND		mg/kg	0.575	1
Acenaphthylene	ND		mg/kg	0.575	1
Acenaphthene	ND		mg/kg	0.575	1
Fluorene	ND		mg/kg	0.575	1
Phenanthrene	4.29		mg/kg	0.575	1
Anthracene	0.897		mg/kg	0.575	1
Fluoranthene	5.84		mg/kg	0.575	1
Pyrene	4.66		mg/kg	0.575	1
Benzo(a)anthracene	2.35		mg/kg	0.575	1
Chrysene	2.38		mg/kg	0.575	1
Benzo(b)fluoranthene	2.63		mg/kg	0.575	1
Benzo(k)fluoranthene	2.47		mg/kg	0.575	1
Benzo(a)pyrene	2.42		mg/kg	0.575	1
Indeno(1,2,3-cd)Pyrene	1.95		mg/kg	0.575	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.575	1
Benzo(ghi)perylene	1.66		mg/kg	0.575	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-11

Date Collected: 12/18/08 09:30

Client ID: B-210 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	80		40-140
o-Terphenyl	86		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	79		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-12
Client ID: B-211 0-3'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 21:50
Analyst: AS
Percent Solids: 76%

Date Collected: 12/18/08 10:45
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	8.77	1
C19-C36 Aliphatics	14.1		mg/kg	8.77	1
C11-C22 Aromatics	11.1		mg/kg	8.77	1
C11-C22 Aromatics, Adjusted	11.1		mg/kg	8.77	1
Naphthalene	ND		mg/kg	0.438	1
2-Methylnaphthalene	ND		mg/kg	0.438	1
Acenaphthylene	ND		mg/kg	0.438	1
Acenaphthene	ND		mg/kg	0.438	1
Fluorene	ND		mg/kg	0.438	1
Phenanthrene	ND		mg/kg	0.438	1
Anthracene	ND		mg/kg	0.438	1
Fluoranthene	ND		mg/kg	0.438	1
Pyrene	ND		mg/kg	0.438	1
Benzo(a)anthracene	ND		mg/kg	0.438	1
Chrysene	ND		mg/kg	0.438	1
Benzo(b)fluoranthene	ND		mg/kg	0.438	1
Benzo(k)fluoranthene	ND		mg/kg	0.438	1
Benzo(a)pyrene	ND		mg/kg	0.438	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.438	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.438	1
Benzo(ghi)perylene	ND		mg/kg	0.438	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-12

Date Collected: 12/18/08 10:45

Client ID: B-211 0-3'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	79		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	76		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-13
Client ID: B-212 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 14:07
Analyst: AS
Percent Solids: 80%

Date Collected: 12/18/08 10:15
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	8.33	1
C19-C36 Aliphatics	31.6		mg/kg	8.33	1
C11-C22 Aromatics	18.1		mg/kg	8.33	1
C11-C22 Aromatics, Adjusted	18.1		mg/kg	8.33	1
Naphthalene	ND		mg/kg	0.417	1
2-Methylnaphthalene	ND		mg/kg	0.417	1
Acenaphthylene	ND		mg/kg	0.417	1
Acenaphthene	ND		mg/kg	0.417	1
Fluorene	ND		mg/kg	0.417	1
Phenanthrene	ND		mg/kg	0.417	1
Anthracene	ND		mg/kg	0.417	1
Fluoranthene	ND		mg/kg	0.417	1
Pyrene	ND		mg/kg	0.417	1
Benzo(a)anthracene	ND		mg/kg	0.417	1
Chrysene	ND		mg/kg	0.417	1
Benzo(b)fluoranthene	ND		mg/kg	0.417	1
Benzo(k)fluoranthene	ND		mg/kg	0.417	1
Benzo(a)pyrene	ND		mg/kg	0.417	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.417	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.417	1
Benzo(ghi)perylene	ND		mg/kg	0.417	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-13

Date Collected: 12/18/08 10:15

Client ID: B-212 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		40-140
o-Terphenyl	82		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	77		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-14
Client ID: B-213 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 13:37
Analyst: AS
Percent Solids: 83%

Date Collected: 12/18/08 11:00
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.03	1
C19-C36 Aliphatics	ND		mg/kg	8.03	1
C11-C22 Aromatics	ND		mg/kg	8.03	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.03	1
Naphthalene	ND		mg/kg	0.402	1
2-Methylnaphthalene	ND		mg/kg	0.402	1
Acenaphthylene	ND		mg/kg	0.402	1
Acenaphthene	ND		mg/kg	0.402	1
Fluorene	ND		mg/kg	0.402	1
Phenanthrene	ND		mg/kg	0.402	1
Anthracene	ND		mg/kg	0.402	1
Fluoranthene	ND		mg/kg	0.402	1
Pyrene	ND		mg/kg	0.402	1
Benzo(a)anthracene	ND		mg/kg	0.402	1
Chrysene	ND		mg/kg	0.402	1
Benzo(b)fluoranthene	ND		mg/kg	0.402	1
Benzo(k)fluoranthene	ND		mg/kg	0.402	1
Benzo(a)pyrene	ND		mg/kg	0.402	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.402	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.402	1
Benzo(ghi)perylene	ND		mg/kg	0.402	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-14

Date Collected: 12/18/08 11:00

Client ID: B-213 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	70		40-140
o-Terphenyl	90		40-140
2-Fluorobiphenyl	86		40-140
2-Bromonaphthalene	87		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-15
Client ID: B-214 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 22:22
Analyst: AS
Percent Solids: 72%

Date Collected: 12/18/08 12:00
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.26	1
C19-C36 Aliphatics	37.0		mg/kg	9.26	1
C11-C22 Aromatics	37.8		mg/kg	9.26	1
C11-C22 Aromatics, Adjusted	37.8		mg/kg	9.26	1
Naphthalene	ND		mg/kg	0.463	1
2-Methylnaphthalene	ND		mg/kg	0.463	1
Acenaphthylene	ND		mg/kg	0.463	1
Acenaphthene	ND		mg/kg	0.463	1
Fluorene	ND		mg/kg	0.463	1
Phenanthrene	ND		mg/kg	0.463	1
Anthracene	ND		mg/kg	0.463	1
Fluoranthene	ND		mg/kg	0.463	1
Pyrene	ND		mg/kg	0.463	1
Benzo(a)anthracene	ND		mg/kg	0.463	1
Chrysene	ND		mg/kg	0.463	1
Benzo(b)fluoranthene	ND		mg/kg	0.463	1
Benzo(k)fluoranthene	ND		mg/kg	0.463	1
Benzo(a)pyrene	ND		mg/kg	0.463	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.463	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.463	1
Benzo(ghi)perylene	ND		mg/kg	0.463	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-15

Date Collected: 12/18/08 12:00

Client ID: B-214 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		40-140
o-Terphenyl	96		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	88		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-16
Client ID: B-215 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/05/09 21:19
Analyst: AS
Percent Solids: 70%

Date Collected: 12/18/08 11:15
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 12/31/08 20:00
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/05/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.52	1
C19-C36 Aliphatics	15.1		mg/kg	9.52	1
C11-C22 Aromatics	20.5		mg/kg	9.52	1
C11-C22 Aromatics, Adjusted	20.5		mg/kg	9.52	1
Naphthalene	ND		mg/kg	0.476	1
2-Methylnaphthalene	ND		mg/kg	0.476	1
Acenaphthylene	ND		mg/kg	0.476	1
Acenaphthene	ND		mg/kg	0.476	1
Fluorene	ND		mg/kg	0.476	1
Phenanthrene	ND		mg/kg	0.476	1
Anthracene	ND		mg/kg	0.476	1
Fluoranthene	ND		mg/kg	0.476	1
Pyrene	ND		mg/kg	0.476	1
Benzo(a)anthracene	ND		mg/kg	0.476	1
Chrysene	ND		mg/kg	0.476	1
Benzo(b)fluoranthene	ND		mg/kg	0.476	1
Benzo(k)fluoranthene	ND		mg/kg	0.476	1
Benzo(a)pyrene	ND		mg/kg	0.476	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.476	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.476	1
Benzo(ghi)perylene	ND		mg/kg	0.476	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-16

Date Collected: 12/18/08 11:15

Client ID: B-215 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	85		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	79		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-17
Client ID: B-216 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/31/08 02:51
Analyst: MF
Percent Solids: 78%

Date Collected: 12/18/08 11:05
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/30/08 11:22
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	8.55	1
C19-C36 Aliphatics	23.7		mg/kg	8.55	1
C11-C22 Aromatics	35.1		mg/kg	8.55	1
C11-C22 Aromatics, Adjusted	27.8		mg/kg	8.55	1
Naphthalene	ND		mg/kg	0.427	1
2-Methylnaphthalene	ND		mg/kg	0.427	1
Acenaphthylene	ND		mg/kg	0.427	1
Acenaphthene	ND		mg/kg	0.427	1
Fluorene	ND		mg/kg	0.427	1
Phenanthrene	0.807		mg/kg	0.427	1
Anthracene	ND		mg/kg	0.427	1
Fluoranthene	1.36		mg/kg	0.427	1
Pyrene	1.14		mg/kg	0.427	1
Benzo(a)anthracene	0.672		mg/kg	0.427	1
Chrysene	0.907		mg/kg	0.427	1
Benzo(b)fluoranthene	0.719		mg/kg	0.427	1
Benzo(k)fluoranthene	0.598		mg/kg	0.427	1
Benzo(a)pyrene	0.610		mg/kg	0.427	1
Indeno(1,2,3-cd)Pyrene	0.485		mg/kg	0.427	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.427	1
Benzo(ghi)perylene	ND		mg/kg	0.427	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-17

Date Collected: 12/18/08 11:05

Client ID: B-216 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	51		40-140
o-Terphenyl	57		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	89		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-18
Client ID: B-217 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 21:36
Analyst: AS
Percent Solids: 71%

Date Collected: 12/18/08 12:25
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	18.8	2
C19-C36 Aliphatics	ND		mg/kg	18.8	2
C11-C22 Aromatics	ND		mg/kg	18.8	2
C11-C22 Aromatics, Adjusted	ND		mg/kg	18.8	2
Naphthalene	ND		mg/kg	0.939	2
2-Methylnaphthalene	ND		mg/kg	0.939	2
Acenaphthylene	ND		mg/kg	0.939	2
Acenaphthene	ND		mg/kg	0.939	2
Fluorene	ND		mg/kg	0.939	2
Phenanthrene	ND		mg/kg	0.939	2
Anthracene	ND		mg/kg	0.939	2
Fluoranthene	ND		mg/kg	0.939	2
Pyrene	ND		mg/kg	0.939	2
Benzo(a)anthracene	ND		mg/kg	0.939	2
Chrysene	ND		mg/kg	0.939	2
Benzo(b)fluoranthene	ND		mg/kg	0.939	2
Benzo(k)fluoranthene	ND		mg/kg	0.939	2
Benzo(a)pyrene	ND		mg/kg	0.939	2
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.939	2
Dibenzo(a,h)anthracene	ND		mg/kg	0.939	2
Benzo(ghi)perylene	ND		mg/kg	0.939	2

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-18

Date Collected: 12/18/08 12:25

Client ID: B-217 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	49		40-140
o-Terphenyl	56		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	73		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-19
Client ID: B-218 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 21:05
Analyst: AS
Percent Solids: 63%

Date Collected: 12/18/08 11:47
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	10.6	1
C19-C36 Aliphatics	ND		mg/kg	10.6	1
C11-C22 Aromatics	ND		mg/kg	10.6	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	10.6	1
Naphthalene	ND		mg/kg	0.529	1
2-Methylnaphthalene	ND		mg/kg	0.529	1
Acenaphthylene	ND		mg/kg	0.529	1
Acenaphthene	ND		mg/kg	0.529	1
Fluorene	ND		mg/kg	0.529	1
Phenanthrene	ND		mg/kg	0.529	1
Anthracene	ND		mg/kg	0.529	1
Fluoranthene	ND		mg/kg	0.529	1
Pyrene	ND		mg/kg	0.529	1
Benzo(a)anthracene	ND		mg/kg	0.529	1
Chrysene	ND		mg/kg	0.529	1
Benzo(b)fluoranthene	ND		mg/kg	0.529	1
Benzo(k)fluoranthene	ND		mg/kg	0.529	1
Benzo(a)pyrene	ND		mg/kg	0.529	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.529	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.529	1
Benzo(ghi)perylene	ND		mg/kg	0.529	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-19

Date Collected: 12/18/08 11:47

Client ID: B-218 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	29		40-140
o-Terphenyl	36		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	77		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-19 RE
 Client ID: B-218 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Analytical Method: 61,EPH-04-1
 Analytical Date: 12/31/08 01:47
 Analyst: AS
 Percent Solids: 63%

Date Collected: 12/18/08 11:47
 Date Received: 12/19/08
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 12/30/08 11:22
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	10.6	1
C19-C36 Aliphatics	ND		mg/kg	10.6	1
C11-C22 Aromatics	ND		mg/kg	10.6	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	10.6	1
Naphthalene	ND		mg/kg	0.529	1
2-Methylnaphthalene	ND		mg/kg	0.529	1
Acenaphthylene	ND		mg/kg	0.529	1
Acenaphthene	ND		mg/kg	0.529	1
Fluorene	ND		mg/kg	0.529	1
Phenanthrene	ND		mg/kg	0.529	1
Anthracene	ND		mg/kg	0.529	1
Fluoranthene	ND		mg/kg	0.529	1
Pyrene	ND		mg/kg	0.529	1
Benzo(a)anthracene	ND		mg/kg	0.529	1
Chrysene	ND		mg/kg	0.529	1
Benzo(b)fluoranthene	ND		mg/kg	0.529	1
Benzo(k)fluoranthene	ND		mg/kg	0.529	1
Benzo(a)pyrene	ND		mg/kg	0.529	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.529	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.529	1
Benzo(ghi)perylene	ND		mg/kg	0.529	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-19 RE

Date Collected: 12/18/08 11:47

Client ID: B-218 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	28		40-140
o-Terphenyl	28		40-140
2-Fluorobiphenyl	62		40-140
2-Bromonaphthalene	70		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-20
Client ID: B-220 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/30/08 01:15
Analyst: AS
Percent Solids: 58%

Date Collected: 12/18/08 11:20
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	11.5	1
C19-C36 Aliphatics	77.4		mg/kg	11.5	1
C11-C22 Aromatics	44.2		mg/kg	11.5	1
C11-C22 Aromatics, Adjusted	41.4		mg/kg	11.5	1
Naphthalene	ND		mg/kg	0.575	1
2-Methylnaphthalene	ND		mg/kg	0.575	1
Acenaphthylene	ND		mg/kg	0.575	1
Acenaphthene	ND		mg/kg	0.575	1
Fluorene	ND		mg/kg	0.575	1
Phenanthrene	ND		mg/kg	0.575	1
Anthracene	ND		mg/kg	0.575	1
Fluoranthene	0.801		mg/kg	0.575	1
Pyrene	0.654		mg/kg	0.575	1
Benzo(a)anthracene	ND		mg/kg	0.575	1
Chrysene	0.591		mg/kg	0.575	1
Benzo(b)fluoranthene	0.667		mg/kg	0.575	1
Benzo(k)fluoranthene	ND		mg/kg	0.575	1
Benzo(a)pyrene	ND		mg/kg	0.575	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.575	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.575	1
Benzo(ghi)perylene	ND		mg/kg	0.575	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-20

Date Collected: 12/18/08 11:20

Client ID: B-220 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	46		40-140
o-Terphenyl	50		40-140
2-Fluorobiphenyl	80		40-140
2-Bromonaphthalene	78		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-21
 Client ID: DUP-1
 Sample Location: WOBURN, MA
 Matrix: Soil
 Analytical Method: 61,EPH-04-1
 Analytical Date: 12/29/08 22:08
 Analyst: AS
 Percent Solids: 82%

Date Collected: 12/18/08 08:08
 Date Received: 12/19/08
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 12/23/08 13:43
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	8.13	1
C19-C36 Aliphatics	ND		mg/kg	8.13	1
C11-C22 Aromatics	ND		mg/kg	8.13	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.13	1
Naphthalene	ND		mg/kg	0.406	1
2-Methylnaphthalene	ND		mg/kg	0.406	1
Acenaphthylene	ND		mg/kg	0.406	1
Acenaphthene	ND		mg/kg	0.406	1
Fluorene	ND		mg/kg	0.406	1
Phenanthrene	ND		mg/kg	0.406	1
Anthracene	ND		mg/kg	0.406	1
Fluoranthene	ND		mg/kg	0.406	1
Pyrene	ND		mg/kg	0.406	1
Benzo(a)anthracene	ND		mg/kg	0.406	1
Chrysene	ND		mg/kg	0.406	1
Benzo(b)fluoranthene	ND		mg/kg	0.406	1
Benzo(k)fluoranthene	ND		mg/kg	0.406	1
Benzo(a)pyrene	ND		mg/kg	0.406	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.406	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.406	1
Benzo(ghi)perylene	ND		mg/kg	0.406	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-21
 Client ID: DUP-1
 Sample Location: WOBURN, MA

Date Collected: 12/18/08 08:08
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	28		40-140
o-Terphenyl	35		40-140
2-Fluorobiphenyl	73		40-140
2-Bromonaphthalene	73		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-21 RE
 Client ID: DUP-1
 Sample Location: WOBURN, MA
 Matrix: Soil
 Analytical Method: 61,EPH-04-1
 Analytical Date: 12/31/08 00:13
 Analyst: AS
 Percent Solids: 82%

Date Collected: 12/18/08 08:08
 Date Received: 12/19/08
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 12/30/08 11:22
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.13	1
C19-C36 Aliphatics	9.65		mg/kg	8.13	1
C11-C22 Aromatics	ND		mg/kg	8.13	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.13	1
Naphthalene	ND		mg/kg	0.406	1
2-Methylnaphthalene	ND		mg/kg	0.406	1
Acenaphthylene	ND		mg/kg	0.406	1
Acenaphthene	ND		mg/kg	0.406	1
Fluorene	ND		mg/kg	0.406	1
Phenanthrene	ND		mg/kg	0.406	1
Anthracene	ND		mg/kg	0.406	1
Fluoranthene	ND		mg/kg	0.406	1
Pyrene	ND		mg/kg	0.406	1
Benzo(a)anthracene	ND		mg/kg	0.406	1
Chrysene	ND		mg/kg	0.406	1
Benzo(b)fluoranthene	ND		mg/kg	0.406	1
Benzo(k)fluoranthene	ND		mg/kg	0.406	1
Benzo(a)pyrene	ND		mg/kg	0.406	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.406	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.406	1
Benzo(ghi)perylene	ND		mg/kg	0.406	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-21 RE

Date Collected: 12/18/08 08:08

Client ID: DUP-1

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	30		40-140
o-Terphenyl	39		40-140
2-Fluorobiphenyl	87		40-140
2-Bromonaphthalene	98		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22
Client ID: DUP-2
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 22:39
Analyst: AS
Percent Solids: 62%

Date Collected: 12/18/08 12:10
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
C9-C18 Aliphatics	ND		mg/kg	10.8	1
C19-C36 Aliphatics	ND		mg/kg	10.8	1
C11-C22 Aromatics	11.7		mg/kg	10.8	1
C11-C22 Aromatics, Adjusted	11.7		mg/kg	10.8	1
Naphthalene	ND		mg/kg	0.538	1
2-Methylnaphthalene	ND		mg/kg	0.538	1
Acenaphthylene	ND		mg/kg	0.538	1
Acenaphthene	ND		mg/kg	0.538	1
Fluorene	ND		mg/kg	0.538	1
Phenanthrene	ND		mg/kg	0.538	1
Anthracene	ND		mg/kg	0.538	1
Fluoranthene	ND		mg/kg	0.538	1
Pyrene	ND		mg/kg	0.538	1
Benzo(a)anthracene	ND		mg/kg	0.538	1
Chrysene	ND		mg/kg	0.538	1
Benzo(b)fluoranthene	ND		mg/kg	0.538	1
Benzo(k)fluoranthene	ND		mg/kg	0.538	1
Benzo(a)pyrene	ND		mg/kg	0.538	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.538	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.538	1
Benzo(ghi)perylene	ND		mg/kg	0.538	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22

Date Collected: 12/18/08 12:10

Client ID: DUP-2

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	27		40-140
o-Terphenyl	32		40-140
2-Fluorobiphenyl	83		40-140
2-Bromonaphthalene	81		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22 RE
 Client ID: DUP-2
 Sample Location: WOBURN, MA
 Matrix: Soil
 Analytical Method: 61,EPH-04-1
 Analytical Date: 12/31/08 01:16
 Analyst: AS
 Percent Solids: 62%

Date Collected: 12/18/08 12:10
 Date Received: 12/19/08
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 12/30/08 11:22
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	10.8	1
C19-C36 Aliphatics	ND		mg/kg	10.8	1
C11-C22 Aromatics	ND		mg/kg	10.8	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	10.8	1
Naphthalene	ND		mg/kg	0.538	1
2-Methylnaphthalene	ND		mg/kg	0.538	1
Acenaphthylene	ND		mg/kg	0.538	1
Acenaphthene	ND		mg/kg	0.538	1
Fluorene	ND		mg/kg	0.538	1
Phenanthrene	ND		mg/kg	0.538	1
Anthracene	ND		mg/kg	0.538	1
Fluoranthene	ND		mg/kg	0.538	1
Pyrene	ND		mg/kg	0.538	1
Benzo(a)anthracene	ND		mg/kg	0.538	1
Chrysene	ND		mg/kg	0.538	1
Benzo(b)fluoranthene	ND		mg/kg	0.538	1
Benzo(k)fluoranthene	ND		mg/kg	0.538	1
Benzo(a)pyrene	ND		mg/kg	0.538	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.538	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.538	1
Benzo(ghi)perylene	ND		mg/kg	0.538	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22 RE

Date Collected: 12/18/08 12:10

Client ID: DUP-2

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	27		40-140
o-Terphenyl	29		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	86		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-23
Client ID: B-221 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 20:33
Analyst: AS
Percent Solids: 84%

Date Collected: 12/18/08 11:00
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	7.94	1
C19-C36 Aliphatics	ND		mg/kg	7.94	1
C11-C22 Aromatics	12.2		mg/kg	7.94	1
C11-C22 Aromatics, Adjusted	12.2		mg/kg	7.94	1
Naphthalene	ND		mg/kg	0.397	1
2-Methylnaphthalene	ND		mg/kg	0.397	1
Acenaphthylene	ND		mg/kg	0.397	1
Acenaphthene	ND		mg/kg	0.397	1
Fluorene	ND		mg/kg	0.397	1
Phenanthrene	ND		mg/kg	0.397	1
Anthracene	ND		mg/kg	0.397	1
Fluoranthene	ND		mg/kg	0.397	1
Pyrene	ND		mg/kg	0.397	1
Benzo(a)anthracene	ND		mg/kg	0.397	1
Chrysene	ND		mg/kg	0.397	1
Benzo(b)fluoranthene	ND		mg/kg	0.397	1
Benzo(k)fluoranthene	ND		mg/kg	0.397	1
Benzo(a)pyrene	ND		mg/kg	0.397	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.397	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.397	1
Benzo(ghi)perylene	ND		mg/kg	0.397	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-23

Date Collected: 12/18/08 11:00

Client ID: B-221 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	43		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	75		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-24
Client ID: B-222 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 17:55
Analyst: AS
Percent Solids: 96%

Date Collected: 12/18/08 15:15
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	6.94	1
C19-C36 Aliphatics	ND		mg/kg	6.94	1
C11-C22 Aromatics	ND		mg/kg	6.94	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.94	1
Naphthalene	ND		mg/kg	0.347	1
2-Methylnaphthalene	ND		mg/kg	0.347	1
Acenaphthylene	ND		mg/kg	0.347	1
Acenaphthene	ND		mg/kg	0.347	1
Fluorene	ND		mg/kg	0.347	1
Phenanthrene	ND		mg/kg	0.347	1
Anthracene	ND		mg/kg	0.347	1
Fluoranthene	ND		mg/kg	0.347	1
Pyrene	ND		mg/kg	0.347	1
Benzo(a)anthracene	ND		mg/kg	0.347	1
Chrysene	ND		mg/kg	0.347	1
Benzo(b)fluoranthene	ND		mg/kg	0.347	1
Benzo(k)fluoranthene	ND		mg/kg	0.347	1
Benzo(a)pyrene	ND		mg/kg	0.347	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.347	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.347	1
Benzo(ghi)perylene	ND		mg/kg	0.347	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-24

Date Collected: 12/18/08 15:15

Client ID: B-222 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	62		40-140
o-Terphenyl	60		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	74		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-25
Client ID: B-223 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/31/08 00:45
Analyst: MF
Percent Solids: 84%

Date Collected: 12/18/08 15:40
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/30/08 11:22
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	7.94	1
C19-C36 Aliphatics	ND		mg/kg	7.94	1
C11-C22 Aromatics	38.1		mg/kg	7.94	1
C11-C22 Aromatics, Adjusted	23.8		mg/kg	7.94	1
Naphthalene	ND		mg/kg	0.397	1
2-Methylnaphthalene	ND		mg/kg	0.397	1
Acenaphthylene	ND		mg/kg	0.397	1
Acenaphthene	ND		mg/kg	0.397	1
Fluorene	ND		mg/kg	0.397	1
Phenanthrene	2.72		mg/kg	0.397	1
Anthracene	0.406		mg/kg	0.397	1
Fluoranthene	2.65		mg/kg	0.397	1
Pyrene	2.23		mg/kg	0.397	1
Benzo(a)anthracene	0.969		mg/kg	0.397	1
Chrysene	1.22		mg/kg	0.397	1
Benzo(b)fluoranthene	0.930		mg/kg	0.397	1
Benzo(k)fluoranthene	0.925		mg/kg	0.397	1
Benzo(a)pyrene	0.908		mg/kg	0.397	1
Indeno(1,2,3-cd)Pyrene	0.672		mg/kg	0.397	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.397	1
Benzo(ghi)perylene	0.664		mg/kg	0.397	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-25

Date Collected: 12/18/08 15:40

Client ID: B-223 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	40		40-140
o-Terphenyl	50		40-140
2-Fluorobiphenyl	69		40-140
2-Bromonaphthalene	76		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-26
Client ID: B-224 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/30/08 00:12
Analyst: AS
Percent Solids: 67%

Date Collected: 12/18/08 14:50
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	9.95	1
C19-C36 Aliphatics	120		mg/kg	9.95	1
C11-C22 Aromatics	73.2		mg/kg	9.95	1
C11-C22 Aromatics, Adjusted	73.2		mg/kg	9.95	1
Naphthalene	ND		mg/kg	0.498	1
2-Methylnaphthalene	ND		mg/kg	0.498	1
Acenaphthylene	ND		mg/kg	0.498	1
Acenaphthene	ND		mg/kg	0.498	1
Fluorene	ND		mg/kg	0.498	1
Phenanthrene	ND		mg/kg	0.498	1
Anthracene	ND		mg/kg	0.498	1
Fluoranthene	ND		mg/kg	0.498	1
Pyrene	ND		mg/kg	0.498	1
Benzo(a)anthracene	ND		mg/kg	0.498	1
Chrysene	ND		mg/kg	0.498	1
Benzo(b)fluoranthene	ND		mg/kg	0.498	1
Benzo(k)fluoranthene	ND		mg/kg	0.498	1
Benzo(a)pyrene	ND		mg/kg	0.498	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.498	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.498	1
Benzo(ghi)perylene	ND		mg/kg	0.498	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-26

Date Collected: 12/18/08 14:50

Client ID: B-224 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	32		40-140
o-Terphenyl	46		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	75		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-26 RE
 Client ID: B-224 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Analytical Method: 61,EPH-04-1
 Analytical Date: 12/31/08 02:19
 Analyst: AS
 Percent Solids: 67%

Date Collected: 12/18/08 14:50
 Date Received: 12/19/08
 Field Prep: Not Specified
 Extraction Method: EPA 3546
 Extraction Date: 12/30/08 11:22
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/30/08

Quality Control Information

Condition of sample received: Satisfactory
 Sample Temperature upon receipt: Received on Ice
 Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	9.95	1
C19-C36 Aliphatics	ND		mg/kg	9.95	1
C11-C22 Aromatics	108		mg/kg	9.95	1
C11-C22 Aromatics, Adjusted	82.4		mg/kg	9.95	1
Naphthalene	ND		mg/kg	0.498	1
2-Methylnaphthalene	ND		mg/kg	0.498	1
Acenaphthylene	ND		mg/kg	0.498	1
Acenaphthene	ND		mg/kg	0.498	1
Fluorene	0.566		mg/kg	0.498	1
Phenanthrene	5.48		mg/kg	0.498	1
Anthracene	1.43		mg/kg	0.498	1
Fluoranthene	4.40		mg/kg	0.498	1
Pyrene	3.55		mg/kg	0.498	1
Benzo(a)anthracene	1.57		mg/kg	0.498	1
Chrysene	1.74		mg/kg	0.498	1
Benzo(b)fluoranthene	2.48		mg/kg	0.498	1
Benzo(k)fluoranthene	1.70		mg/kg	0.498	1
Benzo(a)pyrene	1.11		mg/kg	0.498	1
Indeno(1,2,3-cd)Pyrene	0.831		mg/kg	0.498	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.498	1
Benzo(ghi)perylene	0.612		mg/kg	0.498	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-26 RE

Date Collected: 12/18/08 14:50

Client ID: B-224 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	1		40-140
o-Terphenyl	54		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	85		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-27
Client ID: B-224 5-10'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 23:08
Analyst: AS
Percent Solids: 78%

Date Collected: 12/18/08 15:30
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.55	1
C19-C36 Aliphatics	52.4		mg/kg	8.55	1
C11-C22 Aromatics	23.1		mg/kg	8.55	1
C11-C22 Aromatics, Adjusted	23.1		mg/kg	8.55	1
Naphthalene	ND		mg/kg	0.427	1
2-Methylnaphthalene	ND		mg/kg	0.427	1
Acenaphthylene	ND		mg/kg	0.427	1
Acenaphthene	ND		mg/kg	0.427	1
Fluorene	ND		mg/kg	0.427	1
Phenanthrene	ND		mg/kg	0.427	1
Anthracene	ND		mg/kg	0.427	1
Fluoranthene	ND		mg/kg	0.427	1
Pyrene	ND		mg/kg	0.427	1
Benzo(a)anthracene	ND		mg/kg	0.427	1
Chrysene	ND		mg/kg	0.427	1
Benzo(b)fluoranthene	ND		mg/kg	0.427	1
Benzo(k)fluoranthene	ND		mg/kg	0.427	1
Benzo(a)pyrene	ND		mg/kg	0.427	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.427	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.427	1
Benzo(ghi)perylene	ND		mg/kg	0.427	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-27

Date Collected: 12/18/08 15:30

Client ID: B-224 5-10'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	60		40-140
2-Fluorobiphenyl	82		40-140
2-Bromonaphthalene	81		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-28
Client ID: B-224 10-15'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 18:26
Analyst: AS
Percent Solids: 97%

Date Collected: 12/18/08 15:10
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Extractable Petroleum Hydrocarbons					
C9-C18 Aliphatics	ND		mg/kg	6.87	1
C19-C36 Aliphatics	ND		mg/kg	6.87	1
C11-C22 Aromatics	ND		mg/kg	6.87	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.87	1
Naphthalene	ND		mg/kg	0.344	1
2-Methylnaphthalene	ND		mg/kg	0.344	1
Acenaphthylene	ND		mg/kg	0.344	1
Acenaphthene	ND		mg/kg	0.344	1
Fluorene	ND		mg/kg	0.344	1
Phenanthrene	ND		mg/kg	0.344	1
Anthracene	ND		mg/kg	0.344	1
Fluoranthene	ND		mg/kg	0.344	1
Pyrene	ND		mg/kg	0.344	1
Benzo(a)anthracene	ND		mg/kg	0.344	1
Chrysene	ND		mg/kg	0.344	1
Benzo(b)fluoranthene	ND		mg/kg	0.344	1
Benzo(k)fluoranthene	ND		mg/kg	0.344	1
Benzo(a)pyrene	ND		mg/kg	0.344	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.344	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.344	1
Benzo(ghi)perylene	ND		mg/kg	0.344	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-28

Date Collected: 12/18/08 15:10

Client ID: B-224 10-15'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	56		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	83		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-29
Client ID: B-225 0-5'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 18:58
Analyst: AS
Percent Solids: 90%

Date Collected: 12/18/08 15:30
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	7.41	1
C19-C36 Aliphatics	ND		mg/kg	7.41	1
C11-C22 Aromatics	ND		mg/kg	7.41	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.41	1
Naphthalene	ND		mg/kg	0.370	1
2-Methylnaphthalene	ND		mg/kg	0.370	1
Acenaphthylene	ND		mg/kg	0.370	1
Acenaphthene	ND		mg/kg	0.370	1
Fluorene	ND		mg/kg	0.370	1
Phenanthrene	ND		mg/kg	0.370	1
Anthracene	ND		mg/kg	0.370	1
Fluoranthene	ND		mg/kg	0.370	1
Pyrene	ND		mg/kg	0.370	1
Benzo(a)anthracene	ND		mg/kg	0.370	1
Chrysene	ND		mg/kg	0.370	1
Benzo(b)fluoranthene	ND		mg/kg	0.370	1
Benzo(k)fluoranthene	ND		mg/kg	0.370	1
Benzo(a)pyrene	ND		mg/kg	0.370	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.370	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.370	1
Benzo(ghi)perylene	ND		mg/kg	0.370	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-29

Date Collected: 12/18/08 15:30

Client ID: B-225 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	43		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	68		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-30
Client ID: B-220 5-10'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 19:29
Analyst: AS
Percent Solids: 83%

Date Collected: 12/18/08 11:25
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.03	1
C19-C36 Aliphatics	ND		mg/kg	8.03	1
C11-C22 Aromatics	ND		mg/kg	8.03	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.03	1
Naphthalene	ND		mg/kg	0.402	1
2-Methylnaphthalene	ND		mg/kg	0.402	1
Acenaphthylene	ND		mg/kg	0.402	1
Acenaphthene	ND		mg/kg	0.402	1
Fluorene	ND		mg/kg	0.402	1
Phenanthrene	ND		mg/kg	0.402	1
Anthracene	ND		mg/kg	0.402	1
Fluoranthene	ND		mg/kg	0.402	1
Pyrene	ND		mg/kg	0.402	1
Benzo(a)anthracene	ND		mg/kg	0.402	1
Chrysene	ND		mg/kg	0.402	1
Benzo(b)fluoranthene	ND		mg/kg	0.402	1
Benzo(k)fluoranthene	ND		mg/kg	0.402	1
Benzo(a)pyrene	ND		mg/kg	0.402	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.402	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.402	1
Benzo(ghi)perylene	ND		mg/kg	0.402	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-30

Date Collected: 12/18/08 11:25

Client ID: B-220 5-10'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	60		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	80		40-140

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-31
Client ID: B-225 5-10'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 20:01
Analyst: AS
Percent Solids: 94%

Date Collected: 12/18/08 15:35
Date Received: 12/19/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	7.09	1
C19-C36 Aliphatics	ND		mg/kg	7.09	1
C11-C22 Aromatics	ND		mg/kg	7.09	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	7.09	1
Naphthalene	ND		mg/kg	0.355	1
2-Methylnaphthalene	ND		mg/kg	0.355	1
Acenaphthylene	ND		mg/kg	0.355	1
Acenaphthene	ND		mg/kg	0.355	1
Fluorene	ND		mg/kg	0.355	1
Phenanthrene	ND		mg/kg	0.355	1
Anthracene	ND		mg/kg	0.355	1
Fluoranthene	ND		mg/kg	0.355	1
Pyrene	ND		mg/kg	0.355	1
Benzo(a)anthracene	ND		mg/kg	0.355	1
Chrysene	ND		mg/kg	0.355	1
Benzo(b)fluoranthene	ND		mg/kg	0.355	1
Benzo(k)fluoranthene	ND		mg/kg	0.355	1
Benzo(a)pyrene	ND		mg/kg	0.355	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.355	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.355	1
Benzo(ghi)perylene	ND		mg/kg	0.355	1

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-31

Date Collected: 12/18/08 15:35

Client ID: B-225 5-10'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	54		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	91		40-140
2-Bromonaphthalene	81		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
 Analytical Date: 12/30/08 20:17
 Analyst: AS

Extraction Method: EPA 3546
 Extraction Date: 12/23/08 10:02
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 12/30/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 01 Batch: WG348111-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	55		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	83		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 61,EPH-04-1
Analytical Date: 12/29/08 16:47
Analyst: AS

Extraction Method: EPA 3546
Extraction Date: 12/23/08 13:43
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/29/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 18-24,26-31 Batch: WG348159-1				

Parameter	Result	Qualifier	Units	RDL
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	62		40-140
2-Fluorobiphenyl	85		40-140
2-Bromonaphthalene	73		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
Analytical Date: 12/30/08 22:07
Analyst: MF

Extraction Method: EPA 3546
Extraction Date: 12/30/08 11:22
Cleanup Method1: EPH-04-1
Cleanup Date1: 12/30/08

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 17,25 Batch: WG348556-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	75		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	90		40-140
2-Bromonaphthalene	91		40-140

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

**Method Blank Analysis
 Batch Quality Control**

Analytical Method: 61,EPH-04-1
 Analytical Date: 01/05/09 11:16
 Analyst: AS

Extraction Method: EPA 3540C
 Extraction Date: 12/31/08 20:00
 Cleanup Method1: EPH-04-1
 Cleanup Date1: 01/05/09

Parameter	Result	Qualifier	Units	RDL
Extractable Petroleum Hydrocarbons for sample(s): 02-16 Batch: WG348717-1				
C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		40-140
o-Terphenyl	83		40-140
2-Fluorobiphenyl	81		40-140
2-Bromonaphthalene	82		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01 Batch: WG348111-2 WG348111-3					
C9-C18 Aliphatics	56	54	40-140	4	25
C19-C36 Aliphatics	61	63	40-140	3	25
C11-C22 Aromatics	58	61	40-140	5	25
Naphthalene	50	53	40-140	6	25
2-Methylnaphthalene	52	54	40-140	4	25
Acenaphthylene	49	49	40-140	0	25
Acenaphthene	54	55	40-140	2	25
Fluorene	53	54	40-140	2	25
Phenanthrene	56	56	40-140	0	25
Anthracene	61	60	40-140	2	25
Fluoranthene	59	58	40-140	2	25
Pyrene	62	61	40-140	2	25
Benzo(a)anthracene	57	58	40-140	2	25
Chrysene	60	60	40-140	0	25
Benzo(b)fluoranthene	60	62	40-140	3	25
Benzo(k)fluoranthene	62	63	40-140	2	25
Benzo(a)pyrene	56	55	40-140	2	25
Indeno(1,2,3-cd)Pyrene	59	61	40-140	3	25
Dibenzo(a,h)anthracene	58	60	40-140	3	25
Benzo(ghi)perylene	62	62	40-140	0	25
Nonane (C9)	43	42	30-140	2	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01 Batch: WG348111-2 WG348111-3					
Decane (C10)	50	48	40-140	4	25
Dodecane (C12)	55	54	40-140	2	25
Tetradecane (C14)	58	58	40-140	0	25
Hexadecane (C16)	61	60	40-140	2	25
Octadecane (C18)	63	61	40-140	3	25
Nonadecane (C19)	64	62	40-140	3	25
Eicosane (C20)	63	62	40-140	2	25
Docosane (C22)	64	64	40-140	0	25
Tetracosane (C24)	63	65	40-140	3	25
Hexacosane (C26)	64	67	40-140	5	25
Octacosane (C28)	62	65	40-140	5	25
Triacontane (C30)	64	67	40-140	5	25
Hexatriacontane (C36)	68	72	40-140	6	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		50		40-140
o-Terphenyl	66		67		40-140
2-Fluorobiphenyl	73		66		40-140
2-Bromonaphthalene	79		81		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 18-24,26-31 Batch: WG348159-2 WG348159-3					
C9-C18 Aliphatics	49	52	40-140	6	25
C19-C36 Aliphatics	60	65	40-140	8	25
C11-C22 Aromatics	62	71	40-140	14	25
Naphthalene	48	57	40-140	17	25
2-Methylnaphthalene	51	61	40-140	18	25
Acenaphthylene	50	58	40-140	15	25
Acenaphthene	54	63	40-140	15	25
Fluorene	58	67	40-140	14	25
Phenanthrene	60	69	40-140	14	25
Anthracene	66	75	40-140	13	25
Fluoranthene	65	74	40-140	13	25
Pyrene	65	74	40-140	13	25
Benzo(a)anthracene	65	73	40-140	12	25
Chrysene	67	75	40-140	11	25
Benzo(b)fluoranthene	69	77	40-140	11	25
Benzo(k)fluoranthene	68	76	40-140	11	25
Benzo(a)pyrene	62	68	40-140	9	25
Indeno(1,2,3-cd)Pyrene	65	70	40-140	7	25
Dibenzo(a,h)anthracene	66	71	40-140	7	25
Benzo(ghi)perylene	67	72	40-140	7	25
Nonane (C9)	36	40	30-140	11	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 18-24,26-31 Batch: WG348159-2 WG348159-3					
Decane (C10)	41	45	40-140	9	25
Dodecane (C12)	44	47	40-140	7	25
Tetradecane (C14)	46	50	40-140	8	25
Hexadecane (C16)	53	58	40-140	9	25
Octadecane (C18)	59	64	40-140	8	25
Nonadecane (C19)	61	66	40-140	8	25
Eicosane (C20)	62	66	40-140	6	25
Docosane (C22)	63	68	40-140	8	25
Tetracosane (C24)	61	66	40-140	8	25
Hexacosane (C26)	64	69	40-140	8	25
Octacosane (C28)	61	66	40-140	8	25
Triacontane (C30)	62	68	40-140	9	25
Hexatriacontane (C36)	65	71	40-140	9	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		56		40-140
o-Terphenyl	71		73		40-140
2-Fluorobiphenyl	77		85		40-140
2-Bromonaphthalene	72		82		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 17,25 Batch: WG348556-2 WG348556-3					
C9-C18 Aliphatics	48	49	40-140	2	25
C19-C36 Aliphatics	63	62	40-140	2	25
C11-C22 Aromatics	61	57	40-140	7	25
Naphthalene	50	46	40-140	8	25
2-Methylnaphthalene	52	47	40-140	10	25
Acenaphthylene	48	45	40-140	6	25
Acenaphthene	52	49	40-140	6	25
Fluorene	53	52	40-140	2	25
Phenanthrene	60	56	40-140	7	25
Anthracene	68	62	40-140	9	25
Fluoranthene	62	57	40-140	8	25
Pyrene	66	59	40-140	11	25
Benzo(a)anthracene	60	55	40-140	9	25
Chrysene	62	56	40-140	10	25
Benzo(b)fluoranthene	61	55	40-140	10	25
Benzo(k)fluoranthene	62	56	40-140	10	25
Benzo(a)pyrene	58	52	40-140	11	25
Indeno(1,2,3-cd)Pyrene	59	51	40-140	15	25
Dibenzo(a,h)anthracene	58	51	40-140	13	25
Benzo(ghi)perylene	61	53	40-140	14	25
Nonane (C9)	36	35	30-140	3	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 17,25 Batch: WG348556-2 WG348556-3					
Decane (C10)	41	41	40-140	0	25
Dodecane (C12)	44	44	40-140	0	25
Tetradecane (C14)	48	50	40-140	4	25
Hexadecane (C16)	57	60	40-140	5	25
Octadecane (C18)	64	64	40-140	0	25
Nonadecane (C19)	67	66	40-140	2	25
Eicosane (C20)	67	67	40-140	0	25
Docosane (C22)	67	68	40-140	1	25
Tetracosane (C24)	64	64	40-140	0	25
Hexacosane (C26)	65	65	40-140	0	25
Octacosane (C28)	61	60	40-140	2	25
Triacontane (C30)	61	60	40-140	2	25
Hexatriacontane (C36)	63	60	40-140	5	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	64		64		40-140
o-Terphenyl	73		73		40-140
2-Fluorobiphenyl	77		69		40-140
2-Bromonaphthalene	80		78		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 02-16 Batch: WG348717-2 WG348717-3					
C9-C18 Aliphatics	59	62	40-140	5	25
C19-C36 Aliphatics	71	74	40-140	4	25
C11-C22 Aromatics	94	98	40-140	4	25
Naphthalene	82	75	40-140	9	25
2-Methylnaphthalene	87	81	40-140	7	25
Acenaphthylene	82	79	40-140	4	25
Acenaphthene	88	86	40-140	2	25
Fluorene	90	92	40-140	2	25
Phenanthrene	94	96	40-140	2	25
Anthracene	99	103	40-140	4	25
Fluoranthene	97	100	40-140	3	25
Pyrene	100	102	40-140	2	25
Benzo(a)anthracene	93	98	40-140	5	25
Chrysene	96	101	40-140	5	25
Benzo(b)fluoranthene	93	99	40-140	6	25
Benzo(k)fluoranthene	93	101	40-140	8	25
Benzo(a)pyrene	85	92	40-140	8	25
Indeno(1,2,3-cd)Pyrene	86	94	40-140	9	25
Dibenzo(a,h)anthracene	86	95	40-140	10	25
Benzo(ghi)perylene	88	97	40-140	10	25
Nonane (C9)	46	49	30-140	6	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 02-16 Batch: WG348717-2 WG348717-3					
Decane (C10)	55	58	40-140	5	25
Dodecane (C12)	61	65	40-140	6	25
Tetradecane (C14)	64	68	40-140	6	25
Hexadecane (C16)	67	70	40-140	4	25
Octadecane (C18)	69	72	40-140	4	25
Nonadecane (C19)	68	71	40-140	4	25
Eicosane (C20)	69	72	40-140	4	25
Docosane (C22)	72	75	40-140	4	25
Tetracosane (C24)	73	77	40-140	5	25
Hexacosane (C26)	76	80	40-140	5	25
Octacosane (C28)	73	77	40-140	5	25
Triacontane (C30)	75	79	40-140	5	25
Hexatriacontane (C36)	80	82	40-140	2	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	61		59		40-140
o-Terphenyl	103		116		40-140
2-Fluorobiphenyl	96		89		40-140
2-Bromonaphthalene	98		93		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Parameter	% Recovery	QC Criteria
C9-C18 Aliphatics	77	40-140
C19-C36 Aliphatics	76	40-140
C11-C22 Aromatics	86	40-140
Naphthalene	82	40-140
2-Methylnaphthalene	78	40-140
Acenaphthylene	76	40-140
Acenaphthene	80	40-140
Fluorene	79	40-140
Phenanthrene	78	40-140
Anthracene	82	40-140
Fluoranthene	84	40-140
Pyrene	84	40-140
Benzo(a)anthracene	82	40-140
Chrysene	88	40-140
Benzo(b)fluoranthene	81	40-140
Benzo(k)fluoranthene	97	40-140
Benzo(a)pyrene	78	40-140
Indeno(1,2,3-cd)Pyrene	76	40-140
Dibenzo(a,h)anthracene	83	40-140
Benzo(g,h,i)perylene	82	40-140
Nonane	72	30-140
Decane	77	40-140
Dodecane	80	40-140
Tetradecane	76	40-140
Hexadecane	78	40-140
Octadecane	76	40-140
Nonadecane	75	40-140
Eicosane	77	40-140
Docosane	79	40-140
Tetracosane	83	40-140
Hexacosane	78	40-140
Octacosane	77	40-140
triacontane	76	40-140
Hexatriacontane	75	40-140
% Naphthalene Breakthrough	0	0-5
% 2-Methylnaphthalene Breakthrough	0	0-5

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Surrogate	% Recovery	QC Criteria
Chloro-Octadecane	66	40-140
o-Terphenyl	83	40-140
2-Fluorobiphenyl	75	40-140
2-Bromonaphthalene	76	40-140

METALS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-01

Date Collected: 12/18/08 13:55

Client ID: B-200 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	3.7		mg/kg	0.57	1	12/23/08 11:45	12/24/08 09:48	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.57	1	12/23/08 11:45	12/24/08 09:48	EPA 3050B	60,6010B	MG
Chromium, Total	970		mg/kg	0.57	1	12/23/08 11:45	12/24/08 09:48	EPA 3050B	60,6010B	MG
Lead, Total	37		mg/kg	2.8	1	12/23/08 11:45	12/24/08 09:48	EPA 3050B	60,6010B	MG
Mercury, Total	0.53		mg/kg	0.09	1	12/23/08 21:45	12/24/08 11:40	EPA 7471A	64,7471A	RC



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-02

Date Collected: 12/18/08 12:35

Client ID: B-201 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	16		mg/kg	0.68	1	12/23/08 11:45	12/24/08 09:51	EPA 3050B	60,6010B	MG
Cadmium, Total	0.79		mg/kg	0.68	1	12/23/08 11:45	12/24/08 09:51	EPA 3050B	60,6010B	MG
Chromium, Total	1400		mg/kg	0.68	1	12/23/08 11:45	12/24/08 09:51	EPA 3050B	60,6010B	MG
Lead, Total	110		mg/kg	3.4	1	12/23/08 11:45	12/24/08 09:51	EPA 3050B	60,6010B	MG
Mercury, Total	1.4		mg/kg	0.10	1	12/23/08 21:45	12/24/08 11:42	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-03

Date Collected: 12/18/08 12:45

Client ID: B-202 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.9		mg/kg	0.54	1	12/23/08 11:45	12/24/08 09:54	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.54	1	12/23/08 11:45	12/24/08 09:54	EPA 3050B	60,6010B	MG
Chromium, Total	150		mg/kg	0.54	1	12/23/08 11:45	12/24/08 09:54	EPA 3050B	60,6010B	MG
Lead, Total	33		mg/kg	2.7	1	12/23/08 11:45	12/24/08 09:54	EPA 3050B	60,6010B	MG
Mercury, Total	0.84		mg/kg	0.09	1	12/23/08 21:45	12/24/08 11:54	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-04
 Client ID: B-203 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 76%

Date Collected: 12/18/08 12:50
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.8		mg/kg	0.66	1	12/23/08 11:45	12/24/08 09:56	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.66	1	12/23/08 11:45	12/24/08 09:56	EPA 3050B	60,6010B	MG
Chromium, Total	28		mg/kg	0.66	1	12/23/08 11:45	12/24/08 09:56	EPA 3050B	60,6010B	MG
Lead, Total	6.6		mg/kg	3.3	1	12/23/08 11:45	12/24/08 09:56	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.10	1	12/23/08 21:45	12/24/08 11:56	EPA 7471A	64,7471A	RC



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-05

Date Collected: 12/18/08 12:15

Client ID: B-204 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	10		mg/kg	0.70	1	12/23/08 11:45	12/24/08 10:23	EPA 3050B	60,6010B	MG
Cadmium, Total	0.82		mg/kg	0.70	1	12/23/08 11:45	12/24/08 10:23	EPA 3050B	60,6010B	MG
Chromium, Total	1500		mg/kg	0.70	1	12/23/08 11:45	12/24/08 10:23	EPA 3050B	60,6010B	MG
Lead, Total	140		mg/kg	3.5	1	12/23/08 11:45	12/24/08 10:23	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.12	1	12/23/08 21:45	12/24/08 11:58	EPA 7471A	64,7471A	RC
Mercury, Total	2.7		mg/kg	0.24	2	12/23/08 21:45	12/24/08 14:51	EPA 7471A	64,7471A	RC



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-06
 Client ID: B-205 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 72%

Date Collected: 12/18/08 13:00
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	13		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:26	EPA 3050B	60,6010B	MG
Cadmium, Total	0.77		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:26	EPA 3050B	60,6010B	MG
Chromium, Total	2600		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:26	EPA 3050B	60,6010B	MG
Lead, Total	170		mg/kg	3.2	1	12/23/08 11:45	12/24/08 10:26	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.11	1	12/23/08 21:45	12/24/08 12:00	EPA 7471A	64,7471A	RC
Mercury, Total	2.8		mg/kg	0.22	2	12/23/08 21:45	12/24/08 14:22	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-07
 Client ID: B-206 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 71%

Date Collected: 12/18/08 13:05
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	14		mg/kg	0.64	1	12/23/08 11:45	12/24/08 10:29	EPA 3050B	60,6010B	MG
Cadmium, Total	1.2		mg/kg	0.64	1	12/23/08 11:45	12/24/08 10:29	EPA 3050B	60,6010B	MG
Chromium, Total	6000		mg/kg	0.64	1	12/23/08 11:45	12/24/08 10:29	EPA 3050B	60,6010B	MG
Lead, Total	240		mg/kg	3.2	1	12/23/08 11:45	12/24/08 10:29	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.12	1	12/23/08 21:45	12/24/08 12:02	EPA 7471A	64,7471A	RC
Mercury, Total	4.9		mg/kg	0.58	5	12/23/08 21:45	12/24/08 14:35	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-08
 Client ID: B-207 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 74%

Date Collected: 12/18/08 09:45
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	8.5		mg/kg	0.66	1	12/23/08 11:45	12/24/08 10:32	EPA 3050B	60,6010B	MG
Cadmium, Total	0.68		mg/kg	0.66	1	12/23/08 11:45	12/24/08 10:32	EPA 3050B	60,6010B	MG
Chromium, Total	2200		mg/kg	0.66	1	12/23/08 11:45	12/24/08 10:32	EPA 3050B	60,6010B	MG
Lead, Total	140		mg/kg	3.3	1	12/23/08 11:45	12/24/08 10:32	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.1	1	12/23/08 21:45	12/24/08 12:05	EPA 7471A	64,7471A	RC
Mercury, Total	3.2		mg/kg	0.21	2	12/23/08 21:45	12/24/08 14:26	EPA 7471A	64,7471A	RC



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-09

Date Collected: 12/18/08 10:30

Client ID: B-208 0-3'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	15		mg/kg	0.69	1	12/23/08 11:45	12/24/08 10:34	EPA 3050B	60,6010B	MG
Cadmium, Total	1.4		mg/kg	0.69	1	12/23/08 11:45	12/24/08 10:34	EPA 3050B	60,6010B	MG
Chromium, Total	4300		mg/kg	0.69	1	12/23/08 11:45	12/24/08 10:34	EPA 3050B	60,6010B	MG
Lead, Total	260		mg/kg	3.4	1	12/23/08 11:45	12/24/08 10:34	EPA 3050B	60,6010B	MG
Mercury, Total	2.0		mg/kg	0.11	1	12/23/08 21:45	12/24/08 12:07	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-10
 Client ID: B-209 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 62%

Date Collected: 12/18/08 10:45
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	11		mg/kg	0.77	1	12/23/08 11:45	12/24/08 10:37	EPA 3050B	60,6010B	MG
Cadmium, Total	1.4		mg/kg	0.77	1	12/23/08 11:45	12/24/08 10:37	EPA 3050B	60,6010B	MG
Chromium, Total	>5000		mg/kg	.77	1	12/23/08 11:45	12/24/08 10:37	EPA 3050B	60,6010B	MG
Chromium, Total	14000		mg/kg	7.7	10	12/23/08 11:45	12/24/08 10:50	EPA 3050B	60,6010B	MG
Lead, Total	400		mg/kg	3.8	1	12/23/08 11:45	12/24/08 10:37	EPA 3050B	60,6010B	MG
Mercury, Total	2.2		mg/kg	0.12	1	12/23/08 21:45	12/24/08 12:09	EPA 7471A	64,7471A	RC

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-11

Date Collected: 12/18/08 09:30

Client ID: B-210 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 58%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	14		mg/kg	0.83	1	12/23/08 11:45	12/24/08 10:40	EPA 3050B	60,6010B	MG
Cadmium, Total	1.6		mg/kg	0.83	1	12/23/08 11:45	12/24/08 10:40	EPA 3050B	60,6010B	MG
Chromium, Total	>5000		mg/kg	.83	1	12/23/08 11:45	12/24/08 10:40	EPA 3050B	60,6010B	MG
Chromium, Total	10000		mg/kg	8.3	10	12/23/08 11:45	12/24/08 10:52	EPA 3050B	60,6010B	MG
Lead, Total	340		mg/kg	4.1	1	12/23/08 11:45	12/24/08 10:40	EPA 3050B	60,6010B	MG
Mercury, Total	>1.7		mg/kg	.13	1	12/23/08 21:45	12/24/08 12:11	EPA 7471A	64,7471A	RC
Mercury, Total	4.4		mg/kg	0.27	2	12/23/08 21:45	12/24/08 14:28	EPA 7471A	64,7471A	RC



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-12
 Client ID: B-211 0-3'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 76%

Date Collected: 12/18/08 10:45
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.8		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:43	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:43	EPA 3050B	60,6010B	MG
Chromium, Total	1200		mg/kg	0.63	1	12/23/08 11:45	12/24/08 10:43	EPA 3050B	60,6010B	MG
Lead, Total	43		mg/kg	3.2	1	12/23/08 11:45	12/24/08 10:43	EPA 3050B	60,6010B	MG
Mercury, Total	0.70		mg/kg	0.11	1	12/29/08 17:30	12/30/08 09:46	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-13

Date Collected: 12/18/08 10:15

Client ID: B-212 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.6		mg/kg	0.60	1	12/23/08 11:45	12/24/08 14:29	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.60	1	12/23/08 11:45	12/24/08 14:29	EPA 3050B	60,6010B	MG
Chromium, Total	2500		mg/kg	0.60	1	12/23/08 11:45	12/24/08 14:29	EPA 3050B	60,6010B	MG
Lead, Total	42		mg/kg	3.0	1	12/23/08 11:45	12/24/08 14:29	EPA 3050B	60,6010B	MG
Mercury, Total	0.16		mg/kg	0.10	1	12/29/08 17:30	12/30/08 09:48	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-14

Date Collected: 12/18/08 11:00

Client ID: B-213 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.5		mg/kg	0.55	1	12/23/08 11:45	12/24/08 14:34	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.55	1	12/23/08 11:45	12/24/08 14:34	EPA 3050B	60,6010B	MG
Chromium, Total	190		mg/kg	0.55	1	12/23/08 11:45	12/24/08 14:34	EPA 3050B	60,6010B	MG
Lead, Total	34		mg/kg	2.7	1	12/23/08 11:45	12/24/08 14:34	EPA 3050B	60,6010B	MG
Mercury, Total	0.84		mg/kg	0.09	1	12/29/08 17:30	12/30/08 09:50	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-15

Date Collected: 12/18/08 12:00

Client ID: B-214 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 72%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	6.6		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:37	EPA 3050B	60,6010B	MG
Cadmium, Total	1.2		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:37	EPA 3050B	60,6010B	MG
Chromium, Total	2000		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:37	EPA 3050B	60,6010B	MG
Lead, Total	93		mg/kg	3.2	1	12/23/08 11:45	12/24/08 14:37	EPA 3050B	60,6010B	MG
Mercury, Total	>2.1		mg/kg	.11	1	12/29/08 17:30	12/30/08 09:52	EPA 7471A	64,7471A	DM
Mercury, Total	3.1		mg/kg	0.21	2	12/29/08 17:30	12/30/08 11:19	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-16
 Client ID: B-215 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 70%

Date Collected: 12/18/08 11:15
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	3.9		mg/kg	0.70	1	12/23/08 11:45	12/24/08 14:40	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.70	1	12/23/08 11:45	12/24/08 14:40	EPA 3050B	60,6010B	MG
Chromium, Total	1500		mg/kg	0.70	1	12/23/08 11:45	12/24/08 14:40	EPA 3050B	60,6010B	MG
Lead, Total	27		mg/kg	3.5	1	12/23/08 11:45	12/24/08 14:40	EPA 3050B	60,6010B	MG
Mercury, Total	0.28		mg/kg	0.11	1	12/29/08 17:30	12/30/08 09:54	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-17
 Client ID: B-216 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 78%

Date Collected: 12/18/08 11:05
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	5.1		mg/kg	0.61	1	12/23/08 11:45	12/24/08 14:43	EPA 3050B	60,6010B	MG
Cadmium, Total	0.61		mg/kg	0.61	1	12/23/08 11:45	12/24/08 14:43	EPA 3050B	60,6010B	MG
Chromium, Total	770		mg/kg	0.61	1	12/23/08 11:45	12/24/08 14:43	EPA 3050B	60,6010B	MG
Lead, Total	74		mg/kg	3.0	1	12/23/08 11:45	12/24/08 14:43	EPA 3050B	60,6010B	MG
Mercury, Total	0.18		mg/kg	0.10	1	12/29/08 17:30	12/30/08 09:56	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-18
 Client ID: B-217 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 71%

Date Collected: 12/18/08 12:25
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	5.0		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:45	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:45	EPA 3050B	60,6010B	MG
Chromium, Total	630		mg/kg	0.65	1	12/23/08 11:45	12/24/08 14:45	EPA 3050B	60,6010B	MG
Lead, Total	57		mg/kg	3.2	1	12/23/08 11:45	12/24/08 14:45	EPA 3050B	60,6010B	MG
Mercury, Total	0.66		mg/kg	0.12	1	12/29/08 17:30	12/30/08 09:57	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-19
 Client ID: B-218 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 63%

Date Collected: 12/18/08 11:47
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	7.2		mg/kg	0.73	1	12/23/08 11:45	12/24/08 14:48	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.73	1	12/23/08 11:45	12/24/08 14:48	EPA 3050B	60,6010B	MG
Chromium, Total	990		mg/kg	0.73	1	12/23/08 11:45	12/24/08 14:48	EPA 3050B	60,6010B	MG
Lead, Total	51		mg/kg	3.6	1	12/23/08 11:45	12/24/08 14:48	EPA 3050B	60,6010B	MG
Mercury, Total	0.59		mg/kg	0.12	1	12/29/08 17:30	12/30/08 10:03	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-20

Date Collected: 12/18/08 11:20

Client ID: B-220 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 58%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	1.4		mg/kg	0.84	1	12/23/08 11:45	12/24/08 14:51	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.84	1	12/23/08 11:45	12/24/08 14:51	EPA 3050B	60,6010B	MG
Chromium, Total	8000		mg/kg	0.84	1	12/23/08 11:45	12/24/08 14:51	EPA 3050B	60,6010B	MG
Lead, Total	230		mg/kg	4.2	1	12/23/08 11:45	12/24/08 14:51	EPA 3050B	60,6010B	MG
Mercury, Total	0.87		mg/kg	0.14	1	12/29/08 17:30	12/30/08 10:05	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-21

Date Collected: 12/18/08 08:08

Client ID: DUP-1

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 82%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	3.5		mg/kg	0.56	1	12/23/08 11:45	12/24/08 14:54	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.56	1	12/23/08 11:45	12/24/08 14:54	EPA 3050B	60,6010B	MG
Chromium, Total	760		mg/kg	0.56	1	12/23/08 11:45	12/24/08 14:54	EPA 3050B	60,6010B	MG
Lead, Total	22		mg/kg	2.8	1	12/23/08 11:45	12/24/08 14:54	EPA 3050B	60,6010B	MG
Mercury, Total	0.17		mg/kg	0.09	1	12/29/08 17:30	12/30/08 10:06	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22

Date Collected: 12/18/08 12:10

Client ID: DUP-2

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 62%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	9.9		mg/kg	0.79	1	12/23/08 11:45	12/24/08 15:15	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.79	1	12/23/08 11:45	12/24/08 15:15	EPA 3050B	60,6010B	MG
Chromium, Total	1200		mg/kg	0.79	1	12/23/08 11:45	12/24/08 15:15	EPA 3050B	60,6010B	MG
Lead, Total	110		mg/kg	4.0	1	12/23/08 11:45	12/24/08 15:15	EPA 3050B	60,6010B	MG
Mercury, Total	1.9		mg/kg	0.13	1	12/29/08 17:30	12/30/08 10:08	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-23

Date Collected: 12/18/08 11:00

Client ID: B-221 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	9.6		mg/kg	0.59	1	12/23/08 11:45	12/24/08 15:18	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.59	1	12/23/08 11:45	12/24/08 15:18	EPA 3050B	60,6010B	MG
Chromium, Total	3600		mg/kg	0.59	1	12/23/08 11:45	12/24/08 15:18	EPA 3050B	60,6010B	MG
Lead, Total	46		mg/kg	3.0	1	12/23/08 11:45	12/24/08 15:18	EPA 3050B	60,6010B	MG
Mercury, Total	0.83		mg/kg	0.09	1	12/29/08 17:30	12/30/08 10:10	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-24
 Client ID: B-222 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 96%

Date Collected: 12/18/08 15:15
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	5.3		mg/kg	0.51	1	12/23/08 11:45	12/24/08 15:21	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.51	1	12/23/08 11:45	12/24/08 15:21	EPA 3050B	60,6010B	MG
Chromium, Total	16		mg/kg	0.51	1	12/23/08 11:45	12/24/08 15:21	EPA 3050B	60,6010B	MG
Lead, Total	2.9		mg/kg	2.5	1	12/23/08 11:45	12/24/08 15:21	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	12/29/08 17:30	12/30/08 10:12	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-25
 Client ID: B-223 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 84%

Date Collected: 12/18/08 15:40
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	26		mg/kg	0.56	1	12/23/08 11:45	12/24/08 15:24	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.56	1	12/23/08 11:45	12/24/08 15:24	EPA 3050B	60,6010B	MG
Chromium, Total	25		mg/kg	0.56	1	12/23/08 11:45	12/24/08 15:24	EPA 3050B	60,6010B	MG
Lead, Total	20		mg/kg	2.8	1	12/23/08 11:45	12/24/08 15:24	EPA 3050B	60,6010B	MG
Mercury, Total	0.21		mg/kg	0.10	1	12/29/08 17:30	12/30/08 10:13	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-26
 Client ID: B-224 0-5'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 67%

Date Collected: 12/18/08 14:50
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	2.1		mg/kg	0.73	1	12/23/08 11:45	12/24/08 15:26	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.73	1	12/23/08 11:45	12/24/08 15:26	EPA 3050B	60,6010B	MG
Chromium, Total	>5000		mg/kg	.73	1	12/23/08 11:45	12/24/08 15:26	EPA 3050B	60,6010B	MG
Chromium, Total	22000		mg/kg	7.3	10	12/23/08 11:45	12/29/08 12:38	EPA 3050B	60,6010B	MG
Lead, Total	100		mg/kg	3.6	1	12/23/08 11:45	12/24/08 15:26	EPA 3050B	60,6010B	MG
Mercury, Total	>2.4		mg/kg	.12	1	12/29/08 17:30	12/30/08 10:15	EPA 7471A	64,7471A	DM
Mercury, Total	43		mg/kg	2.4	20	12/29/08 17:30	12/30/08 11:21	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-27
 Client ID: B-224 5-10'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 78%

Date Collected: 12/18/08 15:30
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	1.6		mg/kg	0.62	1	12/23/08 11:45	12/24/08 15:29	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.62	1	12/23/08 11:45	12/24/08 15:29	EPA 3050B	60,6010B	MG
Chromium, Total	>5000		mg/kg	.62	1	12/23/08 11:45	12/24/08 15:29	EPA 3050B	60,6010B	MG
Chromium, Total	12000		mg/kg	6.2	10	12/23/08 11:45	12/29/08 12:40	EPA 3050B	60,6010B	MG
Lead, Total	85		mg/kg	3.1	1	12/23/08 11:45	12/24/08 15:29	EPA 3050B	60,6010B	MG
Mercury, Total	>2.0		mg/kg	.1	1	12/29/08 17:30	12/30/08 10:17	EPA 7471A	64,7471A	DM
Mercury, Total	28		mg/kg	2.0	20	12/29/08 17:30	12/30/08 11:23	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-28
 Client ID: B-224 10-15'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 97%

Date Collected: 12/18/08 15:10
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	3.7		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:32	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:32	EPA 3050B	60,6010B	MG
Chromium, Total	30		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:32	EPA 3050B	60,6010B	MG
Lead, Total	3.7		mg/kg	2.4	1	12/23/08 11:45	12/24/08 15:32	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	12/29/08 17:30	12/30/08 10:19	EPA 7471A	64,7471A	DM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-29

Date Collected: 12/18/08 15:30

Client ID: B-225 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	12		mg/kg	0.53	1	12/23/08 11:45	12/24/08 15:35	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.53	1	12/23/08 11:45	12/24/08 15:35	EPA 3050B	60,6010B	MG
Chromium, Total	230		mg/kg	0.53	1	12/23/08 11:45	12/24/08 15:35	EPA 3050B	60,6010B	MG
Lead, Total	17		mg/kg	2.6	1	12/23/08 11:45	12/24/08 15:35	EPA 3050B	60,6010B	MG
Mercury, Total	0.31		mg/kg	0.08	1	12/29/08 17:30	12/30/08 10:25	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-30
 Client ID: B-220 5-10'
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 83%

Date Collected: 12/18/08 11:25
 Date Received: 12/19/08
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	1.7		mg/kg	0.57	1	12/23/08 11:45	12/24/08 15:38	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.57	1	12/23/08 11:45	12/24/08 15:38	EPA 3050B	60,6010B	MG
Chromium, Total	8.8		mg/kg	0.57	1	12/23/08 11:45	12/24/08 15:38	EPA 3050B	60,6010B	MG
Lead, Total	ND		mg/kg	2.8	1	12/23/08 11:45	12/24/08 15:38	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.10	1	12/29/08 17:30	12/30/08 10:27	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-31

Date Collected: 12/18/08 15:35

Client ID: B-225 5-10'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 94%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	4.1		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:40	EPA 3050B	60,6010B	MG
Cadmium, Total	ND		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:40	EPA 3050B	60,6010B	MG
Chromium, Total	26		mg/kg	0.49	1	12/23/08 11:45	12/24/08 15:40	EPA 3050B	60,6010B	MG
Lead, Total	4.0		mg/kg	2.5	1	12/23/08 11:45	12/24/08 15:40	EPA 3050B	60,6010B	MG
Mercury, Total	ND		mg/kg	0.08	1	12/29/08 17:30	12/30/08 10:29	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-12 Batch: WG348238-1								
Arsenic, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 09:20	60,6010B	MG
Cadmium, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 09:20	60,6010B	MG
Chromium, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 09:20	60,6010B	MG
Lead, Total	ND	mg/kg	2.5	1	12/23/08 11:45	12/24/08 09:20	60,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 13-31 Batch: WG348241-1								
Arsenic, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 13:54	60,6010B	MG
Cadmium, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 13:54	60,6010B	MG
Chromium, Total	ND	mg/kg	0.50	1	12/23/08 11:45	12/24/08 13:54	60,6010B	MG
Lead, Total	ND	mg/kg	2.5	1	12/23/08 11:45	12/24/08 13:54	60,6010B	MG

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01-11 Batch: WG348307-1								
Mercury, Total	ND	mg/kg	0.08	1	12/23/08 21:45	12/24/08 14:13	64,7471A	RC

Prep Information

Digestion Method: EPA 7471A

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 12-31 Batch: WG348487-1								
Mercury, Total	ND	mg/kg	0.08	1	12/29/08 17:30	12/30/08 09:41	64,7471A	DM

Prep Information

Digestion Method: EPA 7471A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818721

Report Date: 01/06/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 01-12 Batch: WG348238-2 WG348238-3					
Arsenic, Total	95	94	75-125	1	30
Cadmium, Total	99	96	75-125	3	30
Chromium, Total	96	95	75-125	1	30
Lead, Total	95	96	75-125	1	30
Total Metals by MCP 6000/7000 series Associated sample(s): 13-31 Batch: WG348241-2 WG348241-3					
Arsenic, Total	81	84	75-125	4	30
Cadmium, Total	83	89	75-125	7	30
Chromium, Total	84	86	75-125	2	30
Lead, Total	83	85	75-125	2	30
Total Metals by MCP 6000/7000 series Associated sample(s): 01-11 Batch: WG348307-2 WG348307-3					
Mercury, Total	104	105	75-125	1	30
Total Metals by MCP 6000/7000 series Associated sample(s): 12-31 Batch: WG348487-2 WG348487-3					
Mercury, Total	93	88	75-125	6	30

INORGANICS & MISCELLANEOUS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-01

Date Collected: 12/18/08 13:55

Client ID: B-200 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	86		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-02
Client ID: B-201 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 12:35
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	73		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-03
Client ID: B-202 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 12:45
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	87		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-04

Date Collected: 12/18/08 12:50

Client ID: B-203 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	76		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-05**Date Collected:** 12/18/08 12:15**Client ID:** B-204 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	68		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-06

Date Collected: 12/18/08 13:00

Client ID: B-205 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	72		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-07

Date Collected: 12/18/08 13:05

Client ID: B-206 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	71		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-08**Date Collected:** 12/18/08 09:45**Client ID:** B-207 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	74		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-09
Client ID: B-208 0-3'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 10:30
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	68		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-10

Date Collected: 12/18/08 10:45

Client ID: B-209 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	62		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-11
Client ID: B-210 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 09:30
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	58		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-12

Date Collected: 12/18/08 10:45

Client ID: B-211 0-3'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	76		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-13

Date Collected: 12/18/08 10:15

Client ID: B-212 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	80		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-14**Date Collected:** 12/18/08 11:00**Client ID:** B-213 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	83		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-15**Date Collected:** 12/18/08 12:00**Client ID:** B-214 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	72		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-16**Date Collected:** 12/18/08 11:15**Client ID:** B-215 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	70		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-17

Date Collected: 12/18/08 11:05

Client ID: B-216 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	78		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-18
Client ID: B-217 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 12:25
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	71		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-19**Date Collected:** 12/18/08 11:47**Client ID:** B-218 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	63		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-20
Client ID: B-220 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 11:20
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	58		%	0.10	1	-	12/23/08 15:21	30,2540G	SL



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-21
Client ID: DUP-1
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 08:08
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	82		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-22

Date Collected: 12/18/08 12:10

Client ID: DUP-2

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	62		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-23
Client ID: B-221 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 11:00
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	84		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-24
Client ID: B-222 0-5'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 15:15
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	96		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS**

Lab ID: L0818721-25

Date Collected: 12/18/08 15:40

Client ID: B-223 0-5'

Date Received: 12/19/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	84		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-26**Date Collected:** 12/18/08 14:50**Client ID:** B-224 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	67		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

SAMPLE RESULTS

Lab ID: L0818721-27
Client ID: B-224 5-10'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 15:30
Date Received: 12/19/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	78		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-28**Date Collected:** 12/18/08 15:10**Client ID:** B-224 10-15'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	97		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-29**Date Collected:** 12/18/08 15:30**Client ID:** B-225 0-5'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	90		%	0.10	1	-	12/28/08 10:35	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-30**Date Collected:** 12/18/08 11:25**Client ID:** B-220 5-10'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	83		%	0.10	1	-	12/28/08 10:55	30,2540G	NM



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818721**Project Number:** 127-13417-09001**Report Date:** 01/06/09**SAMPLE RESULTS****Lab ID:** L0818721-31**Date Collected:** 12/18/08 15:35**Client ID:** B-225 5-10'**Date Received:** 12/19/08**Sample Location:** WOBURN, MA**Field Prep:** Not Specified**Matrix:** Soil

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	94		%	0.10	1	-	12/28/08 10:55	30,2540G	NM



Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818721

Report Date: 01/06/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 01-20 QC Batch ID: WG348178-1 QC Sample: L0818721-01 Client ID: B-200 0-5'					
Solids, Total	86	88	%	2	20
Associated sample(s): 21-29 QC Batch ID: WG348373-1 QC Sample: L0818647-03 Client ID: DUP Sample					
Solids, Total	84	83	%	1	20
Associated sample(s): 30-31 QC Batch ID: WG348374-1 QC Sample: L0818721-30 Client ID: B-220 5-10'					
Solids, Total	83	84	%	1	20

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818721

Project Number: 127-13417-09001

Report Date: 01/06/09

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0818721-01A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-02A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-03A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-04A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-05A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-06A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-07A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-08A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-09A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-10A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)

*Hold days indicated by values in parentheses



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0818721-11A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-12A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-13A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-14A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-15A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-16A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-17A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-18A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-19A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-20A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-21A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-22A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)

*Hold days indicated by values in parentheses



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0818721-23A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-24A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-25A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-26A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-27A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-28A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-29A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-30A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)
L0818721-31A	Amber 250ml unpreserved	A	N/A	2.9C	Y	Absent	MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)

Container Comments

L0818721-02A
L0818721-03A
L0818721-04A
L0818721-05A
L0818721-06A
L0818721-07A

*Hold days indicated by values in parentheses



Project Name: FORMER JOHN J. RILEY SITE**Project Number:** 127-13417-09001**Lab Number:** L0818721**Report Date:** 01/06/09**Container Information**

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
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Container Comments

L0818721-08A

L0818721-09A

L0818721-10A

L0818721-11A

L0818721-12A

L0818721-13A

L0818721-14A

L0818721-15A

L0818721-16A

L0818721-18A

L0818721-19A

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

GLOSSARY

Acronyms

- EPA - Environmental Protection Agency.
 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
 LCSD- Laboratory Control Sample Duplicate: Refer to LCS.
 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
 MSD - Matrix Spike Sample Duplicate: Refer to MS.
 NA - Not Applicable.
 NI - Not Ignitable.
 NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
 ND - Not detected at the reported detection limit for the sample.
 RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
 RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818721
Report Date: 01/06/09

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.
- 61 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH). Massachusetts Department of Environmental Protection, DEA/ORS/BWSC. May 2004, Revision 1.1.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised December 31, 2008

The following list includes only those analytes/methods for which certification/approval is held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. *Organic Parameters:* Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. *Organic Parameters:* 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. *Organic Parameters:* 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

New York Department of Health Certificate/Lab ID: 11148.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.

01060917:11



CHAIN OF CUSTODY

PAGE 1 OF 4

Westborough, MA Mansfield, MA
 TEL: 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: Tetra Tech Rizzo
 Address: One Grant Street
 Framingham, MA
 Phone: 508-903-2039
 Fax: 508-903-2001
 Email: ron.myrick@tetratech.com

Project Information

Project Name: Former John J. Riley Site
 Project Location: Wcburn, MA
 Project #: 127-13417-09001
 Project Manager: Ron Myrick
 ALPHA Quote #: 2008585

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)
 Due Date: 12/30/08 Time:

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

DLs less than RCS-1
 * Metals = arsenic, cadmium, chromium, lead and mercury

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	EPH w/ Target PAHs	Total Metals											Sample Specific Comments		
		Date	Time																	
18721-1	B-200 0-5'	12-18-08	155pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
2	B-201 0-5'	12-18-08	1235pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
3	B-202 0-5'	12-18-08	1245pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
4	B-203 0-5'	12-18-08	1250pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
5	B-204 0-5'	12-18-08	1215pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
6	B-205 0-5'	12-18-08	100pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
7	B-206 0-5'	12-18-08	105pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
8	B-207 0-5'	12-18-08	945pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
9	B-208 0-3'	12-18-08	1030pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
10	B-209 0-5'	12-18-08	1045pm	S	MT/DG	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												

Date Rec'd in Lab: 12/19/08

ALPHA Job #: L 6818721

Report Information Data Deliverables

FAX EMAIL
 ADEx Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: Criteria:
 MassDEP MCP CAM RCS-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOC

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

SAMPLE HANDLING
 Filtration
 Done
 Not Needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**IS YOUR PROJECT
 MA MCP or CT RCP?**

FORM NO. 01-011)
 (rev. 30-JUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Don Samuels</i>	<u>12/18/08 6pm</u>	<i>TT Rizzo Refrig</i>	<u>12/18/08 6pm</u>
<i>TT Rizzo Refrig</i>	<u>12/19/08 1245</u>	<i>Don Samuels</i>	<u>12/19/08 1245</u>
<i>Don Samuels</i>	<u>12/19/08 1330</u>	<i>W</i>	<u>12/19/08 1330</u>

Please print clearly, legibly and completely. Samples not be logged in and turnaround time clock will start until any ambiguity is resolved. All samples submitted are subject to Alpha's Payment Terms.

01060917:11



CHAIN OF CUSTODY

PAGE 3 OF 4

Westborough, MA
 TEL: 508-898-9220
 FAX: 508-898-9193

Mansfield, MA
 TEL: 508-822-9300
 FAX: 508-822-3283

Project Information

Project Name: Former John J. Riley Site

Project Location: Woburn, MA

Project #: 127-13417-09001

Project Manager: Ron Myrick

ALPHA Quote #: 2008585

Client Information

Client: Tetra Tech Rizzo

Address: One Grant Street

Framingham, MA

Phone: 508-903-2039

Fax: 508-903-2001

Email: ron.myrick@tetratech.com

These samples have been Previously analyzed by Alpha

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: 12/30/08 Time:

Other Project Specific Requirements/Comments/Detection Limits:

DLs less than RCS-1

* Metals = arsenic, cadmium, chromium, lead and mercury

Date Rec'd in Lab: 12/19/08 ALPHA Job #: 20818721

Report Information Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: MassDEP MCP CAM Criteria: RCS-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOL

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

EPH w/ Target PAFIs	Total Metals														
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>													

SAMPLE HANDLING
 Filtration
 Done
 Not Needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
10721-21	Dup-1	12-18-08	808	S	MT/DG
22	Dup-2	12-18-08	1210	S	MT/DG
23	B-221 0-5'	12-18-08	1100	S	DG
24	B-222 0-5'	12-18-08	315pm	S	DG
25	B-223 0-5'	12-18-08	340pm	S	DG
26	B-224 0-5'	12-18-08	250pm	S	DG
27	B-224 5-10'	12-18-08	330pm	S	DG
28	B-224 10-15'	12-18-08	310pm	S	DG
29	B-225 0-5'	12-18-08	330pm	S	DG

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

IS YOUR PROJECT
 MA MCP or CT RCP?

FORM # O-01-01(1)
 (rev. 30-JUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
<i>John Myrick</i>	12/18/08 6pm	<i>TTRizzo</i>	12/11/08 6pm
<i>TTRizzo</i>	12/19/08 1245	<i>Don Baker</i>	12/19/08 1245
<i>Don Baker</i>	12/19/08	<i>U</i>	12/19/08 1320

Please print clearly, legible and completely. Samples not be logged in and turnaround time clock will start until any ambiguity resolved. All samples submitted are subject to Alpha's Payment Terms



ANALYTICAL REPORT

Lab Number:	L0818938
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01701-9005
ATTN:	Ron Myrick
Project Name:	FORMER JOHN J.RILEY SITE
Project Number:	127-13417-09001
Report Date:	01/07/09

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

Alpha Sample ID

L0818938-01

Client ID

B-210 5-10'

Sample Location

WOBURN, MA

Project Name: FORMER JOHN J.RILEY SITE

Lab Number: L0818938

Project Number: 127-13417-0900

Report Date: 01/07/09

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical methods(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	YES
A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	NO
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

MCP Related Narratives

EPH

In reference to question E:

The WG348538-2/-3 LCS/LCSD RPDs associated with L0818938-01 are above the acceptance criteria for Benzo(b)fluoranthene (31%), Benzo(k)fluoranthene (28%), Indeno(1,2,3-cd)pyrene (32%), Dibenzo(a,h)anthracene (29%) and Benzo(ghi)perylene (29%); however, the individual LCS/LCSD recoveries are within method limits. The results of the associated samples are reported.

Metals

In reference to question F:

All samples were analyzed for a subset of MCP elements per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 01/07/09

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: FORMER JOHN J.RILEY SITE**Lab Number:** L0818938**Project Number:** 127-13417-09001**Report Date:** 01/07/09**SAMPLE RESULTS**

Lab ID: L0818938-01
Client ID: B-210 5-10'
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 61,EPH-04-1
Analytical Date: 01/07/09 02:16
Analyst: AS
Percent Solids: 75%

Date Collected: 12/18/08 09:35
Date Received: 12/29/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/30/08 09:42
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/06/09

Quality Control Information

Condition of sample received: Satisfactory
Sample Temperature upon receipt: Received on Ice
Sample Extraction method: Extracted Per the Method

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

C9-C18 Aliphatics	ND		mg/kg	8.89	1
C19-C36 Aliphatics	ND		mg/kg	8.89	1
C11-C22 Aromatics	ND		mg/kg	8.89	1
C11-C22 Aromatics, Adjusted	ND		mg/kg	8.89	1
Naphthalene	ND		mg/kg	0.444	1
2-Methylnaphthalene	ND		mg/kg	0.444	1
Acenaphthylene	ND		mg/kg	0.444	1
Acenaphthene	ND		mg/kg	0.444	1
Fluorene	ND		mg/kg	0.444	1
Phenanthrene	ND		mg/kg	0.444	1
Anthracene	ND		mg/kg	0.444	1
Fluoranthene	ND		mg/kg	0.444	1
Pyrene	ND		mg/kg	0.444	1
Benzo(a)anthracene	ND		mg/kg	0.444	1
Chrysene	ND		mg/kg	0.444	1
Benzo(b)fluoranthene	ND		mg/kg	0.444	1
Benzo(k)fluoranthene	ND		mg/kg	0.444	1
Benzo(a)pyrene	ND		mg/kg	0.444	1
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.444	1
Dibenzo(a,h)anthracene	ND		mg/kg	0.444	1
Benzo(ghi)perylene	ND		mg/kg	0.444	1

Project Name: FORMER JOHN J.RILEY SITE**Lab Number:** L0818938**Project Number:** 127-13417-09001**Report Date:** 01/07/09**SAMPLE RESULTS**

Lab ID: L0818938-01

Date Collected: 12/18/08 09:35

Client ID: B-210 5-10'

Date Received: 12/29/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Extractable Petroleum Hydrocarbons

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	52		40-140
o-Terphenyl	59		40-140
2-Fluorobiphenyl	88		40-140
2-Bromonaphthalene	87		40-140

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

Method Blank Analysis
Batch Quality Control

Analytical Method: 61,EPH-04-1
Analytical Date: 01/07/09 07:57
Analyst: AS

Extraction Method: EPA 3546
Extraction Date: 12/30/08 09:42
Cleanup Method1: EPH-04-1
Cleanup Date1: 01/06/09

Parameter	Result	Qualifier	Units	RDL
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Extractable Petroleum Hydrocarbons for sample(s): 01 Batch: WG348538-1

C9-C18 Aliphatics	ND		mg/kg	6.67
C19-C36 Aliphatics	ND		mg/kg	6.67
C11-C22 Aromatics	ND		mg/kg	6.67
C11-C22 Aromatics, Adjusted	ND		mg/kg	6.67
Naphthalene	ND		mg/kg	0.333
2-Methylnaphthalene	ND		mg/kg	0.333
Acenaphthylene	ND		mg/kg	0.333
Acenaphthene	ND		mg/kg	0.333
Fluorene	ND		mg/kg	0.333
Phenanthrene	ND		mg/kg	0.333
Anthracene	ND		mg/kg	0.333
Fluoranthene	ND		mg/kg	0.333
Pyrene	ND		mg/kg	0.333
Benzo(a)anthracene	ND		mg/kg	0.333
Chrysene	ND		mg/kg	0.333
Benzo(b)fluoranthene	ND		mg/kg	0.333
Benzo(k)fluoranthene	ND		mg/kg	0.333
Benzo(a)pyrene	ND		mg/kg	0.333
Indeno(1,2,3-cd)Pyrene	ND		mg/kg	0.333
Dibenzo(a,h)anthracene	ND		mg/kg	0.333
Benzo(ghi)perylene	ND		mg/kg	0.333

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	53		40-140
o-Terphenyl	56		40-140
2-Fluorobiphenyl	80		40-140
2-Bromonaphthalene	80		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J.RILEY SITE

Lab Number: L0818938

Project Number: 127-13417-09001

Report Date: 01/07/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01 Batch: WG348538-2 WG348538-3					
C9-C18 Aliphatics	45	47	40-140	4	25
C19-C36 Aliphatics	64	59	40-140	8	25
C11-C22 Aromatics	75	63	40-140	17	25
Naphthalene	66	59	40-140	11	25
2-Methylnaphthalene	67	62	40-140	8	25
Acenaphthylene	61	59	40-140	3	25
Acenaphthene	61	60	40-140	2	25
Fluorene	64	61	40-140	5	25
Phenanthrene	71	64	40-140	10	25
Anthracene	77	70	40-140	10	25
Fluoranthene	77	66	40-140	15	25
Pyrene	78	67	40-140	15	25
Benzo(a)anthracene	80	63	40-140	24	25
Chrysene	80	63	40-140	24	25
Benzo(b)fluoranthene	83	61	40-140	31	25
Benzo(k)fluoranthene	82	62	40-140	28	25
Benzo(a)pyrene	73	57	40-140	25	25
Indeno(1,2,3-cd)Pyrene	77	56	40-140	32	25
Dibenzo(a,h)anthracene	76	57	40-140	29	25
Benzo(ghi)perylene	76	57	40-140	29	25
Nonane (C9)	39	39	30-140	0	25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J.RILEY SITE

Lab Number: L0818938

Project Number: 127-13417-09001

Report Date: 01/07/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Extractable Petroleum Hydrocarbons Associated sample(s): 01 Batch: WG348538-2 WG348538-3					
Decane (C10)	44	44	40-140	0	25
Dodecane (C12)	44	47	40-140	7	25
Tetradecane (C14)	48	49	40-140	2	25
Hexadecane (C16)	50	52	40-140	4	25
Octadecane (C18)	56	55	40-140	2	25
Nonadecane (C19)	59	57	40-140	3	25
Eicosane (C20)	61	55	40-140	10	25
Docosane (C22)	63	57	40-140	10	25
Tetracosane (C24)	64	57	40-140	12	25
Hexacosane (C26)	66	60	40-140	10	25
Octacosane (C28)	65	58	40-140	11	25
Triacontane (C30)	67	59	40-140	13	25
Hexatriacontane (C36)	71	62	40-140	14	25

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		49		40-140
o-Terphenyl	77		73		40-140
2-Fluorobiphenyl	90		86		40-140
2-Bromonaphthalene	90		84		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Parameter	% Recovery	QC Criteria
C9-C18 Aliphatics	77	40-140
C19-C36 Aliphatics	76	40-140
C11-C22 Aromatics	86	40-140
Naphthalene	82	40-140
2-Methylnaphthalene	78	40-140
Acenaphthylene	76	40-140
Acenaphthene	80	40-140
Fluorene	79	40-140
Phenanthrene	78	40-140
Anthracene	82	40-140
Fluoranthene	84	40-140
Pyrene	84	40-140
Benzo(a)anthracene	82	40-140
Chrysene	88	40-140
Benzo(b)fluoranthene	81	40-140
Benzo(k)fluoranthene	97	40-140
Benzo(a)pyrene	78	40-140
Indeno(1,2,3-cd)Pyrene	76	40-140
Dibenzo(a,h)anthracene	83	40-140
Benzo(g,h,i)perylene	82	40-140
Nonane	72	30-140
Decane	77	40-140
Dodecane	80	40-140
Tetradecane	76	40-140
Hexadecane	78	40-140
Octadecane	76	40-140
Nonadecane	75	40-140
Eicosane	77	40-140
Docosane	79	40-140
Tetracosane	83	40-140
Hexacosane	78	40-140
Octacosane	77	40-140
triacontane	76	40-140
Hexatriacontane	75	40-140
% Naphthalene Breakthrough	0	0-5
% 2-Methylnaphthalene Breakthrough	0	0-5

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

**Fractionation Check Standard
Quality Control**

Fractionation check standard for 200818205

Surrogate	% Recovery	QC Criteria
Chloro-Octadecane	66	40-140
o-Terphenyl	83	40-140
2-Fluorobiphenyl	75	40-140
2-Bromonaphthalene	76	40-140

METALS

Project Name: FORMER JOHN J.RILEY SITE**Lab Number:** L0818938**Project Number:** 127-13417-09001**Report Date:** 01/07/09**SAMPLE RESULTS**

Lab ID: L0818938-01

Date Collected: 12/18/08 09:35

Client ID: B-210 5-10'

Date Received: 12/29/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series										
Arsenic, Total	3.2		mg/kg	0.64	1	12/30/08 11:30	12/31/08 11:58	EPA 3050B	60,6010B	TD
Cadmium, Total	ND		mg/kg	0.64	1	12/30/08 11:30	12/31/08 11:58	EPA 3050B	60,6010B	TD
Chromium, Total	170		mg/kg	0.64	1	12/30/08 11:30	12/31/08 11:58	EPA 3050B	60,6010B	TD
Lead, Total	4.4		mg/kg	3.2	1	12/30/08 11:30	12/31/08 11:58	EPA 3050B	60,6010B	TD
Mercury, Total	ND		mg/kg	0.10	1	01/03/09 17:00	01/05/09 13:05	EPA 7471A	64,7471A	DM

Project Name: FORMER JOHN J.RILEY SITE

Lab Number: L0818938

Project Number: 127-13417-09001

Report Date: 01/07/09

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01 Batch: WG348579-1								
Arsenic, Total	ND	mg/kg	0.50	1	12/30/08 11:30	12/31/08 11:39	60,6010B	TD
Cadmium, Total	ND	mg/kg	0.50	1	12/30/08 11:30	12/31/08 11:39	60,6010B	TD
Chromium, Total	ND	mg/kg	0.50	1	12/30/08 11:30	12/31/08 11:39	60,6010B	TD
Lead, Total	ND	mg/kg	2.5	1	12/30/08 11:30	12/31/08 11:39	60,6010B	TD

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals by MCP 6000/7000 series for sample(s): 01 Batch: WG348767-1								
Mercury, Total	ND	mg/kg	0.08	1	01/03/09 17:00	01/05/09 12:22	64,7471A	DM

Prep Information

Digestion Method: EPA 7471A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J.RILEY SITE

Lab Number: L0818938

Project Number: 127-13417-09001

Report Date: 01/07/09

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals by MCP 6000/7000 series Associated sample(s): 01 Batch: WG348579-2 WG348579-3					
Arsenic, Total	98	88	75-125	11	30
Cadmium, Total	97	91	75-125	6	30
Chromium, Total	97	84	75-125	14	30
Lead, Total	97	87	75-125	11	30
Total Metals by MCP 6000/7000 series Associated sample(s): 01 Batch: WG348767-2 WG348767-3					
Mercury, Total	95	103	75-125	8	30

INORGANICS & MISCELLANEOUS

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

SAMPLE RESULTS

Lab ID: L0818938-01
Client ID: B-210 5-10'
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/18/08 09:35
Date Received: 12/29/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	75		%	0.10	1	-	12/29/08 18:35	30,2540G	NM



Lab Duplicate Analysis
Batch Quality Control

Project Name: FORMER JOHN J.RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818938

Report Date: 01/07/09

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 01 QC Batch ID: WG348491-1 QC Sample: L0818679-01 Client ID: DUP Sample					
Solids, Total	90	90	%	0	20

Project Name: FORMER JOHN J.RILEY SITE**Lab Number:** L0818938**Project Number:** 127-13417-09001**Report Date:** 01/07/09**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal
L0818938-01A	Amber 250ml unpreserved	A	N/A	2 c	Y	Absent

Analysis

MCP-AS-6010T(180),EPH-DELUX-04(14),TS(7),MCP-PB-6010T(180),MCP-7471T(28),MCP-CD-6010T(180),MCP-CR-6010T(180)

Container Comments

L0818938-01A

*Hold days indicated by values in parentheses

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

GLOSSARY

Acronyms

- EPA - Environmental Protection Agency.
 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
 LCSD- Laboratory Control Sample Duplicate: Refer to LCS.
 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
 MSD - Matrix Spike Sample Duplicate: Refer to MS.
 NA - Not Applicable.
 NI - Not Ignitable.
 NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
 ND - Not detected at the reported detection limit for the sample.
 RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
 RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Project Name: FORMER JOHN J.RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818938
Report Date: 01/07/09

REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 60 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). May 2004.
- 61 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH). Massachusetts Department of Environmental Protection, DEA/ORS/BWSC. May 2004, Revision 1.1.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised December 31, 2008

The following list includes only those analytes/methods for which certification/approval is held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. *Organic Parameters:* Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. *Organic Parameters:* 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. *Organic Parameters:* 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water)

600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.*Drinking Water*

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO₃-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH₃-H, 4500NH₃-E, 4500NO₂-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO₃-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO₃-F, 4500NO₂-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH₃-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

New York Department of Health Certificate/Lab ID: 11148.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO₃-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH₃-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO₃F, EPA 354.1, SM4500-NO₂-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.



ANALYTICAL REPORT

Lab Number:	L0818478
Client:	Tetra Tech Rizzo 1 Grant Street Framingham, MA 01701-9005
ATTN:	Ron Myrick
Project Name:	FORMER JOHN J. RILEY SITE
Project Number:	127-13417-09001
Report Date:	12/24/08

Certifications & Approvals: MA (M-MA086), NY NELAC (11148), CT (PH-0574), NH (2003), NJ (MA935), RI (LAO00065), ME (MA0086), PA (Registration #68-03671), USDA (Permit #S-72578), US Army Corps of Engineers, Naval FESC.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Alpha Sample ID	Client ID	Sample Location
L0818478-01	TP-202 (0-5)	WOBURN, MA
L0818478-02	TP-203 (0-7.5)	WOBURN, MA
L0818478-03	TP-204 (0-4)	WOBURN, MA

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-0900

Report Date: 12/24/08

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A, B, C & D is required for "Presumptive Certainty" status		
A	Were all samples received by the laboratory in a condition consistent with those described on their Chain-of-Custody documentation for the data set?	YES
B	Were all QA/QC procedures required for the specified analytical method(s) included in this report followed, including the requirement to note and discuss in a narrative QC data that did not meet appropriate performance standards or guidelines?	YES
C	Does the analytical data included in this report meet all the requirements for "Presumptive Certainty", as described in section 2.0 of the MADEP document CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	YES
D	VPH and EPH methods only: Was the VPH or EPH method run without significant modifications, as specified in Section 11.3?	N/A

A response to questions E and F is required for "Presumptive Certainty" status		
E	Were all QC performance standards and recommendations for the specified method(s) achieved?	NO
F	Were results for all analyte-list compounds/elements for the specified method(s) reported?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

MCP Related Narratives

Report Submission

The results of the TCLP Herbicides analysis will be issued under separate cover.

PCB

L0818478-02 has elevated detection limits due to the dilution required by matrix interferences encountered during the concentration of the sample.

In reference to question E:

The surrogate recovery for L0818478-01 is outside the individual acceptance criteria for Decachlorobiphenyl (28%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential low bias.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Case Narrative (continued)

Non-MCP Related Narratives

TCLP Semivolatile Organics

The surrogate recovery for L0818478-01 is above the acceptance criteria for 2,4,6-Tribromophenol (123%). Since the sample was non-detect for all target analytes, re-analysis is not required.

The surrogate recoveries for L0818478-02 are above the acceptance criteria for 2,4,6-Tribromophenol (137%) and 4-Terphenyl-d14 (126%). Since the sample was non-detect for all target analytes, re-analysis is not required.

The WG348003-2/-3 LCS/LCSD recoveries associated with L0818478-01 through -03 were above the acceptance criteria for 2,4-Dinitrotoluene (111%/120%) and Pentachlorophenol (110%/125%); however, the associated samples were non-detect for these target compounds. The results of the original analysis are reported.

The surrogate recoveries for WG348003-2/-3 are above the acceptance criteria for 2,4,6-Tribromophenol (122%/134%).

The WG348003-2/-3 LCS/LCSD RPD associated with L0818478-01 through -03 is above the acceptance criteria for Pyridine (157%); however, the individual LCS/LCSD recoveries are within method limits. The results of the associated samples are reported.

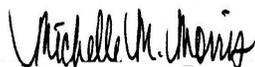
The WG348003-4/-5 MS/MSD recoveries associated with L0818478-01 through -03 were above the acceptance criteria for 2,4-Dinitrotoluene (120%/120%) and Pentachlorophenol (120%/120%); however, the associated samples were non-detect for these target compounds. The results of the original analysis are reported.

The surrogate recoveries for WG348003-4/-5 are above the acceptance criteria for 2,4,6-Tribromophenol (138%/129%).

The WG348003-5 MS/MSD RPD associated with L0818478-01 through -03 is above the acceptance criteria for Pyridine (105%); however, the individual MS/MSD recoveries are within method limits. The results of the associated samples are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 12/24/08

ORGANICS

VOLATILES

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8260B
Analytical Date: 12/22/08 12:13
Analyst: GK
Percent Solids: 72%
TCLP/SPLP Ext. Date: 12/18/08 16:20

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Volatile Organics by 1311					
Chloroform	ND		ug/l	7.5	10
Carbon tetrachloride	ND		ug/l	5.0	10
Tetrachloroethene	ND		ug/l	5.0	10
Chlorobenzene	ND		ug/l	5.0	10
1,2-Dichloroethane	ND		ug/l	5.0	10
Benzene	ND		ug/l	5.0	10
Vinyl chloride	ND		ug/l	10	10
1,1-Dichloroethene	ND		ug/l	5.0	10
Trichloroethene	ND		ug/l	5.0	10
1,4-Dichlorobenzene	ND		ug/l	25	10
2-Butanone	ND		ug/l	50	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	113		70-130

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8260B
Analytical Date: 12/22/08 12:47
Analyst: GK
Percent Solids: 74%
TCLP/SPLP Ext. Date: 12/18/08 16:20

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Volatile Organics by 1311					
Chloroform	ND		ug/l	7.5	10
Carbon tetrachloride	ND		ug/l	5.0	10
Tetrachloroethene	ND		ug/l	5.0	10
Chlorobenzene	ND		ug/l	5.0	10
1,2-Dichloroethane	ND		ug/l	5.0	10
Benzene	ND		ug/l	5.0	10
Vinyl chloride	ND		ug/l	10	10
1,1-Dichloroethene	ND		ug/l	5.0	10
Trichloroethene	ND		ug/l	5.0	10
1,4-Dichlorobenzene	ND		ug/l	25	10
2-Butanone	ND		ug/l	50	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	120		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	114		70-130

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8260B
Analytical Date: 12/22/08 13:20
Analyst: GK
Percent Solids: 69%
TCLP/SPLP Ext. Date: 12/18/08 16:20

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Volatile Organics by 1311					
Chloroform	ND		ug/l	7.5	10
Carbon tetrachloride	ND		ug/l	5.0	10
Tetrachloroethene	ND		ug/l	5.0	10
Chlorobenzene	ND		ug/l	5.0	10
1,2-Dichloroethane	ND		ug/l	5.0	10
Benzene	ND		ug/l	5.0	10
Vinyl chloride	ND		ug/l	10	10
1,1-Dichloroethene	ND		ug/l	5.0	10
Trichloroethene	ND		ug/l	5.0	10
1,4-Dichlorobenzene	ND		ug/l	25	10
2-Butanone	ND		ug/l	50	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	122		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	115		70-130

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260B
Analytical Date: 12/22/08 11:40
Analyst: GK
TCLP Extraction Date:

Parameter	Result	Qualifier	Units	RDL
TCLP Volatile Organics by 1311 for sample(s): 01-03 Batch: WG348107-3				

Parameter	Result	Qualifier	Units	RDL
Chloroform	ND		ug/l	7.5
Carbon tetrachloride	ND		ug/l	5.0
Tetrachloroethene	ND		ug/l	5.0
Chlorobenzene	ND		ug/l	5.0
1,2-Dichloroethane	ND		ug/l	5.0
Benzene	ND		ug/l	5.0
Vinyl chloride	ND		ug/l	10
1,1-Dichloroethene	ND		ug/l	5.0
Trichloroethene	ND		ug/l	5.0
1,4-Dichlorobenzene	ND		ug/l	25
2-Butanone	ND		ug/l	50

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	113		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	113		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Volatile Organics by 1311 Associated sample(s): 01-03 Batch: WG348107-1 WG348107-2					
Chloroform	102	103	70-130	1	20
Carbon tetrachloride	110	111	70-130	1	20
Tetrachloroethene	93	99	70-130	6	20
Chlorobenzene	90	91	75-130	1	20
1,2-Dichloroethane	104	105	70-130	1	20
Benzene	83	86	76-127	4	20
Vinyl chloride	96	87	70-130	10	20
1,1-Dichloroethene	99	100	61-145	1	20
Trichloroethene	91	91	71-120	0	20
1,4-Dichlorobenzene	97	99	70-130	2	20
2-Butanone	83	82	70-130	1	20

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114	116	70-130
Toluene-d8	96	98	70-130
4-Bromofluorobenzene	97	97	70-130
Dibromofluoromethane	111	113	70-130

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
TCLP Volatile Organics by 1311 Associated sample(s): 01-03 QC Batch ID: WG348107-4 WG348107-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)										
Chloroform	ND	10	12	117	12	117	70-130	0	20	
Carbon tetrachloride	ND	10	12	125	13	127	70-130	2	20	
Tetrachloroethene	ND	10	11	112	11	115	70-130	3	20	
Chlorobenzene	ND	10	10	103	10	104	75-130	1	20	
1,2-Dichloroethane	ND	10	13	126	13	127	70-130	1	20	
Benzene	ND	10	9.8	99	9.8	98	76-127	1	20	
Vinyl chloride	ND	10	10	105	10	101	70-130	4	20	
1,1-Dichloroethene	ND	10	12	117	11	113	61-145	3	20	
Trichloroethene	ND	10	11	109	11	108	71-120	1	20	
1,4-Dichlorobenzene	ND	10	11	108	11	109	70-130	1	20	
2-Butanone	ND	10	9.8	98	9.8	98	70-130	0	20	

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1,2-Dichloroethane-d4	121		119		70-130
4-Bromofluorobenzene	96		99		70-130
Dibromofluoromethane	116		110		70-130
Toluene-d8	97		100		70-130

SEMIVOLATILES

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8270C
Analytical Date: 12/23/08 21:47
Analyst: HL
Percent Solids: 72%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:47

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Semivolatile Organics by EPA 1311/8270C					
Hexachlorobenzene	ND		ug/l	25	1
2,4-Dinitrotoluene	ND		ug/l	30	1
Hexachlorobutadiene	ND		ug/l	50	1
Hexachloroethane	ND		ug/l	25	1
Nitrobenzene	ND		ug/l	25	1
2,4,6-Trichlorophenol	ND		ug/l	25	1
Pentachlorophenol	ND		ug/l	50	1
2-Methylphenol	ND		ug/l	30	1
3-Methylphenol/4-Methylphenol	ND		ug/l	30	1
2,4,5-Trichlorophenol	ND		ug/l	25	1
Pyridine	ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	91		21-120
Phenol-d6	76		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	73		43-120
2,4,6-Tribromophenol	123		10-120
4-Terphenyl-d14	114		33-120

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8270C
Analytical Date: 12/23/08 22:11
Analyst: HL
Percent Solids: 74%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:47

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Semivolatile Organics by EPA 1311/8270C					
Hexachlorobenzene	ND		ug/l	25	1
2,4-Dinitrotoluene	ND		ug/l	30	1
Hexachlorobutadiene	ND		ug/l	50	1
Hexachloroethane	ND		ug/l	25	1
Nitrobenzene	ND		ug/l	25	1
2,4,6-Trichlorophenol	ND		ug/l	25	1
Pentachlorophenol	ND		ug/l	50	1
2-Methylphenol	ND		ug/l	30	1
3-Methylphenol/4-Methylphenol	ND		ug/l	30	1
2,4,5-Trichlorophenol	ND		ug/l	25	1
Pyridine	ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	99		21-120
Phenol-d6	83		10-120
Nitrobenzene-d5	91		23-120
2-Fluorobiphenyl	89		43-120
2,4,6-Tribromophenol	137		10-120
4-Terphenyl-d14	126		33-120

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8270C
Analytical Date: 12/23/08 22:35
Analyst: HL
Percent Solids: 69%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:47

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
TCLP Semivolatile Organics by EPA 1311/8270C					
Hexachlorobenzene	ND		ug/l	25	1
2,4-Dinitrotoluene	ND		ug/l	30	1
Hexachlorobutadiene	ND		ug/l	50	1
Hexachloroethane	ND		ug/l	25	1
Nitrobenzene	ND		ug/l	25	1
2,4,6-Trichlorophenol	ND		ug/l	25	1
Pentachlorophenol	ND		ug/l	50	1
2-Methylphenol	ND		ug/l	30	1
3-Methylphenol/4-Methylphenol	ND		ug/l	30	1
2,4,5-Trichlorophenol	ND		ug/l	25	1
Pyridine	ND		ug/l	250	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		21-120
Phenol-d6	67		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	76		43-120
2,4,6-Tribromophenol	109		10-120
4-Terphenyl-d14	114		33-120

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270C
Analytical Date: 12/23/08 15:49
Analyst: HL
TCLP Extraction Date: 12/18/08 16:30

Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:47

Parameter	Result	Qualifier	Units	RDL
TCLP Semivolatile Organics by EPA 1311/8270C for sample(s): 01-03 Batch: WG348003-1				
Hexachlorobenzene	ND		ug/l	25
2,4-Dinitrotoluene	ND		ug/l	30
Hexachlorobutadiene	ND		ug/l	50
Hexachloroethane	ND		ug/l	25
Nitrobenzene	ND		ug/l	25
2,4,6-Trichlorophenol	ND		ug/l	25
Pentachlorophenol	ND		ug/l	50
2-Methylphenol	ND		ug/l	30
3-Methylphenol/4-Methylphenol	ND		ug/l	30
2,4,5-Trichlorophenol	ND		ug/l	25
Pyridine	ND		ug/l	250

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		21-120
Phenol-d6	69		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	72		43-120
2,4,6-Tribromophenol	113		10-120
4-Terphenyl-d14	112		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Semivolatile Organics by EPA 1311/8270C Associated sample(s): 01-03 Batch: WG348003-2 WG348003-3					
Hexachlorobenzene	112	122	40-140	9	30
2,4-Dinitrotoluene	111	120	24-96	8	30
Hexachlorobutadiene	55	64	10-100	15	30
Hexachloroethane	49	59	13-82	19	30
Nitrobenzene	92	96	40-140	4	30
2,4,6-Trichlorophenol	89	99	30-130	11	30
Pentachlorophenol	110	125	9-103	13	30
2-Methylphenol	82	86	30-130	5	30
3-Methylphenol/4-Methylphenol	93	99	30-130	6	30
2,4,5-Trichlorophenol	95	108	30-130	13	30
Pyridine	7	60		157	30

Surrogate	LCS %Recovery Qualifier	LCSD %Recovery Qualifier	Acceptance Criteria
2-Fluorophenol	92	90	21-120
Phenol-d6	78	78	10-120
Nitrobenzene-d5	81	85	23-120
2-Fluorobiphenyl	75	81	43-120
2,4,6-Tribromophenol	122	134	10-120
4-Terphenyl-d14	104	112	33-120

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
TCLP Semivolatile Organics by EPA 1311/8270C Associated sample(s): 01-03 QC Batch ID: WG348003-4 WG348003-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)										
Hexachlorobenzene	ND	500	600	120	580	120	40-140	0	30	
2,4-Dinitrotoluene	ND	500	610	120	590	120	24-96	0	30	
Hexachlorobutadiene	ND	500	420	84	460	92	10-100	9	30	
Hexachloroethane	ND	500	400	80	400	80	13-82	0	30	
Nitrobenzene	ND	500	450	90	480	96	40-140	6	30	
2,4,6-Trichlorophenol	ND	500	500	100	460	92	30-130	8	30	
Pentachlorophenol	ND	500	600	120	580	120	9-103	0	30	
2-Methylphenol	ND	500	430	86	430	86	30-130	0	30	
3-Methylphenol/4-Methylphenol	ND	1000	940	94	940	94	30-130	0	30	
2,4,5-Trichlorophenol	ND	500	540	110	480	96	30-130	14	30	
Pyridine	ND	1000	450	45	ND	14		105	30	

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
2,4,6-Tribromophenol	138		129		10-120
2-Fluorobiphenyl	92		93		43-120
2-Fluorophenol	92		94		21-120
4-Terphenyl-d14	110		109		33-120
Nitrobenzene-d5	84		86		23-120
Phenol-d6	79		81		10-120

PCBS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 64,8082
Analytical Date: 12/19/08 07:11
Analyst: SH
Percent Solids: 72%

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/17/08 14:01
Cleanup Method1: EPA 3665A
Cleanup Date1: 12/18/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Polychlorinated Biphenyls by MCP 8082					
Aroclor 1016	ND		ug/kg	46.3	1
Aroclor 1221	ND		ug/kg	46.3	1
Aroclor 1232	ND		ug/kg	46.3	1
Aroclor 1242	ND		ug/kg	46.3	1
Aroclor 1248	ND		ug/kg	46.3	1
Aroclor 1254	ND		ug/kg	46.3	1
Aroclor 1260	ND		ug/kg	46.3	1
Aroclor 1262	ND		ug/kg	46.3	1
Aroclor 1268	ND		ug/kg	46.3	1

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Aroclor 1016	ND		ug/kg	46.3	1
Aroclor 1221	ND		ug/kg	46.3	1
Aroclor 1232	ND		ug/kg	46.3	1
Aroclor 1242	ND		ug/kg	46.3	1
Aroclor 1248	ND		ug/kg	46.3	1
Aroclor 1254	ND		ug/kg	46.3	1
Aroclor 1260	ND		ug/kg	46.3	1
Aroclor 1262	ND		ug/kg	46.3	1
Aroclor 1268	ND		ug/kg	46.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	44		30-150	A
Decachlorobiphenyl	28		30-150	A
2,4,5,6-Tetrachloro-m-xylene	49		30-150	B
Decachlorobiphenyl	46		30-150	B

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 64,8082
Analytical Date: 12/19/08 07:25
Analyst: SH
Percent Solids: 74%

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/17/08 14:01
Cleanup Method1: EPA 3665A
Cleanup Date1: 12/18/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Polychlorinated Biphenyls by MCP 8082					
Aroclor 1016	ND		ug/kg	90.1	2
Aroclor 1221	ND		ug/kg	90.1	2
Aroclor 1232	ND		ug/kg	90.1	2
Aroclor 1242	ND		ug/kg	90.1	2
Aroclor 1248	ND		ug/kg	90.1	2
Aroclor 1254	ND		ug/kg	90.1	2
Aroclor 1260	ND		ug/kg	90.1	2
Aroclor 1262	ND		ug/kg	90.1	2
Aroclor 1268	ND		ug/kg	90.1	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	91		30-150	B

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 64,8082
Analytical Date: 12/19/08 07:52
Analyst: SH
Percent Solids: 69%

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3546
Extraction Date: 12/17/08 14:01
Cleanup Method1: EPA 3665A
Cleanup Date1: 12/18/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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Polychlorinated Biphenyls by MCP 8082					
Aroclor 1016	ND		ug/kg	48.3	1
Aroclor 1221	ND		ug/kg	48.3	1
Aroclor 1232	ND		ug/kg	48.3	1
Aroclor 1242	ND		ug/kg	48.3	1
Aroclor 1248	ND		ug/kg	48.3	1
Aroclor 1254	ND		ug/kg	48.3	1
Aroclor 1260	ND		ug/kg	48.3	1
Aroclor 1262	ND		ug/kg	48.3	1
Aroclor 1268	ND		ug/kg	48.3	1

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
Aroclor 1016	ND		ug/kg	48.3	1
Aroclor 1221	ND		ug/kg	48.3	1
Aroclor 1232	ND		ug/kg	48.3	1
Aroclor 1242	ND		ug/kg	48.3	1
Aroclor 1248	ND		ug/kg	48.3	1
Aroclor 1254	ND		ug/kg	48.3	1
Aroclor 1260	ND		ug/kg	48.3	1
Aroclor 1262	ND		ug/kg	48.3	1
Aroclor 1268	ND		ug/kg	48.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	37		30-150	A
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	59		30-150	B

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 64,8082
 Analytical Date: 12/22/08 12:31
 Analyst: SH

Extraction Method: EPA 3546
 Extraction Date: 12/17/08 14:01
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 12/18/08
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 12/22/08

Parameter	Result	Qualifier	Units	RDL
Polychlorinated Biphenyls by MCP 8082 for sample(s): 01-03 Batch: WG348102-1				
Aroclor 1016	ND		ug/kg	33.3
Aroclor 1221	ND		ug/kg	33.3
Aroclor 1232	ND		ug/kg	33.3
Aroclor 1242	ND		ug/kg	33.3
Aroclor 1248	ND		ug/kg	33.3
Aroclor 1254	ND		ug/kg	33.3
Aroclor 1260	ND		ug/kg	33.3
Aroclor 1262	ND		ug/kg	33.3
Aroclor 1268	ND		ug/kg	33.3

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	60		30-150	B

Matrix Spike Analysis
Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
Polychlorinated Biphenyls by MCP 8082 Associated sample(s): 01-03 QC Batch ID: WG348102-4 WG348102-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)										
Aroclor 1016	ND	282	193	69	221	79	40-140	13	50	
Aroclor 1260	ND	282	122	43	146	52	40-140	18	50	

Surrogate	MS		MSD		Acceptance Criteria	Column
	% Recovery	Qualifier	% Recovery	Qualifier		
2,4,5,6-Tetrachloro-m-xylene	63		74		30-150	A
Decachlorobiphenyl	37		47		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		79		30-150	B
Decachlorobiphenyl	54		69		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Polychlorinated Biphenyls by MCP 8082 Associated sample(s): 01-03 Batch: WG348102-2 WG348102-3					
Aroclor 1016	60	59	40-140	2	30
Aroclor 1260	60	57	40-140	5	30

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		62		30-150	A
Decachlorobiphenyl	55		53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		71		30-150	B
Decachlorobiphenyl	70		66		30-150	B

PESTICIDES

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8082/8081
Analytical Date: 12/23/08 13:39
Analyst: JB
Percent Solids: 72%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:24
Cleanup Method1: EPA 3620B
Cleanup Date1: 12/23/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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TCLP Pesticides by 1311/GC					
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Lindane	ND		ug/l	0.100	1
Heptachlor	ND		ug/l	0.100	1
Heptachlor epoxide	ND		ug/l	0.100	1
Endrin	ND		ug/l	0.200	1
Methoxychlor	ND		ug/l	1.00	1
Toxaphene	ND		ug/l	1.00	1
Chlordane	ND		ug/l	1.00	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	136		30-150	A

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8082/8081
Analytical Date: 12/23/08 13:52
Analyst: JB
Percent Solids: 74%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:24
Cleanup Method1: EPA 3620B
Cleanup Date1: 12/23/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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TCLP Pesticides by 1311/GC					
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Lindane	ND		ug/l	0.100	1
Heptachlor	ND		ug/l	0.100	1
Heptachlor epoxide	ND		ug/l	0.100	1
Endrin	ND		ug/l	0.200	1
Methoxychlor	ND		ug/l	1.00	1
Toxaphene	ND		ug/l	1.00	1
Chlordane	ND		ug/l	1.00	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	88		30-150	A

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil
Analytical Method: 1,8082/8081
Analytical Date: 12/23/08 14:05
Analyst: JB
Percent Solids: 69%
TCLP/SPLP Ext. Date: 12/18/08 16:30

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:24
Cleanup Method1: EPA 3620B
Cleanup Date1: 12/23/08

Parameter	Result	Qualifier	Units	RDL	Dilution Factor
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TCLP Pesticides by 1311/GC					
Lindane	ND		ug/l	0.100	1
Heptachlor	ND		ug/l	0.100	1
Heptachlor epoxide	ND		ug/l	0.100	1
Endrin	ND		ug/l	0.200	1
Methoxychlor	ND		ug/l	1.00	1
Toxaphene	ND		ug/l	1.00	1
Chlordane	ND		ug/l	1.00	1

Lindane	ND		ug/l	0.100	1
Heptachlor	ND		ug/l	0.100	1
Heptachlor epoxide	ND		ug/l	0.100	1
Endrin	ND		ug/l	0.200	1
Methoxychlor	ND		ug/l	1.00	1
Toxaphene	ND		ug/l	1.00	1
Chlordane	ND		ug/l	1.00	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65		30-150	A
Decachlorobiphenyl	101		30-150	A

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8082/8081
Analytical Date: 12/23/08 12:59
Analyst: JB
TCLP Extraction Date: 12/18/08 16:30

Extraction Method: EPA 3510C
Extraction Date: 12/22/08 13:24
Cleanup Method1: EPA 3620B
Cleanup Date1: 12/23/08

Parameter	Result	Qualifier	Units	RDL
TCLP Pesticides by 1311/GC for sample(s): 01-03 Batch: WG347993-1				
Lindane	ND		ug/l	0.100
Heptachlor	ND		ug/l	0.100
Heptachlor epoxide	ND		ug/l	0.100
Endrin	ND		ug/l	0.200
Methoxychlor	ND		ug/l	1.00
Toxaphene	ND		ug/l	1.00
Chlordane	ND		ug/l	1.00

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	106		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Pesticides by 1311/GC Associated sample(s): 01-03 Batch: WG347993-2 WG347993-3					
Lindane	78	89	30-150	13	20
Heptachlor	71	82	30-150	15	20
Heptachlor epoxide	90	108	30-150	18	20
Endrin	84	102	30-150	19	20
Methoxychlor	90	110	30-150	20	20

Surrogate	LCS %Recovery	Qualifier	LCSD %Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		66		30-150	A
Decachlorobiphenyl	107		124		30-150	A

Matrix Spike Analysis
Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS		MSD		Recovery Limits	RPD	RPD Limits
			MS Found	%Recovery	MSD Found	%Recovery			
TCLP Pesticides by 1311/GC Associated sample(s): 01-03 QC Batch ID: WG347993-4 WG347993-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)									
Lindane	ND	2.5	1.29	52	1.46	58	30-150	11	30
Heptachlor	ND	2.5	1.26	50	1.44	58	30-150	15	30
Heptachlor epoxide	ND	2.5	1.52	61	1.72	69	30-150	12	30
Endrin	ND	2.5	1.34	54	1.49	60	30-150	11	30
Methoxychlor	ND	2.5	1.66	66	1.87	75	30-150	13	30

Surrogate	MS		MSD		Acceptance Criteria	Column
	% Recovery	Qualifier	% Recovery	Qualifier		
2,4,5,6-Tetrachloro-m-xylene	42		52		30-150	A
Decachlorobiphenyl	88		89		30-150	A

METALS

Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-01

Date Collected: 12/15/08 11:27

Client ID: TP-202 (0-5)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

TCLP/SPLP Ext. Date: 12/18/08 16:30

Percent Solids: 72%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by 1311										
Arsenic, TCLP	ND		mg/l	1.0	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Barium, TCLP	0.54		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Cadmium, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Chromium, TCLP	ND		mg/l	0.20	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Lead, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Mercury, TCLP	ND		mg/l	0.0010	1	12/20/08 16:00	12/22/08 11:08	EPA 7470A	1,7470A	DM
Selenium, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG
Silver, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:28	EPA 3015	1,6010B	MG



Project Name: FORMER JOHN J. RILEY SITE**Lab Number:** L0818478**Project Number:** 127-13417-09001**Report Date:** 12/24/08**SAMPLE RESULTS**

Lab ID: L0818478-02

Date Collected: 12/15/08 12:05

Client ID: TP-203 (0-7.5)

Date Received: 12/16/08

Sample Location: WOBURN, MA

Field Prep: Not Specified

Matrix: Soil

TCLP/SPLP Ext. Date: 12/18/08 16:30

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by 1311										
Arsenic, TCLP	ND		mg/l	1.0	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Barium, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Cadmium, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Chromium, TCLP	ND		mg/l	0.20	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Lead, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Mercury, TCLP	ND		mg/l	0.0010	1	12/20/08 16:00	12/22/08 11:10	EPA 7470A	1,7470A	DM
Selenium, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG
Silver, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:31	EPA 3015	1,6010B	MG



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-03
 Client ID: TP-204 (0-4)
 Sample Location: WOBURN, MA
 Matrix: Soil
 Percent Solids: 69%

Date Collected: 12/15/08 13:35
 Date Received: 12/16/08
 Field Prep: Not Specified
 TCLP/SPLP Ext. Date: 12/18/08 16:30

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by 1311										
Arsenic, TCLP	ND		mg/l	1.0	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Barium, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Cadmium, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Chromium, TCLP	ND		mg/l	0.20	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Lead, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Mercury, TCLP	ND		mg/l	0.0010	1	12/20/08 16:00	12/22/08 11:17	EPA 7470A	1,7470A	DM
Selenium, TCLP	ND		mg/l	0.50	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG
Silver, TCLP	ND		mg/l	0.10	1	12/22/08 10:00	12/22/08 11:44	EPA 3015	1,6010B	MG



Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by 1311 for sample(s): 01-03 Batch: WG347928-1								
Mercury, TCLP	ND	mg/l	0.0010	1	12/20/08 16:00	12/22/08 11:03	1,7470A	DM

Prep Information

Digestion Method: EPA 7470A
TCLP Extraction Date: 12/18/08 16:30

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by 1311 for sample(s): 01-03 Batch: WG347966-1								
Arsenic, TCLP	ND	mg/l	1.0	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Barium, TCLP	ND	mg/l	0.50	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Cadmium, TCLP	ND	mg/l	0.10	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Chromium, TCLP	ND	mg/l	0.20	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Lead, TCLP	ND	mg/l	0.50	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Selenium, TCLP	ND	mg/l	0.50	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG
Silver, TCLP	ND	mg/l	0.10	1	12/22/08 10:00	12/22/08 11:21	1,6010B	MG

Prep Information

Digestion Method: EPA 3015
TCLP Extraction Date: 12/18/08 16:30

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
TCLP Metals by 1311 Associated sample(s): 01-03 Batch: WG347928-2					
Mercury, TCLP	94	-	80-120	-	
TCLP Metals by 1311 Associated sample(s): 01-03 Batch: WG347966-2					
Arsenic, TCLP	100	-	75-125	-	20
Barium, TCLP	93	-	75-125	-	20
Cadmium, TCLP	100	-	75-125	-	20
Chromium, TCLP	100	-	75-125	-	20
Lead, TCLP	100	-	75-125	-	20
Selenium, TCLP	100	-	75-125	-	20
Silver, TCLP	100	-	75-125	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Parameter	Native Sample	MS Added	MS Found	MS		MSD		Recovery Limits	RPD	RPD Limits
				%Recovery	MSD Found	%Recovery				
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347928-4 WG347928-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)										
Mercury, TCLP	ND	0.005	0.0059	118	0.0061	121	70-130	3	20	
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-4 WG347966-5 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)										
Arsenic, TCLP	ND	10	10	100	10	100	75-125	0	20	
Barium, TCLP	ND	100	90	90	93	93	75-125	3	20	
Cadmium, TCLP	ND	10	9.6	96	10	100	75-125	4	20	
Chromium, TCLP	ND	10	9.7	97	10	100	75-125	3	20	
Lead, TCLP	ND	10	9.5	95	10	100	75-125	5	20	
Selenium, TCLP	ND	20	19	95	20	100	75-125	5	20	
Silver, TCLP	ND	10	9.7	97	10	100	75-125	3	20	

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818478

Report Date: 12/24/08

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Silver, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Arsenic, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Barium, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Cadmium, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Chromium, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Lead, TCLP	ND	ND	mg/l	NC	20
TCLP Metals by 1311 Associated sample(s): 01-03 QC Batch ID: WG347966-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Selenium, TCLP	ND	ND	mg/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Dry Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids				
Ignitability	NI	12/18/08 16:00	1,1030	TH



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Dry Soil
Particle Size: Medium
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids				
Ignitability	NI	12/18/08 16:00	1,1030	TH



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified

Test Material Information

Source of Material: Unknown
Description of Material: Non-Metallic - Dry Soil
Particle Size: Fine
Preliminary Burning Time (sec): 120

Parameter	Result	Date Analyzed	Analytical Method	Analyst
Ignitability of Solids				
Ignitability	NI	12/18/08 16:00	1,1030	TH



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-01
Client ID: TP-202 (0-5)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 11:27
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	72		%	0.10	1	-	12/17/08 15:03	30,2540G	SL
pH	7.7		SU	-	1	-	12/18/08 17:35	1,9045C	TH
Cyanide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH
Sulfide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-02
Client ID: TP-203 (0-7.5)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 12:05
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	74		%	0.10	1	-	12/17/08 15:03	30,2540G	SL
pH	7.6		SU	-	1	-	12/18/08 17:35	1,9045C	TH
Cyanide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH
Sulfide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH



Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

SAMPLE RESULTS

Lab ID: L0818478-03
Client ID: TP-204 (0-4)
Sample Location: WOBURN, MA
Matrix: Soil

Date Collected: 12/15/08 13:35
Date Received: 12/16/08
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry									
Solids, Total	69		%	0.10	1	-	12/17/08 15:03	30,2540G	SL
pH	8.0		SU	-	1	-	12/18/08 17:35	1,9045C	TH
Cyanide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH
Sulfide, Reactive	ND		mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH



Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry for sample(s): 01-03 Batch: WG348125-1								
Sulfide, Reactive	ND	mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH
General Chemistry for sample(s): 01-03 Batch: WG348126-1								
Cyanide, Reactive	ND	mg/kg	10	1	-	12/23/08 10:05	1,7.3	TH

Lab Control Sample Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Lab Number: L0818478

Project Number: 127-13417-09001

Report Date: 12/24/08

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Associated sample(s): 01-03 Batch: WG347728-1					
pH	100	-		-	
Associated sample(s): 01-03 Batch: WG348125-2					
Sulfide, Reactive	79	-	60-125	-	40
Associated sample(s): 01-03 Batch: WG348126-2					
Cyanide, Reactive	78	-	30-125	-	40

Lab Duplicate Analysis

Batch Quality Control

Project Name: FORMER JOHN J. RILEY SITE

Project Number: 127-13417-09001

Lab Number: L0818478

Report Date: 12/24/08

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Associated sample(s): 01-03 QC Batch ID: WG347507-1 QC Sample: L0818402-31 Client ID: DUP Sample					
Solids, Total	85	85	%	0	20
Associated sample(s): 01-03 QC Batch ID: WG347728-2 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
pH	7.6	7.6	SU	0	
Associated sample(s): 01-03 QC Batch ID: WG348125-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Sulfide, Reactive	ND	ND	mg/kg	NC	40
Associated sample(s): 01-03 QC Batch ID: WG348126-3 QC Sample: L0818478-02 Client ID: TP-203 (0-7.5)					
Cyanide, Reactive	ND	ND	mg/kg	NC	40

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0818478-01A	Vial Large unpreserved	A	N/A	2C	Y	Absent	TCLP-EXT-ZHE(14),TCLP-VOA(14)
L0818478-01B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04(14)
L0818478-01C	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	-
L0818478-01D	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	IGNIT-1030(14),REACTS(14),TCLP-8270(14),PEST-TCLP*(14),TS(7),PH-9045(1),REACTCN(14)
L0818478-01X	Plastic 250ml HNO3 preserved spl	A	N/A	2C	Y	Absent	CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L0818478-02A	Vial Large unpreserved	A	N/A	2C	Y	Absent	TCLP-EXT-ZHE(14),TCLP-VOA(14)
L0818478-02B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04(14)
L0818478-02C	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	-
L0818478-02D	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	IGNIT-1030(14),REACTS(14),TCLP-8270(14),PEST-TCLP*(14),TS(7),PH-9045(1),REACTCN(14)
L0818478-02X	Plastic 250ml HNO3 preserved spl	A	N/A	2C	Y	Absent	CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L0818478-03A	Vial Large unpreserved	A	N/A	2C	Y	Absent	TCLP-EXT-ZHE(14),TCLP-VOA(14)
L0818478-03B	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	MCP-8082-04(14)
L0818478-03C	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	-
L0818478-03D	Amber 250ml unpreserved	A	N/A	2C	Y	Absent	IGNIT-1030(14),REACTS(14),TCLP-8270(14),PEST-TCLP*(14),TS(7),PH-9045(1),REACTCN(14)
L0818478-03X	Plastic 250ml HNO3 preserved spl	A	N/A	2C	Y	Absent	CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)

*Hold days indicated by values in parentheses

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

GLOSSARY

Acronyms

- EPA - Environmental Protection Agency.
 LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
 LCSD- Laboratory Control Sample Duplicate: Refer to LCS.
 MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
 MSD - Matrix Spike Sample Duplicate: Refer to MS.
 NA - Not Applicable.
 NI - Not Ignitable.
 NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
 ND - Not detected at the reported detection limit for the sample.
 RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
 RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

A - Spectra identified as "Aldol Condensation Product".

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Project Name: FORMER JOHN J. RILEY SITE
Project Number: 127-13417-09001

Lab Number: L0818478
Report Date: 12/24/08

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 64 Quality Assurance and Quality Control Requirements and Performance Standards for SW-846 Methods. MADEP BWSC. WSC-CAM-IIA (Revision 4), WSC-CAM-V C (Revision 2), WSC-CAM-IIIA (Revision 5). August 2004.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



ALPHA ANALYTICAL
NARRATIVE REPORT

Laboratory Job Number: L0818477

The samples were received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Report Submission

This report contains the results for the TCLP-Herbicide analysis. The results for all other analyses will be issued under separate cover.

Herbicides-TCLP

All samples were extracted with the method required holding time exceeded, due to a laboratory error.

The WG348503-2/-3 LCS/LCSD recoveries associated with L0818477-01, -02 and -03 were above the acceptance criteria for 2,4-D (186%/198%). All positive detects are considered to have a potentially high bias for this compound.

The WG348503-4/-5 MS/MSD recoveries associated with L0818477-02 were above the acceptance criteria for 2,4-D (176%/184%). All positive detects are considered to have a potentially high bias for this compound.

ALPHA ANALYTICAL
CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:2003 CT:PH-0574 ME:MA0086 RI:LAO00065 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0818477-01	Date Collected: 15-DEC-2008 11:27
TP-202 (0-5)	Date Received : 16-DEC-2008
Sample Matrix: SOIL	Date Reported : 06-JAN-2009
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 1-Amber	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
TCLP Herbicides by 1311/GC				1 8151A	1229 22:00	0105 11:58	JB
TCLP Extraction				1 1311	1218 16:30		
2,4-D	ND	mg/l	0.025				
2,4,5-TP (Silvex)	ND	mg/l	0.003				
Surrogate(s)	Recovery		QC Criteria				
DCAA	89.0	%	30-150				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL
 CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:2003 CT:PH-0574 ME:MA0086 RI:LAO00065 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number: L0818477-03	Date Collected: 15-DEC-2008 13:35
TP-204 (0-4)	Date Received : 16-DEC-2008
Sample Matrix: SOIL	Date Reported : 06-JAN-2009
Condition of Sample: Satisfactory	Field Prep: None
Number & Type of Containers: 1-Amber	

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP ANAL	ID
TCLP Herbicides by 1311/GC				1 8151A	1229 22:00 0105 12:38	JB
TCLP Extraction				1 1311	1218 16:30	
2,4-D	ND	mg/l	0.025			
2,4,5-TP (Silvex)	ND	mg/l	0.003			
Surrogate(s)	Recovery			QC Criteria		
DCAA	92.0	%		30-150		

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0818477

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
TCLP Herbicides by 1311/GC for sample(s) 01-03 (WG348503-2, WG348503-3)					
2,4-D	186	198	6	25	30-150
2,4,5-TP (Silvex)	67	69	3	25	30-150
Surrogate(s)					
DCAA	88	95	8		30-150

ALPHA ANALYTICAL
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0818477

Parameter	MS %	MSD %	RPD	RPD Limit	MS/MSD Limits
TCLP Herbicides by 1311/GC for sample(s) 01-03 (L0818477-02, WG348503-5)					
2,4-D	176	184	4	25	30-150
2,4,5-TP (Silvex)	64	56	14	25	30-150
Surrogate(s)					
DCAA	87	79	10		30-150

ALPHA ANALYTICAL
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0818477

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-03 (WG348503-1)							
TCLP Herbicides by 1311/GC				1	8151A	1229 22:00	0105 10:18 JB
TCLP Extraction				1	1311	1218 16:30	
2,4-D	ND	mg/l	0.025				
2,4,5-TP (Silvex)	ND	mg/l	0.003				
Surrogate(s)	Recovery		QC Criteria				
DCAA	78.0	%	30-150				

**ALPHA ANALYTICAL
ADDENDUM I**

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

CHAIN OF CUSTODY

PAGE 1 OF 1



Westborough, MA Mansfield, MA
 TEL 508-898-9220 TEL: 508-822-9300
 FAX: 508-898-9193 FAX: 508-822-3288

Client Information

Client: Tetra Tech Rizzo
 Address: One Grant Street
 Framingham, MA
 Phone: 508-903-2039
 Fax: 508-903-2001
 Email: ian.cannan@tetratech.com

Project Information

Project Name: Former John J. Riley Site
 Project Location: Woburn, MA
 Project #: 127-13417-09001
 Project Manager: Ron Myrick
 ALPHA Quote #: 2008585

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: 12/23/08 Time:

Other Project Specific Requirements/Comments/Detection Limits:

DLs less than RCS-1
 * TCLP for RCRA 8 metals, VOCs, SVOCs, Pesticides and Herbicides

Date Rec'd in Lab: 12/16/08

ALPHA Job #: 20818477

Report Information Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Billing Information

Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program Criteria
 MassDEP MCP CAM RCS-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOL

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

Full TCLP *	pH/corrosivity	Ignitability	reactivity sulfide/cyanide	PCBS													
<input checked="" type="checkbox"/>	<input type="checkbox"/>																
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SAMPLE HANDLING
 Filtration
 Done
 Not Needed
 Lab to do
 Preservation
 Lab to do
 (Please specify below)

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
18477-1	TP-202 (0-5')	12-15-08	1127	S	ISC
2	TP-203 (0-7.5')	12-15-08	1205	S	ISC
3	TP-204 (0-4')	12-15-08	1335	S	ISC

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Container Type	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Relinquished By:	Date/Time	Received By:	Date/Time
<i>T. Brady</i>	12-16-08	<i>Paul Brady</i>	12/16/08 1140
<i>Paul Brady</i>	12/16/08 1330	<i>CFly</i>	12/16/08 1330

Please print clearly, legible and completely. Samples not be logged in and turnaround time clock will start until any ambiguity resolved. All samples submitted are subject to Alpha's Payment Terms

FORM NO. 01-0111 (rev. 30-JUL-07)

ALPHA ANALYTICAL
NARRATIVE REPORT

Laboratory Job Number: L0900331

The sample was received in accordance with the chain of custody and no significant deviations were encountered during preparation or analysis unless otherwise noted below.

Report Submission

This report contains the results for the TCLP-Herbicide analysis. The results for all other analyses will be issued under separate cover.

TCLP Herbicides

TCLP Extraction Date: 12-JAN-09 17:00

ALPHA ANALYTICAL
QUALITY ASSURANCE BATCH LCS/LCSD ANALYSIS

Laboratory Job Number: L0900331

Parameter	LCS %	LCSD %	RPD	RPD Limit	QC Limits
TCLP Herbicides by 1311/GC for sample(s) 01 (WG349689-2, WG349689-3)					
2,4-D	138	143	4	25	30-150
2,4,5-TP (Silvex)	58	54	7	25	30-150
Surrogate(s)					
DCAA	67	61	9		30-150

ALPHA ANALYTICAL
 QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0900331

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01 (WG349689-1)							
TCLP Herbicides by 1311/GC				1	8151A	0113 23:38	0121 06:50 JB
TCLP Extraction				1	1311		
2,4-D	ND	mg/l	0.025				
2,4,5-TP (Silvex)	ND	mg/l	0.003				
Surrogate(s)	Recovery		QC Criteria				
DCAA	50.0	%	30-150				

**ALPHA ANALYTICAL
ADDENDUM I**

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.
NI	Not Ignitable.
ug/cart	Micrograms per Cartridge.
H	The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

Certificate/Approval Program Summary

Last revised December 31, 2008

The following list includes only those analytes/methods for which certification/approval is held.

For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574.

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. *Organic Parameters:* Haloacetic Acids, Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP), Ethylene Dibromide (EDB).)

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Calcium Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: Lead in Paint, pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), Reactivity. *Organic Parameters:* PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Volatile Organics, Acid Extractables (Phenols), 3,3'-Dichlorobenzidine, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: MA0086.

Drinking Water (Inorganic Parameters: SM9215B, 9221E, 9222B, 9222D, 9223B, EPA 150.1, 180.1, 300.0, 353.2, SM2130B, 2320B, 4500CI-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1. *Organic Parameters:* 504.1, 524.2, SM 6251B.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, Lachat 10-107-06-1-B, SM2320B, 2340B, 2510B, 2540C, 2540D, 426C, 4500CI-D, 4500CI-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NH3-H, 4500NO3-F, 4500P-B.5, 4500P-E, 5210B, 5220D, 5310C, EPA 200.7, 200.8, 245.1. *Organic Parameters:* 608, 624.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl)

(EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Nitrite-N, Fluoride, Sulfate)

353.2 for: Nitrate-N, Nitrite-N; SM4500NO3-F, 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, 2320B, SM2540C, EPA 150.1, SM4500H-B.

Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics)

(504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), SM6251B, 314.0.

Non-Potable Water

Inorganic Parameters:, (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn)

(EPA 200.7 for: Al,Sb,As,Be,Cd,Cr,Co,Cu,Fe,Pb,Mn,Mo,Ni,Se,Ag,Sr,Tl,Ti,V,Zn,Ca,Mg,Na,K)

245.1, SM4500H,B, EPA 120.1, SM2510B, 2540C, 2540B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LCHAT 10-107-06-1-B for Nitrate-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-B,C-Titr, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CN-CE, 2540D, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics)

(608 for: Chlordane, Aldrin, Dieldrin, DDD, DDE, DDT, Heptachlor, Heptachlor Epoxide, PCB-Water) 600/4-81-045-PCB-Oil

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water

Microbiology Parameters: SM9215B; MF-SM9222B; ENZ. SUB. SM9223; EC-SM9221E; MF-SM9222D; ENZ. SUB. SM9223;

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307.

Drinking Water (Inorganic Parameters: SM6215B, 9222B, 9223B Colilert, EPA 200.7, 200.8, 245.2, 110.2, 120.1, 150.1, 300.0, 325.2, 314.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 331.0. Organic Parameters: 504.1, 524.2, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6020, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 150.1, 300.0, 305.1, 310.1, 325.2, 340.2, 350.1, 350.2, 351.1, 353.2, 354.1, 365.2, 375.4, 376.2, 405.1, 415.1, 420.1, 425.1, 1664A, SW-846 9010, 9030, 9040B, EPA 160.1, 160.2, 160.3, SM426C, SM2310B, 2540B, 2540D, 4500H+B, 4500NH3-H, 4500NH3-E, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 2320B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-117-07-1-B, LACHAT 10-107-06-1-B, LACHAT 10-107-04-1-C, LACHAT 10-107-04-1-J, LACHAT 10-117-07-1-A, SM4500CL-E, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3005A, 3015A, 3510C, 5030B, 8021B, 8260B, 8270C, 8330, EPA 624, 625, 608, SW-846 8082, 8081A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 7196A, 7471A, 7.3.3.2, 7.3.4.2, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040, 9045C, 9050C, 1311, 3005A, 3050B, 3051A. Organic Parameters: SW-846 3540C, 3545, 3580A, 5030B, 5035, 8021B, 8260B, 8270C, 8330, 8151A, 8082, 8081A.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935.

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 2540C, 2320B, 314.0, 331.0, 110.2, SM2120B, 2510B, 5310C, EPA 150.1, SM4500H-B, EPA 200.8, 245.2. Organic Parameters: 504.1, SM6251B, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.1, SM5220D, 4500CI-D, EPA 300.0, SM2120B, SM4500F-BC, EPA 200.7, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM4500P-B5+E, 2540B, 2540C, 2540D, EPA 120.1, SM2510B, SM15 426C, SM9221CE, 9222D, 9221B, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, EPA 350.2/1, SM5210B, SW-846 3015, 6020, 7470A, 5540C, 4500H-B, EPA 200.8, SM3500Cr-D, EPA 245.1, 245.2, SW-846 9040B, 3005A, EPA 6010B, 7196A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8270C, 3510C, EPA 608, 624, 625, SW-846 5030B, 8021B, 8081A, 8082, 8151A, 8330.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 9040B, 3005A, 6010B, 7196A, 5030B, 9010B, 9030B, 1030, 1311, 3050B, 3051, 7471A, 9014, 9012A, 9045C, 9050A, 9065. Organic Parameters: SW-846 8021B, 8081A, 8082, 8151A, 8330, 8260B, 8270C, 1311, 3540C, 3545, 3550B, 3580A, 5035L, 5035H.)

New York Department of Health Certificate/Lab ID: 11148.

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 8215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 314.0, 331.0, SM2320B, EPA 300.0, 325.2, 110.2, SM2120B, 4500CN-E, 4500F-C, EPA 150.1, SM4500H-B, 4500NO3-F, 2540C, EPA 120.1, SM 2510B. Organic Parameters: EPA 524.2, 504.1, SM6251B.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, EPA 405.1, SM5210B, EPA 410.4, SM5220D, EPA 305.1, SM2310B-4a, EPA 310.1, SM2320B, EPA 200.7, 300.0, 325.2, LACHAT 10-117-07-1A or B, SM4500CI-E, EPA 340.2, SM4500F-C, EPA 375.4, SM15 426C, EPA 350.1, 350.2, LACHAT 10-107-06-1-B, SM4500NH3-H, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, LACHAT 10-107-041-C, SM4500-NO30F, EPA 354.1, SM4500-NO2-B, EPA 365.2, SM4500P-E, EPA 160.3, SM2540B, EPA 160.1, SM2540C, EPA 160.2, SM2540D, EPA 200.8, EPA 6010B, 6020, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, 110.2, SM2120B, 335.2, LACHAT 10-204-00-1-A, EPA 150.1, 9040B, SM4500-HB, EPA 1664A, EPA 415.1, SM5310C, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, EPA 376.2, SM4500S-D, EPA 425.1, SM5540C, EPA 3005A, 3015. Organic Parameters: EPA 624, 8260B, 8270C, 625, 608, 8081A, 8151A, 8330, 8082, 8021B, EPA 3510C, 5030B, 9010B, 9030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 9040B, 9045C, 1010, 1030, SW-846 Ch 7 Sec 7.3, EPA 6010B, 7196A, 7471A, 9012A, 9014, 9040B, 9045C, 9065, 9050, EPA 1311, 3005A, 3050B, 3051, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8081A, 8151A, 8330, 8082, 8021B, 3540C, 3545, 3580, 5030B, 5035.)

Analytical Services Protocol: CLP Volatile Organics, CLP Inorganics, CLP PCB/Pesticides.

Rhode Island Department of Health Certificate/Lab ID: LAO00065.

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NY-DOH Certificate for Potable and Non-Potable Water.

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. Registered Laboratory.

20900331



CHAIN OF CUSTODY

Westborough, MA Mansfield, MA
TEL: 508-898-9220 TEL: 508-822-9300
FAX: 508-898-9193 FAX: 508-822-3288

Project Information

Project Name: Former John J. Riley Site

Client Information

Client: Tetra Tech Rizzo

Address: One Grant Street

Framingham, MA

Phone: 508-903-2039

Fax: 508-903-2001

Email: ian.cannan@tetratech.com

These samples have been Previously analyzed by Alpha

Project Location: Woburn, MA

Project #: 127-13417-09001

Project Manager: Ron Myrick

ALPHA Quote #: 2308585

Turn-Around Time

Standard Rush (ONLY IF PRE-APPROVED)

Due Date: 1/23/09 Time:

Other Project Specific Requirements/Comments/Detection Limits:
DLs less than RCS-1
* TCLP for RCRA 8 metals, VOCs, SVOCs, Pesticides and Herbicides

Date Received: 1/19/09 ALPHA Job #: 20900331

Report Information Data Deliverables Billing Information

FAX EMAIL Same as Client info PO #:
 ADEx Add'l Deliverables

Regulatory Requirements/Report Limits

State/Fed Program: MassDEP MCP CAM Criteria: RCS-1

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

Yes No Are MCP Analytical Methods Required?
 Yes No Are CT RCP (Reasonable Confidence Protocols) Required?

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	Full TCLP *	pH/corrosivity	Ignitability	reactivity sulfide/cyanide	PCBs											SAMPLE HANDLING Filtration <input type="checkbox"/> Done <input checked="" type="checkbox"/> Not Needed <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please specify below)	TOTAL # BOTTLES
		Date	Time																			
00377	B201-COMP	01-08-09	0830	S	RM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5										
00523	B-210 0-4'	01-08-09	0900	S	RM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5														
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5				
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5				
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
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						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By: Ron Myrick Date/Time: 12-9-08/12:05
 Received By: Raul Delikat Date/Time: 1-9-09 13:15

Please print clearly, legibly and completely. Samples can only be used if the turnaround time provided is met. Until any disputes are resolved. All samples submitted are subject to Alpha's Payment Terms.

Appendix G

Risk Characterization Summary Tables

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)										
Location:	SD-07	A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	B-4
Sample Name:	SD-07	A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	B-4
Sample Depth:	0-0.5 ft.	0-6 in.								
Laboratory:	USEPA New England	Contest								
Laboratory I.D.:	Lab	06B25983	06B25984	06B25985	06B25986	06B25987	06B25988	06B25989	06B25990	06B25991
Sample Date:	22-Jun-04	14-Aug-06								
Consultant:	EPA	TTR								
Method(s):		6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene	<0.530									
Acenaphthylene	<0.530									
Anthracene	<0.530									
Benzo(a)anthracene	1.200									
Benzo(a)pyrene	1.300									
Benzo(b)fluoranthene	1.500									
Benzo(g,h,i)perylene	4.000									
Benzo(k)fluoranthene	1.100									
Chrysene	1.500									
Dibenzo(a,h)anthracene	<0.530									
Fluoranthene	1.200									
Fluorene	<0.530									
Indeno(1,2,3-cd)pyrene	1.200									
Methylnaphthalene, 2-	<0.530									
Naphthalene	<0.530									
Phenanthrene	1.500									
Pyrene	3.500									
Arsenic, Total	127	10.9	9.36	15.9	19.1	9.33	195	82.2	98.2	99.2
Cadmium, Total	3.0									
Chromium, Total	1,490	456	783	1,159	1,320	859	5,547	5,880	2,290	5,560
Chromium, VI		10.1	13.8	71.3	9.65	6.11	2.77	<2.52	<2.11	<2.23
Lead, Total	3,110	80.8	99.5	217	730	87.9	527	782	1,070	1,780
Mercury, Total	3.7									
C ₉ -C ₁₈ Aliphatics										
C ₁₉ -C ₃₆ Aliphatics										
C ₁₁ -C ₂₂ Aromatics										

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)									
Location:	B-5	C-0	C-4	D-3	D-5	D-5	E-0	E-3	B-102
Sample Name:	B-5	C-0	C-4	D-3	D-5 0-3	D5 3.1	E-0	E-3	B-102 2-3
Sample Depth:	0-6 in.	0-12 in.	0-36 in.	0-12 in.	0-36 in.	36-40 in.	0-12 in.	0-12 in.	2-3 ft.
Laboratory:	Contest	Spectrum							
Laboratory I.D.:	06B25992	06B25999	06B26994	06B26995	06B26996	06B26997	06B26000	06B26998	SA79283-03
Sample Date:	14-Aug-06	28-May-08							
Consultant:	TTR	ENSR							
Method(s):	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene									
Acenaphthylene									
Anthracene									
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Fluoranthene									
Fluorene									
Indeno(1,2,3-cd)pyrene									
Methylnaphthalene, 2-									
Naphthalene									
Phenanthrene									
Pyrene									
Arsenic, Total	10.9	57.0	110	8.73	20.4	18.3	63.1	16.7	38.0
Cadmium, Total									
Chromium, Total	242	1,670	1,600	155	1,790	893	6,450	6,880	3,040
Chromium, VI	<2.30	<2.09	<2.26	<1.94	<2.22	<2.16	<2.16	<4.67	<1.23
Lead, Total	225	9,350	18,700	42.0	858	417	190	83.2	545
Mercury, Total									
C ₉ -C ₁₈ Aliphatics									
C ₁₉ -C ₃₆ Aliphatics									
C ₁₁ -C ₂₂ Aromatics									

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)									
Location:	B-102	B-103	B-103	B-107	B-110	B-111	B-112	B-113	B-113
Sample Name:	B-102 5.5-6.5	B-103 0-1	B-103 3-4	B-107 2.3-3	B-110 0-1	B-111 0-1	B-112 3-4	B-113 0-1.5	B-113 2-3
Sample Depth:	5.5-6.5 ft.	0-1 ft.	3-4 ft.	2.3-3 ft.	0-1 ft.	0-1 ft.	3-4 ft.	0-1.5 ft.	2-3 ft.
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory I.D.:	SA79283-04	SA79283-05	SA79283-06	SA79283-11	SA79283-14	SA79283-15	SA79283-16	SA79283-17	SA79283-18
Sample Date:	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08
Consultant:	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR
Method(s):	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene									
Acenaphthylene									
Anthracene									
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Fluoranthene									
Fluorene									
Indeno(1,2,3-cd)pyrene									
Methylnaphthalene, 2-									
Naphthalene									
Phenanthrene									
Pyrene									
Arsenic, Total	130	18.3	13.2	7.59	20.5	98.5	67.7	16.7	7.0
Cadmium, Total									
Chromium, Total	21,000	366	221	565	557	102	39,500	452	30.9
Chromium, VI	<1.33	<1.19	<1.33	<1.29	<1.06	<1.12	<1.57	<1.30	<1.08
Lead, Total	797	1,060	606	9.48	189	84.4	291	456	15.3
Mercury, Total									
C ₉ -C ₁₈ Aliphatics									
C ₁₉ -C ₃₆ Aliphatics									
C ₁₁ -C ₂₂ Aromatics									

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)									
Location:	B-114	B-114	B-114	B-114	B-114	TP-202	TP-202	TP-203	TP-203
Sample Name:	B-201-COMP	B-201-5.5-6'	B-201-6-6.5'	B-201-6.5-7'	B-201-7-7.5'	TP-202 (0-5)	TP-202 5-7'	TP-203 (0-7.5)	TP-203 7.5-9'
Sample Depth:	0-5.5 ft.	5.5-6 ft.	6-6.5 ft.	6.5-7 ft.	7-7.5 ft.	0-5 ft.	5-7 ft.	0-7.5 ft.	7.5-9 ft.
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	SA82632-01	SA82632-02	SA82632-03	SA82632-04	SA82632-05	L0818443-02	L0900327-09	L0818443-03	L0900327-10
Sample Date:	4-Aug-08	4-Aug-08	4-Aug-08	4-Aug-08	4-Aug-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	8260B, 8270C, 8081Am								
	8151A, 6000/7000	8260B, 8270C, 6000/7000	6000/7000	6000/7000	6000/7000	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	6010B
Acenaphthene		<1.850				<0.463		<1.43	
Acenaphthylene		<1.850				<0.463		<1.43	
Anthracene		<1.850				<0.463		2.12	
Benzo(a)anthracene		<1.850				0.634		4.31	
Benzo(a)pyrene		<1.850				0.599		3.50	
Benzo(b)fluoranthene		<1.850				0.634		3.43	
Benzo(g,h,i)perylene		<1.850				0.744		1.79	
Benzo(k)fluoranthene		<1.850				0.607		3.57	
Chrysene		<1.850				0.642		4.76	
Dibenzo(a,h)anthracene		<1.850				<0.463		<1.43	
Fluoranthene		3.030				1.62		10.0	
Fluorene		<1.850				<0.463		<1.43	
Indeno(1,2,3-cd)pyrene		<1.850				<0.463		2.07	
Methylnaphthalene, 2-		<1.850				<0.463		<1.43	
Naphthalene		<1.850				<0.463		<1.43	
Phenanthrene		2.870				1.32		8.45	
Pyrene		2.100				1.33		8.59	
Arsenic, Total	93.6	6.31	7.53	6.71	8.53	13		43	
Cadmium, Total						<0.65		<0.69	
Chromium, Total	4,120	983	49.1	54.7	210	12,000	720	32,000	180
Chromium, VI									
Lead, Total	393	18.1	7.14	7.25	9.32	480		360	
Mercury, Total						11		69	
C ₉ -C ₁₈ Aliphatics						<9.26		<28.6	
C ₁₉ -C ₃₆ Aliphatics						69.5		309	
C ₁₁ -C ₂₂ Aromatics						55.4		222	

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)									
Location:	TP-204	TP-204	TP-205	TP-206	B-201	B-221	B-221	B-223	B-224
Sample Name:	TP-204 (0-4)	TP-204 4-5'	TP-205 (0-3)	TP-206 (0-3)	B-201 0-5'	B-221 0-5'	B-221 5-10'	B-223 0-5'	B-224 0-5'
Sample Depth:	0-4 ft.	4-5 ft.	0-3 ft.	0-3 ft.	0-5 ft.	0-5 ft.	5-10 ft.	0-5 ft.	0-5 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818443-04	L0900327-11	L0818443-05	L0818443-06	L0818721-02	L0818721-23	L0900327-12	L0818721-25	L0818721-26
Sample Date:	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	<0.498
Acenaphthylene	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	<0.498
Anthracene	<2.52		<0.406	<0.813	<0.457	<0.397		0.406	1.43
Benzo(a)anthracene	<2.52		<0.406	1.02	0.478	<0.397		0.969	1.57
Benzo(a)pyrene	<2.52		<0.406	0.984	0.670	<0.397		0.908	1.11
Benzo(b)fluoranthene	<2.52		<0.406	1.02	0.862	<0.397		0.930	2.48
Benzo(g,h,i)perylene	<2.52		<0.406	<0.813	0.575	<0.397		0.664	0.612
Benzo(k)fluoranthene	<2.52		<0.406	0.942	0.710	<0.397		0.925	1.70
Chrysene	<2.52		<0.406	1.25	0.852	<0.397		1.22	1.74
Dibenzo(a,h)anthracene	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	<0.498
Fluoranthene	<2.52		<0.406	2.84	1.46	<0.397		2.65	4.40
Fluorene	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	0.566
Indeno(1,2,3-cd)pyrene	<2.52		<0.406	<0.813	0.694	<0.397		0.672	0.831
Methylnaphthalene, 2-	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	<0.498
Naphthalene	<2.52		<0.406	<0.813	<0.457	<0.397		<0.397	<0.498
Phenanthrene	<2.52		<0.406	2.48	0.586	<0.397		2.72	5.48
Pyrene	<2.52		<0.406	2.37	1.18	<0.397		2.23	3.55
Arsenic, Total	15		12	9.8	16	9.6		26	2.1
Cadmium, Total	0.78		<0.59	<0.59	0.79	<0.59		<0.56	<0.73
Chromium, Total	19,000	330	39	170	1,400	3,600	160	25	22,000
Chromium, VI									
Lead, Total	290		18	27	110	46		20	100
Mercury, Total	13		<0.10	0.63	1.4	0.83		0.21	43
C ₉ -C ₁₈ Aliphatics	<50.5		<8.13	<16.3	<9.13	<7.94		<7.94	<9.95
C ₁₉ -C ₃₆ Aliphatics	125		<8.13	<16.3	26.3	<7.94		<7.94	<9.95
C ₁₁ -C ₂₂ Aromatics	102		<8.13	53.7	22.2	12.2		23.8	82.4

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)				
Location:	B-224	B-224	B-225	B-225
Sample Name:	B-224 5-10'	B-224 10-15'	B-225 0-5'	B-225 5-10'
Sample Depth:	5-10 ft.	10-15 ft.	0-5 ft.	5-10 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-27	L0818721-28	L0818721-29	L0818721-31
Sample Date:	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene	<0.427	<0.344	<0.370	<0.355
Acenaphthylene	<0.427	<0.344	<0.370	<0.355
Anthracene	<0.427	<0.344	<0.370	<0.355
Benzo(a)anthracene	<0.427	<0.344	<0.370	<0.355
Benzo(a)pyrene	<0.427	<0.344	<0.370	<0.355
Benzo(b)fluoranthene	<0.427	<0.344	<0.370	<0.355
Benzo(g,h,i)perylene	<0.427	<0.344	<0.370	<0.355
Benzo(k)fluoranthene	<0.427	<0.344	<0.370	<0.355
Chrysene	<0.427	<0.344	<0.370	<0.355
Dibenzo(a,h)anthracene	<0.427	<0.344	<0.370	<0.355
Fluoranthene	<0.427	<0.344	<0.370	<0.355
Fluorene	<0.427	<0.344	<0.370	<0.355
Indeno(1,2,3-cd)pyrene	<0.427	<0.344	<0.370	<0.355
Methylnaphthalene, 2-	<0.427	<0.344	<0.370	<0.355
Naphthalene	<0.427	<0.344	<0.370	<0.355
Phenanthrene	<0.427	<0.344	<0.370	<0.355
Pyrene	<0.427	<0.344	<0.370	<0.355
Arsenic, Total	1.6	3.7	12	4.1
Cadmium, Total	<0.62	<0.49	<0.53	<0.49
Chromium, Total	12,000	30	230	26
Chromium, VI				
Lead, Total	85	3.7	17	4.0
Mercury, Total	28	<0.08	0.31	<0.08
C ₉ -C ₁₈ Aliphatics	<8.55	<6.87	<7.41	<7.09
C ₁₉ -C ₃₆ Aliphatics	52.4	<6.87	<7.41	<7.09
C ₁₁ -C ₂₂ Aromatics	23.1	<6.87	<7.41	<7.09

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-1 Soil Exposure Point A Data - Hillside Area (mg/kg)

Location: Sample Name: Sample Depth:							2007	2007	2007	2007	2007
Laboratory: Laboratory I.D.: Sample Date: Consultant:	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Average Concentration Detected	Soil Exposure Point A Hillside Area Soil EPCs	Method 1 Standard S-1/GW-1	Method 1 Standard S-1/GW-3	Method 1 Standard S-3/GW-1	Method 1 Standard S-3/GW-3	MCP UCLs
Method(s):											
Acenaphthene	ND	15	ND	ND	ND	ND	4	1,000	4	5,000	10,000
Acenaphthylene	ND	15	ND	ND	ND	ND	1	10	1	10	10,000
Anthracene	3	15	0.41	2.12	0.56	0.56	1,000	1,000	5,000	5,000	10,000
Benzo(a)anthracene	7	15	0.48	4.31	0.90	0.90	7	7	300	300	3,000
Benzo(a)pyrene	7	15	0.60	3.50	0.83	0.83	2	2	30	30	300
Benzo(b)fluoranthene	7	15	0.63	3.43	0.95	0.95	7	7	300	300	3,000
Benzo(g,h,i)perylene	6	15	0.58	4.0	0.81	0.81	1,000	1,000	5,000	5,000	10,000
Benzo(k)fluoranthene	7	15	0.61	3.57	0.86	0.86	70	70	3,000	3,000	10,000
Chrysene	7	15	0.64	4.76	1.02	1.02	70	70	3,000	3,000	10,000
Dibenzo(a,h)anthracene	ND	15	ND	ND	ND	ND	0.7	0.7	30	30	300
Fluoranthene	8	15	1.20	10.00	1.97	1.97	1,000	1,000	5,000	5,000	10,000
Fluorene	1	15	0.57	0.57	0.40	0.40	1,000	1,000	5,000	5,000	10,000
Indeno(1,2,3-cd)pyrene	5	15	0.67	2.07	0.63	0.63	7	7	300	300	3,000
Methylnaphthalene, 2-	ND	15	ND	ND	ND	ND	0.7	300	0.7	500	5,000
Naphthalene	ND	15	ND	ND	ND	ND	4	500	4	3,000	10,000
Phenanthrene	8	15	0.59	8.45	1.85	1.85	10	500	10	3,000	10,000
Pyrene	8	15	1.18	8.59	1.82	1.82	1,000	1,000	5,000	5,000	10,000
Arsenic, Total	46	46	1.60	195	36.5	36.5	20	20	20	20	200
Cadmium, Total	3	14	0.78	3.00	0.56	0.56	2	2	30	30	300
Chromium, Total	50	50	25	39,500	4,404	4,404	1,000	1,000	5,000	5,000	10,000
Chromium, VI	6	27	2.8	71.3	4.9	4.94	30	30	200	200	2,000
Lead, Total	46	46	3.7	18,700	965	965	300	300	300	300	3,000
Mercury, Total	11	14	0.21	69.0	12.23	12.23	20	20	30	30	300
C ₉ -C ₁₈ Aliphatics	ND	13	ND	ND	ND	ND	1,000	1,000	5,000	5,000	20,000
C ₁₉ -C ₃₆ Aliphatics	5	13	26.30	309	47.5	47.5	3,000	3,000	5,000	5,000	20,000
C ₁₁ -C ₂₂ Aromatics	9	13	12.20	222	47.0	47.0	1,000	1,000	1,000	5,000	10,000

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
□ and **Bold** indicates concentration exceeds MCP Method 1 S-3 standard

Soil Exposure Point B Data - Downstream Area (mg/kg)										
Location:	jjr-050811-02	SD-01	SD-01	SD-01	SD-02	SD-02	SD-02	SD-03	SD-03	SD-03
Sample Name:	jjr-050811-02	SD-01A	SD-01B	SD-01C	SD-02A	SD-02B	SD-02C	SD-03A	SD-03B	SD-03C
Sample Depth:		0-1 ft.	1-2 ft.	2-3 ft.	0-1 ft.	1-1.5 ft.	2-3 ft.	0-1 ft.	1-2 ft.	2-3 ft.
Laboratory:	USEPA New England Lab									
Laboratory I.D.:	AA52248	D15541	D15542	D15543	D15544	D15545	D15546	D15547	D15548	D15549
Sample Date:	11-Aug-05	22-Jun-04								
Consultant:	EPA									
Method(s):										
Acenaphthene		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Acenaphthylene		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Anthracene		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Benzo(a)anthracene		1.600	1.600	1.300	3.100	0.870	1.000	1.900	<0.520	<0.850
Benzo(a)pyrene		2.400	1.800	1.400	4.900	1.200	1.500	2.400	0.650	<0.850
Benzo(b)fluoranthene		4.300	2.900	2.200	8.600	2.100	2.400	4.100	0.930	<0.850
Benzo(g,h,i)perylene		1.600	1.100	0.940	4.500	0.820	1.100	1.700	<0.520	<0.850
Benzo(k)fluoranthene		2.700	1.900	1.300	4.800	1.800	2.200	2.400	0.920	<0.850
Chrysene		3.000	2.200	1.700	6.300	1.500	1.900	3.100	0.780	<0.850
Dibenzo(a,h)anthracene		<0.860	<0.830	<0.630	<1.800	<0.480	<0.860	0.690	<0.520	<0.850
Fluoranthene		3.800	3.400	2.100	7.700	2.000	2.400	4.100	1.000	<0.850
Fluorene		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Indeno(1,2,3-cd)pyrene		1.500	0.990	0.870	3.800	0.740	0.910	1.500	<0.520	<0.850
Methylnaphthalene, 2-		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Naphthalene		<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Phenanthrene		1.90	1.80	1.80	4.10	0.92	1.00	2.00	0.550	<0.850
Pyrene		4.70	3.00	<0.630	8.20	2.20	2.60	4.40	0.990	<0.850
Arsenic, Total	<19	<1.4	<1.3	<1.5	<1.1	1.1	1.3	<1.4	<1.2	<2.7
Cadmium, Total	<2.9	1.8	1.5	1.7	1.1	0.84	<0.45	1.4	<0.56	<0.83
Chromium, Total	2,100	3,850	9,060	19,300	2,708	3,990	11,900	5,240	8,390	1,600
Chromium, VI										
Lead, Total	260	317	395	468	220	204	91.6	235	134	146
Mercury, Total		4.1	4.4	5.3	3.8	6.6	1.2	1.3	1.2	4.3
C ₉ -C ₁₈ Aliphatics										
C ₁₉ -C ₃₆ Aliphatics										
C ₁₁ -C ₂₂ Aromatics										

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2 Soil Exposure Point B Data - Downstream Area (mg/kg)									
Location:	SD-04	SD-04	SD-04	B-101	B-101	B-104	B-105	B-105	B-106
Sample Name:	SD-04A	SD-04B	SD-04C	B-101 0-1	B-101 1-2	B-104 0-1	B-105 0-1.25	B-105 1.5-2	B-106 0-1
Sample Depth:	0-1 ft.	1-2 ft.	2-3 ft.	0-1 ft.	1-2 ft.	0-1 ft.	0-1.25 ft.	1.5-2 ft.	0-1 ft.
Laboratory:	USEPA New England Lab	USEPA New England Lab	USEPA New England Lab	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory I.D.:	D15550	D15551	D15552	SA79283-01	SA79283-02	SA79283-07	SA79283-08	SA79283-09	SA79283-10
Sample Date:	22-Jun-04	22-Jun-04	22-Jun-04	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08
Consultant:	EPA	EPA	EPA	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR
Method(s):				6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene	<0.650	<0.410	<0.400						
Acenaphthylene	<0.650	<0.410	<0.400						
Anthracene	<0.650	<0.410	<0.400						
Benzo(a)anthracene	1.000	<0.410	<0.400						
Benzo(a)pyrene	1.300	<0.410	<0.400						
Benzo(b)fluoranthene	2.800	0.580	<0.400						
Benzo(g,h,i)perylene	0.950	<0.410	<0.400						
Benzo(k)fluoranthene	1.500	<0.410	<0.400						
Chrysene	1.700	<0.410	<0.400						
Dibenzo(a,h)anthracene	<0.650	<0.410	<0.400						
Fluoranthene	2.300	0.420	<0.400						
Fluorene	<0.650	<0.410	<0.400						
Indeno(1,2,3-cd)pyrene	0.810	<0.410	<0.400						
Methylnaphthalene, 2-	<0.650	<0.410	<0.400						
Naphthalene	<0.650	<0.410	<0.400						
Phenanthrene	0.840	<0.410	<0.400						
Pyrene	2.400	0.450	<0.400						
Arsenic, Total	<1.7	<0.98	2.3	15.5	15.1	8.78	49.4	93.5	7.16
Cadmium, Total	1.7	<0.49	<0.50						
Chromium, Total	16,100	2,670	799	94	19.8	49.9	8,550	23,300	29.9
Chromium, VI				<1.08	<0.989	<1.03	<1.81	<2.22	<1.22
Lead, Total	508	93.4	42.2	45.1	5.50	41.7	503	872	38.4
Mercury, Total	2.4	0.59	0.70						
C ₉ -C ₁₈ Aliphatics									
C ₁₉ -C ₃₆ Aliphatics									
C ₁₁ -C ₂₂ Aromatics									

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2 Soil Exposure Point B Data - Downstream Area (mg/kg)									
Location:	B-108	B-109	B-202	B-202	B-203	B-204	B-205	B-206	B-207
Sample Name:	B-108 0-1	B-109 0-2	B-202 (SED)	B-202 0-5'	B-203 0-5'	B-204 0-5'	B-205 0-5'	B-206 0-5'	B-207 0-5'
Sample Depth:	0-1 ft.	0-2 ft.	0-12 in.	0-5 ft.					
Laboratory:	Spectrum	Spectrum	Alpha						
Laboratory I.D.:	SA79283-12	SA79283-13	L0818443-08	L0818721-03	L0818721-04	L0818721-05	L0818721-06	L0818721-07	L0818721-08
Sample Date:	28-May-08	28-May-08	15-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	ENSR	ENSR	TTR						
Method(s):	6000/7000	6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Acenaphthylene			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Anthracene			<0.490	<0.383	<0.438	1.23	<0.463	<0.469	<0.450
Benzo(a)anthracene			0.636	0.613	<0.438	2.64	1.35	1.19	0.557
Benzo(a)pyrene			0.960	0.890	<0.438	2.71	1.28	1.08	0.674
Benzo(b)fluoranthene			1.31	1.24	<0.438	3.24	1.32	1.18	0.906
Benzo(g,h,i)perylene			0.916	0.823	<0.438	1.91	0.762	0.606	0.548
Benzo(k)fluoranthene			1.09	0.910	<0.438	2.87	1.38	1.15	0.729
Chrysene			1.33	1.19	<0.438	3.54	1.63	1.21	0.826
Dibenzo(a,h)anthracene			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Fluoranthene			2.35	2.07	<0.438	6.77	3.18	2.65	1.41
Fluorene			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Indeno(1,2,3-cd)pyrene			0.967	0.951	<0.438	2.16	0.962	0.945	0.705
Methylnaphthalene, 2-			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Naphthalene			<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Phenanthrene			0.929	0.984	<0.438	4.90	1.94	1.21	0.702
Pyrene			1.84	1.59	<0.438	5.38	2.54	2.21	1.17
Arsenic, Total	7.52	5.80	8.0	4.9	4.8	10	13	14	8.5
Cadmium, Total			<0.73	<0.54	<0.66	0.82	0.77	1.2	0.68
Chromium, Total	83.1	329	780	150	28	1,500	2,600	6,000	2,200
Chromium, VI	<1.23	<1.09							
Lead, Total	56.9	36.9	66	33	6.6	140	170	240	140
Mercury, Total			0.45	0.84	<0.10	2.7	2.8	4.9	3.2
C ₉ -C ₁₈ Aliphatics			<9.80	<7.66	<8.77	<9.80	<9.26	<9.39	<9.01
C ₁₉ -C ₃₆ Aliphatics			44.4	59.7	<8.77	56.2	72.1	105	81.1
C ₁₁ -C ₂₂ Aromatics			29.2	34.4	<8.77	82.4	66.4	68.7	43.3

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2		Soil Exposure Point B Data - Downstream Area (mg/kg)							
Location:	B-208	B-209	B-210R	B-210R	B-210R	B-210R	B-210R	B-210R	B-210R
Sample Name:	B-208 0-5'	B-209 0-5'	B-210R 0-1'	B-210R 1-2'	B-210R 2-3'	B-210R 3.75-4'	B-210R 4-4.25'	B-210R 4.25-4.5'	
Sample Depth:	0-3 ft.	0-5 ft.	0-1 ft.	1-2 ft.	2-3 ft.	3.75-4 ft.	4-4.25 ft.	4.25-4.5 ft.	
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-09	L0818721-10	L0900327-03	L0900327-04	L0900327-05	L0900327-06	L0900327-07	L0900327-08	L0900327-08
Sample Date:	18-Dec-08	18-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6010B	6010B	6010B	6010B	6010B	6010B	6010B
Acenaphthene	<0.490	<0.538							
Acenaphthylene	<0.490	<0.538							
Anthracene	<0.490	<0.538							
Benzo(a)anthracene	1.27	0.879							
Benzo(a)pyrene	1.72	0.919							
Benzo(b)fluoranthene	2.37	0.972							
Benzo(g,h,i)perylene	1.19	0.551							
Benzo(k)fluoranthene	1.77	0.994							
Chrysene	2.20	1.12							
Dibenzo(a,h)anthracene	<0.490	<0.538							
Fluoranthene	3.80	2.20							
Fluorene	<0.490	<0.538							
Indeno(1,2,3-cd)pyrene	1.62	0.794							
Methylnaphthalene, 2-	<0.490	<0.538							
Naphthalene	<0.490	<0.538							
Phenanthrene	1.66	1.63							
Pyrene	3.00	1.81							
Arsenic, Total	15	11							
Cadmium, Total	1.4	1.4							
Chromium, Total	4,300	14,000	1,800	3,400	7,000	28,000	39,000	3,700	
Chromium, VI									
Lead, Total	260	400							
Mercury, Total	2.0	2.2							
C ₉ -C ₁₈ Aliphatics	<9.8	<10.8							
C ₁₉ -C ₃₆ Aliphatics	125	116							
C ₁₁ -C ₂₂ Aromatics	79.1	67.7							

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2		Soil Exposure Point B Data - Downstream Area (mg/kg)						
Location:	B-210	B-210	B-211	B-212	B-212	B-213	B-214	B-214
Sample Name:	B-210 0-5'	B-210 5-10'	B-211 0-3'	B-212 0-5'	DUP-1	B-213 0-5'	B-214 0-5'	DUP-2
Sample Depth:	0-5 ft.	5-10 ft.	0-3 ft.	0-5 ft.				
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-11	L0818938-01	L0818721-12	L0818721-13	L0818721-21	L0818721-14	L0818721-15	L0818721-22
Sample Date:	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Acenaphthylene	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Anthracene	0.897	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Benzo(a)anthracene	2.35	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Benzo(a)pyrene	2.42	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Benzo(b)fluoranthene	2.63	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Benzo(g,h,i)perylene	1.66	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Benzo(k)fluoranthene	2.47	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Chrysene	2.38	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Dibenzo(a,h)anthracene	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Fluoranthene	5.84	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Fluorene	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Indeno(1,2,3-cd)pyrene	1.95	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Methylnaphthalene, 2-	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Naphthalene	<0.575	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Phenanthrene	4.29	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Pyrene	4.66	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538
Arsenic, Total	14	3.2	4.8	4.6	3.5	4.5	6.6	9.9
Cadmium, Total	1.6	<0.64	0.63	<0.60	<0.56	<0.55	1.2	<0.79
Chromium, Total	10,000	170	1,200	2,500	760	190	2,000	1,200
Chromium, VI								
Lead, Total	340	4.4	43	42	22	34	93	110
Mercury, Total	4.4	<0.10	0.70	0.16	0.17	0.84	3.1	1.9
C ₉ -C ₁₈ Aliphatics	<11.5	<8.89	<8.77	<8.33	<8.13	<8.03	<9.26	<10.8
C ₁₉ -C ₃₆ Aliphatics	134	<8.89	14.1	31.6	9.65	<8.03	37.0	<10.8
C ₁₁ -C ₂₂ Aromatics	107	<8.89	11.1	18.1	<8.13	<8.03	37.8	11.7

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2 Soil Exposure Point B Data - Downstream Area (mg/kg)								
Location:	B-215	B-216	B-217	B-218	B-219	B-219	B-220	B-220
Sample Name:	B-215 0-5'	B-216 0-5'	B-217 0-5'	B-218 0-5'	B-219 0-3'	B-219 3-4'	B-220 0-5'	B-220 5-10'
Sample Depth:	0-5 ft.	0-5 ft.	0-5 ft.	0-5 ft.	0-3 ft.	3-4 ft.	0-5 ft.	5-10 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-16	L0818721-17	L0818721-18	L0818721-19	L0900327-01	L0900327-02	L0818721-20	L0818721-30
Sample Date:	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	30-Dec-08	30-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6000/7000	6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Acenaphthylene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Anthracene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Benzo(a)anthracene	<0.476	0.672	<0.939	<0.529			<0.575	<0.402
Benzo(a)pyrene	<0.476	0.610	<0.939	<0.529			<0.575	<0.402
Benzo(b)fluoranthene	<0.476	0.719	<0.939	<0.529			0.667	<0.402
Benzo(g,h,i)perylene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Benzo(k)fluoranthene	<0.476	0.598	<0.939	<0.529			<0.575	<0.402
Chrysene	<0.476	0.907	<0.939	<0.529			0.591	<0.402
Dibenzo(a,h)anthracene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Fluoranthene	<0.476	1.36	<0.939	<0.529			0.801	<0.402
Fluorene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Indeno(1,2,3-cd)pyrene	<0.476	0.485	<0.939	<0.529			<0.575	<0.402
Methylnaphthalene, 2-	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Naphthalene	<0.476	<0.427	<0.939	<0.529			<0.575	<0.402
Phenanthrene	<0.476	0.807	<0.939	<0.529			<0.575	<0.402
Pyrene	<0.476	1.14	<0.939	<0.529			0.654	<0.402
Arsenic, Total	3.9	5.1	5.0	7.2	12	4.5	1.4	1.7
Cadmium, Total	<0.70	0.61	<0.65	<0.73	<1.1	<0.62	<0.84	<0.57
Chromium, Total	1,500	770	630	990	6,600	38	8,000	8.8
Chromium, VI								
Lead, Total	27	74	57	51	200	6.6	230	<2.8
Mercury, Total	0.28	0.18	0.66	0.59	2.1	<0.10	0.87	<0.10
C ₉ -C ₁₈ Aliphatics	<9.52	<8.55	<18.8	<10.6			<11.5	<8.03
C ₁₉ -C ₃₆ Aliphatics	15.1	23.7	<18.8	<10.6			77.4	<8.03
C ₁₁ -C ₂₂ Aromatics	20.5	27.8	<18.8	<10.6			41.4	<8.03

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed

Table G-2 Soil Exposure Point B Data - Downstream Area (mg/kg)

Location: Sample Name: Sample Depth: Laboratory: Laboratory I.D.: Sample Date: Consultant: Method(s):	Number of Times Detected	Number of Times Sought	Minimum Concentration Detected	Maximum Concentration Detected	Average Concentration Detected	Soil Exposure Point B (Downstream Soil EPCs)	2007	2007	2007	2007	2007	2007	2007
							Method 1 Standard S-1/GW-1	Method 1 Standard S-1/GW-3	Method 1 Standard S-2/GW-1	Method 1 Standard S-2/GW-3	Method 1 Standard S-3/GW-1	Method 1 Standard S-3/GW-3	MCP UCLs
Acenaphthene	ND	35	ND	ND	ND	ND	4	1,000	4	3,000	4	5,000	10,000
Acenaphthylene	ND	35	ND	ND	ND	ND	1	10	1	10	1	10	10,000
Anthracene	2	35	0.90	1.23	0.33	0.33	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Benzo(a)anthracene	18	35	0.56	3.10	0.82	0.82	7	7	40	40	300	300	3,000
Benzo(a)pyrene	19	35	0.61	4.90	1.00	1.00	2	2	4	4	30	30	300
Benzo(b)fluoranthene	21	35	0.58	8.60	1.46	1.46	7	7	40	40	300	300	3,000
Benzo(g,h,i)perylene	17	35	0.55	4.50	0.75	0.75	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Benzo(k)fluoranthene	19	35	0.60	4.80	1.07	1.07	70	70	400	400	3,000	3,000	10,000
Chrysene	20	35	0.59	6.30	1.23	1.23	70	70	400	400	3,000	3,000	10,000
Dibenzo(a,h)anthracene	1	35	0.69	0.69	0.30	0.30	0.7	0.7	4	4	30	30	300
Fluoranthene	21	35	0.42	7.70	1.86	1.86	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Fluorene	ND	35	ND	ND	ND	ND	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Indeno(1,2,3-cd)pyrene	18	35	0.49	3.80	0.77	0.77	7	7	40	40	300	300	3,000
Methylnaphthalene, 2-	ND	35	ND	ND	ND	ND	0.7	300	0.7	500	0.7	500	5,000
Naphthalene	ND	35	ND	ND	ND	ND	4	500	4	1,000	4	3,000	10,000
Phenanthrene	19	35	0.55	4.90	1.09	1.09	10	500	10	1,000	10	3,000	10,000
Pyrene	20	35	0.45	8.20	1.68	1.68	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Arsenic, Total	36	46	1.10	94	8.8	8.80	20	20	20	20	20	20	200
Cadmium, Total	17	38	0.61	1.80	0.75	0.75	2	2	30	30	30	30	300
Chromium, Total	52	52	8.80	39,000	5,215	5,215	1,000	1,000	3,000	3,000	5,000	5,000	10,000
Chromium, VI	ND	8	ND	ND	ND	ND	30	30	200	200	200	200	2,000
Lead, Total	45	46	4.40	872	163	163.15	300	300	300	300	300	300	3,000
Mercury, Total	33	37	0.16	6.60	1.92	1.92	20	20	30	30	30	30	300
C ₉ -C ₁₈ Aliphatics	ND	23	ND	ND	ND	ND	1,000	1,000	3,000	3,000	5,000	5,000	20,000
C ₁₉ -C ₃₆ Aliphatics	16	23	9.65	134	45.2	45.17	3,000	3,000	5,000	5,000	5,000	5,000	20,000
C ₁₁ -C ₂₂ Aromatics	16	23	11.10	107	34.0	34.01	1,000	1,000	1,000	3,000	1,000	5,000	10,000

Notes: ND or < indicates compound not detected
Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 and **Bold** indicates concentration exceeds MCP Method 1 S-2 and S-3 standards

Table G-3 Groundwater Analytical Data (µg/L) - Former John J. Riley Site, Woburn, Massachusetts

Location:	Stormwater Culvert	MW-2	MW-3	MW-1				
Sample Name:	Culvert-Upstream	MW-2-20090213	MW-3-20090213	MW-1-20090213				
Laboratory:	Alpha	Alpha	Alpha	Alpha	Number	Number	Average	Groundwater
Laboratory I.D.:	L0901867-01	L0901867-02	L0901867-03	L0901867-04	of Times	of Times	Concentration	EPC
Sample Date:	13-Feb-09	13-Feb-09	13-Feb-09	13-Feb-09	Detected	Sought	Detected	
Consultant:	TTR	TTR	TTR	TTR				
Method(s):	6000/7000 series	6000/7000 series	6000/7000 series	6000/7000 series				
Chromium, Dissolved	<10	<10	<10	10	1	4	6.3	6.3

Notes: Concentrations entered as < indicate that they were below the laboratory method detection limit. Since chromium is detected at least once above the detection limit, samples reported as not detected (ND) by the laboratory are assumed to have a concentration of one-half of the method detection limit for that sample.

Table G-4 Upper Concentration Limits for Site Compounds of Concern

Compound name	MCP Method 3				
	Upper Concentration Limits (UCLs)				
	310 CMR 40.0996(5)				
	Average Groundwater Concentrations (µg/L)	Groundwater UCLs (µg/L)	Hillside Area Average Soil Concentration (mg/kg)	Downstream Area Average Soil Concentration (mg/kg)	Soil UCLs (mg/kg)
Anthracene	NS	600	0.6	0.33	10,000
Benzo(a)anthracene	NS	10,000	0.9	0.82	3,000
Benzo(a)pyrene	NS	5,000	0.8	1.0	300
Benzo[e]pyrene	NS	NA	ND	0.29	NA
Benzo(b)fluoranthene	NS	4,000	0.9	1.5	3000
Benzo(g,h,i)perylene	NS	500	0.8	0.75	10,000
Benzo(k)fluoranthene	NS	1,000	0.9	1.07	10,000
Chrysene	NS	700	1.0	1.23	10000
Dibenzo(a,h)anthracene	NS	400	ND	0.30	300
Fluoranthene	NS	2,000	2.0	1.9	10,000
Fluorene	NS	400	0.4	ND	10,000
Indeno(1,2,3-cd)pyrene	NS	1,000	0.6	0.77	3,000
Perylene	NS	NA	ND	0.29	NA
Phenanthrene	NS	100,000	1.9	1.1	10,000
Pyrene	NS	800	1.8	1.7	10,000
Arsenic	ND	9,000	36.5	8.8	200
Barium	NS	100,000	ND	210	10,000
Cadmium	ND	50	0.6	0.75	300
Chromium, Total	6.3	3,000	4,404	5,215	10,000
Chromium, VI	NS	3,000	4.9	ND	2,000
Lead, Total	ND	150	965	163	3,000
Mercury, Total	ND	200	12.2	1.9	300
C19-C36 Aliphatics	NS	100,000	47.5	45.2	20,000
C11-C22 Aromatics	NS	100,000	47.0	34.0	10,000

ND = Not Detected

NS indicates no sample collected

Table G-5 Ambient Water Quality Criteria

Compound name	Site Groundwater EPC (µg/L)	AWQC, Aquatic Organisms Fresh Water		Ref
		Acute (µg/L)	Chronic (µg/L)	
Chromium, Dissolved	0.6	16	11	62FR42160

The EPC is divided by 10 to represent dilution into surface water.

Appendix H
Public Notifications



TETRA TECH RIZZO

March 18, 2009

Woburn Board of Health
City of Woburn
City Hall
10 Common Street
Woburn MA 01801

**Re: MCP Phase II and Phase III Report
240 Salem Street
Woburn, MA
RTN 3-25734**

Dear Sir or Madam:

On behalf of Organix, LLC, Tetra Tech Rizzo (TTR) is providing this notification of the availability of a Phase II and Phase III Report pursuant to the Massachusetts Contingency Plan (MCP) under 310 CMR 40.0839. The above referenced property is a Disposal Site under the MCP as a result of the detection of oil and hazardous materials in soil at concentrations above the applicable MCP Reportable Concentrations.

A report entitled MCP Phase II and Phase III Report was submitted to the Massachusetts Department of Environmental Protection (MassDEP) Northeast Regional Office via eDEP on March 18, 2009. This document is available for review at MassDEP office or on-line via the MassDEP Site Viewer at http://public.dep.state.ma.us/wsc_viewer/main.aspx under Release Tracking Number (RTN) 3-25734. To request a complete copy of this report please contact Mr. Ron Myrick, Jr. of TTR at (508) 903-2000. The following presents a summary of the conclusions of this report.

Phase II Summary and Conclusions

TTR has prepared a Phase II Report to summarize the completion of Comprehensive Site Assessment activities completed in accordance with the MCP. This Phase II Report was prepared under the supervision of the LSP-of-Record for RTN 3-25734 and conforms to the applicable requirements of the MCP under 310 CMR 40.0830. It is the opinion of the LSP-of-Record that the findings of this Phase II Report have not disclosed new or additional information which may affect the Tier Classification or permit category for the



Site, and rescoring under the Numerical Ranking System is not necessary. The data gathered during Phase II CSA activities were used to evaluate risks posed by the Site via a combined MCP Method 1 and Method 3 risk characterization. The results of the risk characterization indicate that a condition of "No Significant Risk" cannot be achieved for the Site at this time. Further Comprehensive Response Actions (CRAs) are necessary at the Site to achieve a Response Action Outcome (RAO). A Phase III evaluation under the MCP is necessary to select a remedial action alternative for the Site.

Phase III Summary and Conclusions

TTR prepared a Phase III Report pursuant to the MCP. The selected Remedial Action Plan is a combination of soil excavation and off-site disposal and on-site consolidation with the implementation of an Activity and Use Limitation on a portion of the Site. It is the opinion of the LSP-of-Record for the Site that the selected remedial action alternative is likely to achieve a Permanent Solution under the MCP. This Phase III Evaluation conforms with the applicable Phase III requirements and performance standards under the MCP. A Phase IV RIP will be submitted to detail the implementation of the selected RAP at the Site on or before March 2010.

If you have any questions or require additional information please contact the undersigned at (508) 903-2000.

Very truly yours,

Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

CC: Mayor Thomas L. McLaughlin

CC: Massachusetts Department of Environmental Protection



TETRA TECH RIZZO

March 18, 2009

Mayor Thomas L. McLaughlin
City of Woburn
City Hall
10 Common Street
Woburn MA 01801

**Re: MCP Phase II and Phase III Report
240 Salem Street
Woburn, MA
RTN 3-25734**

Dear Mayor McLaughlin:

On behalf of Organix, LLC, Tetra Tech Rizzo (TTR) is providing this notification of the availability of Phase II and Phase III Report pursuant to the Massachusetts Contingency Plan (MCP) under 310 CMR 40.0839. The above referenced property is a Disposal Site under the MCP as a result of the detection of oil and hazardous materials in soil at concentrations above the applicable MCP Reportable Concentrations.

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TTR has prepared a Phase II Report to summarize the completion of Comprehensive Site Assessment activities completed in accordance with the MCP. This Phase II Report was prepared under the supervision of the LSP-of-Record for RTN 3-25734 and conforms to the applicable requirements of the MCP under 310 CMR 40.0830. It is the opinion of the LSP-of-Record that the findings of this Phase II Report have not disclosed new or additional information which may affect the Tier Classification or permit category for the



Site, and rescoring under the Numerical Ranking System is not necessary. The data gathered during Phase II CSA activities were used to evaluate risks posed by the Site via a combined MCP Method 1 and Method 3 risk characterization. The results of the risk characterization indicate that a condition of "No Significant Risk" cannot be achieved for the Site at this time. Further Comprehensive Response Actions (CRAs) are necessary at the Site to achieve a Response Action Outcome (RAO). A Phase III evaluation under the MCP is necessary to select a remedial action alternative for the Site.

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If you have any questions or require additional information please contact the undersigned at (508) 903-2000.

Very truly yours,

Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

CC: Woburn Board of Health

CC: Massachusetts Department of Environmental Protection

MCP Phase II and Phase III Report

Former John J. Riley Site
240 Salem Street
Woburn, Massachusetts
RTN 3-25734

Submitted to:
Massachusetts Department of Environmental Protection
Northeast Regional Office

March 15, 2009

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TETRA TECH RIZZO

March 15, 2009

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

**Re: MCP Phase II and Phase III Report
Former John J. Riley Site
240 Salem Street
Woburn, Massachusetts
RTN 3-25734**

Dear Sir or Madam:

On behalf of Organix, LLC, Tetra Tech, Inc. d/b/a Tetra Tech Rizzo has prepared the attached report for the Disposal Site identified by Release Tracking Number 3-25734. This report summarizes the findings of the Phase II – Comprehensive Site Assessment (Phase II) and Phase III – Identification, Evaluation and Selection of Remedial Action Alternatives (Phase III) for the Disposal Site. This report was prepared in accordance with the provisions of the Massachusetts Contingency Plan under 310 CMR 40.0000.

Please contact the undersigned at (508) 903-2000 if you have any questions regarding this matter.

Very truly yours,

Ian S. Cannan
Project Scientist

Ronald E. Myrick, Jr., P.E., L.S.P.
Sr. Project Manager

Michael E. Billa, P.E., P.G., L.S.P.
Director
Remediation, Assessment & Compliance

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One Grant Street
Framingham, MA 01701
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1.0 Introduction

On behalf of Organix, LLC (Organix) and in accordance with the Massachusetts Contingency Plan (MCP) under 310 CMR 40.0000, Tetra Tech, Inc. d/b/a Tetra Tech Rizzo (TTR) has prepared this Phase II – Comprehensive Site Assessment (Phase II) and Phase III – Identification, Evaluation and Selection of Remedial Action Alternatives (Phase III) Report for the Disposal Site identified by the Massachusetts Department of Environmental Protection (MassDEP) by Release Tracking Number (RTN) 3-25734 (the Site). This submittal has been prepared in accordance with the requirements of a Phase II under 310 CMR 40.0835 to document the Comprehensive Site Assessment (CSA) and includes a Phase III Completion Statement for the Identification, Evaluation and Selection of a Comprehensive Remedial Action (Phase III) in accordance with 310 CMR 40.0850.

This submittal contains the findings of CSA activities that were implemented at the Disposal Site pursuant to the MCP to assess a release of oil and/or hazardous materials (OHM) attributed to historic waste disposal practices while the Site was operated as a tannery. The Phase II Report presents relevant information, data, and findings to document the CSA activities and the opinions of the Licensed Site Professional (LSP) with respect to RTN 3-25734. The Phase III presents the identification and initial screening of likely remedial action alternatives, a detailed evaluation of select remedial action alternatives, and an overview of the selected Remedial Action Plan (RAP) for the Site. The material facts and LSP Opinions presented in this submittal are subject to the limitations and conditions presented in Appendix A. This submittal is appended to the appropriate transmittal form established by MassDEP and is submitted in electronic format via eDEP. Copies of the MassDEP transmittal forms are included in Appendix B.

2.0 Disposal Site Information

The following sections present the Disposal Site information relevant to this CSA in accordance with 310 CMR 40.0835(4)(a). The information presented herein details and updates, as necessary, information previously presented in the Phase I – Initial Site Investigation and Tier Classification submittal (Phase I Report) dated March 13, 2007.

2.1 Disposal Site Location

The geographical location of the Site is shown on Figure 1, the Site Locus Map. The approximate geographical coordinates of the Site are as follows:

UTM Coordinates: 4706420 m north
 324602 m east

The boundaries of the Disposal Site encompass a portion of the former John J Riley (Riley) property where a former tannery operation facility was sited. In June 1994, the Maggiore Companies (a property developer) subdivided a portion of the Riley property which was occupied by the primary tannery operation facility buildings and structures into six lots. The subdivided lots were identified by the City of Woburn Tax Assessor as Lot numbers 11 through

16. In 2003, the Woburn Tax Assessors office revised the City's tax maps and divided the former Riley site into four lots. These properties are shown on City of Woburn Tax Assessors Map No. 37 as lots 3, 4, 7 and 8. The Disposal Site is located upon a portion of Lot No.7 which is currently identified as 240 Salem Street in Woburn, Massachusetts. Lot No. 7 is currently owned and operated by Organix LLC and is used as an organic chemistry research and development facility. The Organix property encompasses approximately 3.62 acre of land.

The currently-defined limits of the RTN 3-25734 Disposal Site (Site) include the northern portion of the Organix property as depicted on Figure 2.

2.2 Disposal Site Description

The Site is undeveloped, and no occupied structures exist. A partially-collapsed pump house associated with a former Riley tannery production well exists on the north-central portion of the Site. The one-story masonry building that is occupied by Organix is located south of the Site. The building contains office space and research and development working spaces for Organix operations.

A paved driveway provides access to the Organix property and parking lot from Salem Street. The Site is accessed via a north-sloping embankment at the northwest edge of the Organix parking lot. At the base of the embankment is a paved pathway. The historic pathway begins at southwestern side of the Site and runs northeast generally parallel to a stormwater drainage swale. Based on historic maps of the area, this pathway is believed to be related to the former Riley operations and was likely used for access to the northern portion of the Site including the well house.

The stormwater drainage swale that traverses the Site serves as the conveyance of stormwater from surrounding northern and western highland areas. The drainage swale also receives overflow from a stormwater detention pond that is located on the Organix property during heavy rain events. The open-channel drainage swale begins near the southwestern portion of the Site near the terminus of a stormwater drainage culvert from the abutting property to the west and the overflow culvert from the detention pond. The drainage swale continues northeasterly through the Site toward a culvert beneath the Massachusetts Bay Transportation Authority (MBTA) railroad right-of-way to the north-northeast of the Organix property. Based on available record resources and Site observations, the culvert conveys stormwater beneath the MBTA railroad tracks and into a stream and wetlands located on the Murphy's Waste Oil property (part of the Wells G&H National Priorities List (NPL) site).

A municipal sewer easement and associated subsurface sewer pipe transects the Site in a parallel orientation with respect to the stormwater drainage swale and paved pathway, as depicted on Figure 2. No other utilities are known to exist at the Site.

2.3 Surrounding Area

The Site is located within mixed commercial, industrial and residential-zoned area of Woburn, Massachusetts. The Site is located within an area that is zoned I-P ("industrial park"). Properties

surrounding the Site are generally used for commercial or industrial purposes with residential properties to the south and west.

The lots that formerly comprised the Riley property are currently owned by separate commercial businesses. Lot No. 3 is owned by the Robert M. Duffy Trust and is operated under the name of Kraft Power. Lot No. 4 is owned by the Robert B Krueger Trust and is operated under the name of New England Industrial Truck. Lot No. 8 is owned by Beryl E. Rotundo and is operated under the name of Charl's Ice Cream.

Located to the east of the Organix property is the MBTA Lowell commuter railroad (MBTA railroad). The property located east of the MBTA railroad is known as the Murphy's Waste Oil property (Murphy's property) which is part of the Wells G&H NPL Site.

As defined by the MCP, an institution is any publicly or privately owned hospital, health care facility, orphanage, nursing home, convalescent home, educational facility, or correctional facility where such facility provides overnight housing. Based on a site reconnaissance and review of standard record resources, no institutions have been identified within 500 feet of the Site boundaries.

2.4 Natural Resource Areas

TTR reviewed the Massachusetts Geographic Information System (MassGIS) Site Scoring Map of the Site that was presented in the Phase I Report and included in Appendix C to identify resource areas proximate to the Site including:

- surface waters, wetlands, vernal pools, ponds, lakes, streams, rivers and reservoirs;
- drinking water supplies consisting of Zone II areas, Interim Wellhead Protection Areas, Zone A areas, Potentially Productive Aquifers, and private wells and;
- Areas of Critical Environmental Concern, Sole Source Aquifers, Protected Open Space, fish habitats and habitats of Species of Special Concern or Threatened or Endangered Species.

2.4.1 Surface Waters

As defined by the MCP, surface waters include all waters other than groundwater within the jurisdiction of the Commonwealth, including without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and vernal pools. The Aberjona River is located approximately 850 feet east of the Site. According to the MassGIS MassDEP Wetlands map, a wetland area is located approximately 100 feet east-northeast of the northeastern limit of Site on the eastern side of the MBTA railroad.

2.4.2 Drinking Water Supply

No active public groundwater drinking water sources were identified within a one-mile radius of the Site. Woburn municipal wells G and H are located approximately 3,000 feet northeast of the Site but have reportedly been inactive since 1979. These wells were deactivated in 1979 as a result of elevated concentrations of volatile organic compounds (VOCs). However, according to the Woburn Health Department, wells G and H have not been officially decommissioned, and the Interim Wellhead Protection Area (IWPA) for wells G and H encompasses the Site and surrounding area, as indicated on the MassGIS map (Appendix C). The closest identified public drinking water supply is located at Horn Pond, which is approximately 2 miles southwest of the Site.

Drinking water for the City of Woburn including the Organix property is provided by the City of Woburn municipal authority, and approximately 60 percent of municipal water is sourced from the public wells located at Horn Pond with the remaining water provided by the Massachusetts Water Resources Authority (MWRA). No known private drinking water wells are located within 500 feet of the Site. An inactive former pumping well (previously used for tannery operations) is located at the Site but is not believed to have been used since at least 1989 when Riley activities ceased at the Site.

2.4.3 Areas of Critical Environmental Concern and Other Protected Resources

No Areas of Critical Environmental Concern (ACEC) are located within 500 feet of the Site. According to the MassGIS map, Protected Open Space exists approximately 1,800 feet east and 2,000 feet west of the Site.

3.0 Disposal Site History

The historical development and use of the former Riley property, including the area defined as the Site, were constructed from City of Woburn municipal records, Sanborn Fire Insurance Maps, a review of federal and state environmental records prepared by FirstSearch Technology Corporation (FirstSearch report), a Summary of Activities Report (21E, inc.) and published literature from private and United States Environmental Protection Agency (EPA) sourced publications. Copies of previous environmental reports referenced here in are provided on a compact disk in Appendix D.

3.1 Owners and Operations History

<u>Dates</u>	<u>Owners</u>	<u>Use</u>
Prior to 1903	Undeveloped	Quarry
1915-1978	John J. Riley	Tannery
1978-1983	Beatrice Foods Company	Tannery

1983-1985	John J. Riley	Tannery
1985-1997	Wedel Corporation	Tannery/Vacant
1997	Paul Maggiore Builders Corporation	Development
1997- Present	Organix LLC	Organic Chemistry R&D

3.2 Release History

The Site is located on a portion of the former Riley tannery property, which operated in the area of the Site area from approximately 1915 to 1989. The former Riley tannery property has been the subject of previous environmental investigations. The following summarizes the history of known and relevant releases of OHM at the former Riley tannery property.

3.2.1 Subject Release: RTN 3-25734

In 2003, as part of remedial investigations of the Wells G&H NPL Site (east of the Site), EPA conducted soil and sediment sampling to support an ecological risk assessment of the watershed. Part of the risk assessment included the collection of sediment samples from wetlands located downstream from the east-northeast portion of the Site. Analysis of these sediment samples documented the presence of elevated concentration of metals in the sediment samples including arsenic and chromium. As a result of the finding, EPA requested access to the Organix property, which is located topographically upgradient from the sediment sample locations, to investigate potential sources of hazardous materials and collect samples from potential source materials.

According to the EPA report entitled *Removal Program Preliminary Assessment/Site Investigation Report for the John J Riley Site* dated August 11, 2005 (provided in Appendix D), “possible tannery-related waste and high levels of chromium in surface soils have been identified in this particular area.” The referenced “particular area” was an eroded section of a drainage swale bank with exposed tannery-related waste at a portion of the Organix property. The EPA report stated that “chromium was detected at concentrations up to 86,000 mg/kg in the drainage swale bank.” A subsequent EPA Site Investigation Closure Memorandum dated March 15, 2006 (Appendix D) also stated that “a Removal Action is appropriate at this time” and the “removal action will be limited in scope to addressing the direct contact threat and threat of migration posed by this area of exposed waste material.”

MassDEP issued a Notice of Responsibility (NOR) dated March 28, 2006 to Organix based on information contained within an EPA report entitled *Removal Program Preliminary Assessment/Site Investigation Report for the John J Riley Site*. The NOR required Organix to submit a Release Notification Form (RNF) within 60 days of receiving the NOR. Based on the detection of chromium and lead at concentrations above the applicable MCP RCS-1 reportable concentrations as a result of EPA assessment activities and as required by the MassDEP NOR, a RNF documenting a 120-day release condition was submitted to MassDEP on May 26, 2006 by Organix.

The materials identified by EPA as a possible source of hazardous materials impacting downstream sediment were further assessed during the Phase I investigation. The source of the materials that have been identified at the Site is believed to have originated from former tannery operations at the Riley property. A review of the Sanborn Maps and available records for the area indicates that the former Riley tannery facility was in operation on the property from approximately 1915 to 1989.

The EPA-required Removal Action included addressing direct contact and threat of migration issues posed by the area of exposed waste material and was implemented in conjunction with a Release Abatement Measure (RAM) under the MCP. The Removal Action associated with the EPA Scope of Work (SOW) and RAM consisted of a limited removal of accessible/exposed tannery-related wastes and stabilization of the adjacent hillside slope along the drainage swale bank that was susceptible to potential further erosion and potential migration of contaminants in the event of a large rainfall event with a scouring runoff velocities within the swale. A summary of the completed Removal Action/RAM is presented in Section 4.0.

A Revised RNF for RTN 3-25734 was subsequently submitted to MassDEP on July 18, 2006 following the detection of additional contaminants including additional metals, polycyclic aromatic hydrocarbons (PAHs) and petroleum compounds at concentrations exceeding the applicable MCP RCS-1 standards in a composite soil sample that was collected on June 16, 2006 from the soils that were targeted for excavation and disposal from the Site as part of the Removal Action/RAM.

3.2.2 Historic Releases: RTNs 3-482 and 3-13444

In January 1987, the former Riley property was listed as a Location to be Investigation (LTBI), and RTN 3-00482 was assigned for “unknown chemicals of unknown type.” Based on a *Summary of Activities* letter prepared by 21E, Inc. and dated September 11, 1996, a LSP Evaluation Opinion Transmittal Form and supporting documentation for a Response Action Outcome (RAO) Statement were submitted to MassDEP on March 28, 1994 for the RTN 3-0482 Disposal Site. The RTN 3-00482 Disposal Site was identified as 228 Salem Street (John J Riley Site) and included the current Organix property (identified as Lot 12). On January 4, 1996, the MassDEP issued a Notice of Audit Findings (NOAF) and Notice of Noncompliance (NON) to the Potentially Responsible Party. In response to the NOAF, NON, and following a meeting with MassDEP, 21E, Inc. submitted a Plan of Activities (January 24, 1996) which included the excavation of test pits, the collection and analysis of soil samples, and preparation of a site map which identified potential source areas of heavy metals on the former Riley tannery property. The Plan of Activities was reportedly approved by MassDEP, and assessment activities were initiated on January 30, 1996.

The reported assessment activities identified apparent impacted soils and tannery-related waste containing elevated concentrations of arsenic, chromium, and lead at the former Riley tannery property. Approximately 200 to 250 cubic yards of contaminated soil were initially excavated and stockpiled on January 30 and 31, 1996 pending disposal. Further excavation of contaminated soils was conducted beginning in late May 1996. As reported by 21E, Inc., “*Excavations at the Site were coincided with excavations of arsenic contaminated soil located in the southern*

portion of the LTBI and addressed under an IRA Plan submitted on April 12, 1996.” MassDEP’s Standard Release Report identifies RTN 3-13444 as reported on February 12, 1996 following the detection of arsenic in soil at concentrations up to 310 mg/kg.

According to a *Summary of Activities* letter by 21E, Inc. dated September 11, 1996 (provided in Appendix D), approximately 3,400 tons of soil were excavated and disposed under a MCP Bill of Lading for RTN 3-0482. The Summary of Activities letter also stated that “...*conditions at the Site pose a Level of No Significant Risk, an Activity and Use Limitation is not required to maintain a level of No Significant Risk, a Permanent Solution has been achieved, and conditions meet the requirements of a Class A-2 RAO.*”

Based on a review of available records, the RTN 3-0482 Disposal Site is located south-southeast of the RTN 3-25734 Disposal Site, as depicted on Figure 2; however, the defined limits of the RTN 3-0482 Disposal Site were not depicted within the documents reviewed.

3.3 Oil and/or Hazardous Materials Use and Storage History

The Site is an undeveloped portion of the Organix property. No known OHM use or storage is known to have occurred at the Site since former Riley tannery facility operations ceased circa 1989 on this portion of the property. Historic use and storage of hazardous materials related to the former Riley tannery facility operations at the Site reportedly included tannery-related materials and wastes containing heavy metals, chlorinated solvents and petroleum compounds.

According to the FirstSearch Report, a release of 500 gallons of No 6. fuel oil occurred at the Riley property at 228 Salem Street in 1986. No additional information about this release is provided. There were also records of three 15,000-gallon underground storage tanks (unknown use) at the 228 Salem Street property. Releases from the No. 6 fuel oil underground storage tanks associated with the 228 Salem Street property are not believed to have impacted the Site. The FirstSearch Report was included within the Phase I Report dated March 13, 2007. Based on available records, it is not believed that the former underground storage tanks that were registered for the 228 Salem Street property were located within the limits of the RTN 3-25734 Disposal Site.

According to the Woburn Fire Department, in 1996 the Organix facility was issued a license to store 90 gallons of Class 1 materials and 180 gallons of Class B materials above ground onsite (270 total gallons). Class 1 materials include diethyl ether, pentane, and non-halogenated waste. Class B materials include acetone, benzene, ethanol, methanol, hexanes, pyridine, tetrahydrofuran, toluene, halogenated waste, ethyl acetate and isopropanol. These materials are used as part of research and development processes at Organix and are not used or disposed within the limits of the Site.

3.4 Waste Management History

Based on assessment activities that have been conducted upon or proximate to the Site, it appears that prior waste management by prior users of the property included dumping of tannery-related wastes and solid waste at the Site. Visual evidence of dumped tannery waste and other solid

wastes was observed by TTR upon the hillside located adjacent to the drainage swale on the western portion of the Organix property. Also, evidence of dumped wastes was reported in the central portion of the Organix property within the boundaries of RTNs 3-00482 and 3-13444 where investigation and remedial activities were conducted by 21E, Inc. in the mid-1990s.

Also, according to the 21E, Inc. *Summary of Activities – Lot 12* report, a clay pipe was identified during excavation activities that was believed to have “*carried residual tannery materials from the interior of a former tannery building (beneath the existing Organix building) to a catch-basin located in the northern portion of the current detention pond*”. 21E, Inc. reportedly excavated and disposed of identified impacted soils associated with this clay pipe discharge. Based on available records, the described release is believed to have been adequately addressed under RTN 3-0482.

The first available Sanborn Map that depicts the Site area was dated 1926 and identified a “basin” in the area where the current detention pond is located. In addition a series of structures are located west of the “basin” in the area proximate to an observed historic paved pathway; however, the descriptions of uses for these structures are not legible on the map. The former Riley tannery facility buildings were identified to the south and southwest of the Site on the Sanborn maps. The “basin” is identified on subsequent Sanborn maps from 1947 and 1969; however, the structures along the historic pathway were not identified on the 1969 map.

3.5 Environmental Permits and Compliance History

The approximate limits of the Site encompass an undeveloped portion of the Organix property (northern portion), and no applicable environmental permits that are associated with Organix operations have been identified for the Site. Organix is classified as a large quantity generator (LQG) of hazardous waste and maintains several permits related to their operations on the southern portion of the property; however, no violations related to hazardous material storage, wastewater discharge, groundwater discharge, or air quality discharges associated with the Organix operations were identified. Also, there are no known requests for wetlands alterations or National Pollutant Discharge Elimination System (NPDES) permits.

3.6 MCP Compliance History and Submittals

MassDEP issued a NOR dated March 28, 2006 to Organix. The NOR required Organix to submit a RNF within 60 days of receiving the NOR. Based on the detection of chromium and lead in soil at concentrations above the applicable MCP RCS-1 reportable concentrations following EPA assessment activities and as required by the NOR, a RNF documenting a 120-day release condition was submitted to MassDEP on May 26, 2006 by Organix. A Revised RNF was submitted to MassDEP on July 18, 2006 following the detection of additional metals, polycyclic aromatic hydrocarbons (PAHs) and petroleum compounds that exceeded applicable MCP RCS-1 reportable concentrations in a composite soil sample that was collected on June 16, 2006 from soils that were targeted for excavation and disposal from the Site as part of the Removal Action/RAM. An Administrative Settlement Agreement and Order on Consent for Removal Action (CERCLA Docket Number 01-2006-0096) was issued to Organix on June 30, 2006 by the EPA with respect to a required Removal Action.

The EPA-required Removal Action included addressing direct contact and threat of migration issues posed by the area of exposed waste material and was implemented in conjunction with a RAM under the MCP. The Removal Action associated with the EPA Scope of Work (SOW) and RAM consisted of a limited removal of accessible/exposed contaminated soils and stabilization of the adjacent hillside slope along the drainage swale bank that was susceptible to potential further erosion and potential migration of contaminants in the event of a large rainfall event with a scouring runoff velocity within the swale. A RAM Completion Report was submitted to MassDEP on November 15, 2006 documenting completion of the Removal Action and compliance with the EPA requirements for mitigating direct contact and threat of migration issues. A summary of the completed Removal Action/RAM is presented in Section 4.0.

The Phase I Completion Statement and Tier Classification (Phase I Report) for RTN 3-25734 were submitted to MassDEP on March 15, 2007. The Phase I Report concluded that a comparison of soil analytical results to the applicable MCP Method 1 Risk Characterization Standards indicate that the requirements of a Class A or Class B Response Action Outcome (RAO) had not been achieved. Therefore, Comprehensive Response Actions were necessary at the Site. Tier Classification of the Disposal Site was completed pursuant to the provisions of 310 CMR 40.0500, and the Site was classified as Tier II. A Phase II Scope of Work was also submitted to MassDEP on March 15, 2007 which detailed proposed CSA investigation activities to be conducted under Phase II of the MCP.

3.7 Potentially Responsible Parties

Organix has owned the subject property since 1997 and is not associated with former tannery-related operations that occurred at the Site or subject property. Organix does not have a reason to believe that their operations contributed to the presence or migration of tannery related OHM at the Site. Other potentially responsible parties (PRPs) for the RTN 3-25734 Disposal Site include past owners/operators of the Site including John J. Riley, Beatrice Foods Company (Beatrice), Wedel Corporation, and Paul Maggiore Builders Corporation (Maggiore), as detailed in Section 3.1. The Organix LLC contact for the Site is as follows:

Mr. Peter C. Meltzer, Ph.D.
Organix LLC
240 Salem Street
Woburn, Massachusetts
781-932-4142

4.0 Summary of Removal Action/RAM

A RAM Plan dated July 5, 2006 was prepared to present proposed implementation of the EPA-required Removal Action, as described in an EPA letter entitled *Notice of Potential Liability and Invitation to Perform or Finance Proposed Cleanup Activities* dated March 29, 2006 and included the following:

- Eliminating the potential for direct contact with the “contaminated soils/waste material” and eliminating the threat of downstream migration through a combination of excavation and/or covering and securing the material in place;
- Sampling and monitoring as needed to conduct the above activities;
- Off-site disposal of cleanup-generated wastes at EPA-approved disposal facilities; and,
- Repairing response-related damage to affected areas of the Site.

A Scope of Work Deliverable dated April 25, 2006 for conducting the EPA-required Removal Action was submitted to EPA for review. The EPA Scope of Work Deliverable included a Quality Assurance Plan (QAP), a Site Assessment Plan (SAP) and a Site Assessment Report and Cleanup Plan (SAR/CP). Comments on the Scope of Work Deliverable from EPA were received on June 9, 2006. The EPA comments were incorporated into the SAR/CP, and the Revised Scope of Work Deliverable was submitted to EPA on June 12, 2006. EPA approved the Revised Scope of Work Deliverable and Organix entered into an Administrative Settlement Agreement and Order on Consent (ASAOC) (Consent Order) with EPA on June 30, 2006 to conduct the Removal Action. Following approval of the Revised Scope of Work Deliverable, a RAM Plan was prepared and submitted to MassDEP to present the proposed remedial plan and implement the plan under the MCP.

The scope of work for the Removal Action/RAM included removal of contaminated soils/waste material that was exposed to erosion and migration via the drainage swale. However, if the volume of encountered contaminated soils/waste material was determined to be limited to less than approximately 100 cubic yards, the scope of excavation activities may have been expanded to include the removal of all suspected contaminated soils/waste material. Based on the initially-encountered thickness and vertical extent of contaminated soils/waste material that was identified during the Removal Action, it was evident that the potential excavation volume of contaminated soils/waste material would exceed 100 cubic yards. Therefore, the Removal Action/RAM was limited to addressing the direct contact threat and threat of migration posed by the limited area of exposed contaminated soils/waste material along the drainage swale. Additional investigation activities were also conducted to preliminarily assess the volume and residual concentrations of target contaminants within the drainage swale bottom and bank as well as the adjacent hillside and downstream areas as discussed in Section 5.0. Following is a summary of Removal Action/RAM:

4.1 Site Preparation and Clearing

On August 1, 2006, trees and vegetation within the Removal Action/RAM area were cut at the ground level and cleared. Trees and vegetation were also cleared along an old paved pathway access that approached the Removal Action/RAM area. In addition, large rock and boulders were removed from the drainage swale within the Removal Action/RAM area and temporarily stockpiled adjacent to the drainage swale for reuse in the drainage swale bottom (after excavation activities were completed).

4.2 Excavation of Contaminated Soils/Waste Material

On August 14, 2006, excavation activities within the Removal Action/RAM area were conducted. The excavation removed approximately 20 to 25 cubic yards of contaminated soils/waste material that had been exposed as a result of erosion along approximately 60 feet of the stormwater drainage swale bank that transects the Organix property. Prior to the Removal Action, the western side of the face of the drainage swale bank at the toe of the hillside where contaminated soils/waste material had been discovered was approximately vertical, and contaminated soils/waste material was exposed to erosion and migration resulting from stormwater flows that contacted the bank. The purpose of excavation activities was to remove and dispose the exposed contaminated soils/waste material along the eroded drainage swale bank and provide a suitable slope, relative to the adjacent hillside, that could be temporarily stabilized.

Prior to excavating the targeted contaminated soils/waste material along the drainage swale bank, polyethylene sheeting was placed within the drainage swale bottom to mark the existing swale elevation and minimize contaminant impacts to the drainage swale bottom. A thickness of approximately 3 feet of contaminated soils/waste material along approximately 60 feet of the stormwater drainage swale bank was excavated/scraped onto the polyethylene sheeting to reduce the bank slope and toe angle. Excavated contaminated soils/waste material was then removed via an excavator which loaded the contaminated soils/waste material into the front bucket of a backhoe for transport and subsequent storage in two 20 cubic yard lined roll-off containers that were staged within the Organix parking lot. Upon completion of the excavation/scraping of the drainage swale bank, the bottom of the drainage swale was excavated to remove the polyethylene sheeting and residual contaminated soils/waste material. Approximately 6 inches of existing rock and sediment material along the bottom of the drainage swale were also excavated and transferred to the roll-off containers for off-site management. The limit of excavation for the Removal Action/RAM is depicted on Figure 3B.

On September 21 and 22, 2006, the two roll-off containers containing 25.88 tons of excavated soil/contaminated media were transported to Turnkey Landfill in Rochester, New Hampshire, an approved RCRA subtitle D landfill, as non-hazardous waste under a MCP Bill of Lading.

4.3 Bank Stabilization

Temporary stabilization of the drainage swale bank within the Removal Action/RAM area was conducted by installing geotextile fabric over the post-excavation sloped face and placing staked hay bales around the top and sides of exposed area footprint. Haybales were placed and staked upon a benched surface of the hillside on the upper side of the excavation. To limit potential erosion of the drainage swale bank, approximately 6 tons of 3 to 6-inch stone rip-rap as well as the stockpiled large rock and boulders that had been removed from drainage swale were placed along the toe of the slope of the stabilized slope across the Removal Action/RAM area.

Periodic inspections of the stabilized slope have been conducted by Organix personnel since implementation of the Removal Action/RAM. In August 2008, new geotextile fabric was installed upon the slope to maintain the stabilized condition.

4.4 Completion of Work Report

A Completion of Work Report dated October 30, 2006 was prepared and submitted to EPA following completion of the Removal Action/RAM. A letter dated November 15, 2006 from Mr. Frank Gardner of the EPA acknowledged receipt of the Completion of Work Report and stated that, “*The provisions of the ASAOC have been met, and the Respondent has no further obligations under this ASAOC.*” The RAM had achieved the remedial goals of mitigating direct contact threat and threat of migration posed by the limited area of exposed contaminated soils/waste material along the drainage swale. A RAM Completion Report was submitted to MassDEP on November 15, 2006.

5.0 Summary of Phase II Investigations

The following summarizes the assessment activities that have been completed at the Site and have been incorporated in the Phase II and Phase III Report.

5.1 EPA Assessment Activities

The investigation activities completed at the Site on behalf of EPA were summarized in a report entitled “*Removal Program Preliminary Assessment/Site Investigation Report for the John J. Riley Site Woburn, Massachusetts*” dated August 11, 2005. The source of information for this report was a report prepared by Weston Solution, Inc. (Weston) entitled “*Expanded Trip Report for John J. Riley Woburn, Massachusetts*” dated September 21, 2004. The EPA investigation included the collection of near surface soil samples at the Organix property in an attempt to identify a source of arsenic, chromium and lead detected in sediment samples collected at the adjacent Wells G&H NPL Site.

According to Weston’s report, a drainage ditch was identified flowing through the central portion of the Site. The drainage ditch was described by Weston as follows “*...While on the northern portion of the Organix property, START personnel observed a culvert where a stormwater drainage ditch flowed underneath the MBTA railroad tracks and into the wetlands located on the Murphy’s Waste Oil property. The drainage ditch begins on the western-central section of the Organix property and continues in a northeasterly manner along the entire length of the property until it reaches the culvert just west of the MBTA railroad property. The drainage ditch follows a relatively steep grade down a ridge, where the ditch and surrounding area flatten out into a low-lying area prior to the culvert located just west of the MBTA railroad tracks. START personnel observed flowing water in the initial approximately 100 ft of the drainage ditch, after which the flowing water terminated.*”

The Weston report also documents the identification of suspect tannery-related wastes and solid waste and described their findings as follows: “*START personnel observed an area of exposed solid waste located north of the drainage ditch. Scattered throughout the area of exposed solid waste were glass bottles, leather scraps, and a black sludge/hardened tar-like material. Mr. Sullivan stated that he had observed a similar material during the investigation of the Murphy’s Waste Oil site. Underneath the exposed solid waste, adjacent to (north of) the drainage ditch, START personnel observed an approximately 12-inch layer of bluish-gray soil. This layer of*

bluish-gray soil was located at approximately 2-3 feet below the ground surface and for a distance of approximately 75 feet.”

On June 22, 2004, Weston collected a total of 15 soil samples in the Site area. Two soil samples were also collected from within the limits of the RTN 3-482 Disposal Site (to the southeast). Soils represented by several of the soil samples collected by Weston (contaminated soils/waste material located at the hillside toe of slope) were subsequently removed during the Removal Action/RAM activities implemented at the Site. The Weston soil sampling locations are depicted on Figures 2, 3A and 3C. Soil samples collected during the EPA investigation were analyzed for VOCs, semi-volatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs) and metals by EPA approved methods. The results of laboratory analysis of EPA soil samples are discussed in Section 8.

5.2 Removal Action/RAM Confirmatory Sampling (August 2006)

Following implementation of the Removal Action/RAM, TTR collected confirmatory soil samples from the excavation limits. TTR personnel collected discrete surficial soil samples (from approximately 0 to 6-inches) from the drainage swale bottom (A-1 through A-5) and along the exposed hillside slope (B-1 through B-5) at a horizontal interval of approximately 10 feet. Discrete and composite soil samples were also collected from the upper hillside area (C, D and E series samples) to preliminarily assess the vertical and horizontal extent of the contaminated soils/waste material upon the hillside. The locations of confirmatory soil samples collected at the excavation limits following the Removal Action/RAM are depicted on Figure 3C, and the locations of sampling upon hillside area are depicted on Figures 2 and 3B.

The soil samples were collected from hand excavated test pits at depths up to approximately 3.5 feet below the ground surface and transferred directly to laboratory-provided sample containers. The soil samples were collected to preliminarily assess the extent of contaminated soils/waste material along the hillside following completion of the required Removal Action/RAM excavation. Post Removal Action/RAM soil samples were submitted to Contest Analytical Laboratories of East Longmeadow, Massachusetts and analyzed for arsenic, total chromium, hexavalent chromium and total lead. The results of laboratory analysis of post-Removal Action/RAM soil samples are discussed in Section 8.

5.3 Spring/Summer 2008 Assessment Activities

On May 28, 2008, ENSR (on behalf of Beatrice Company) performed additional subsurface investigation activities including the advancement of shallow hand borings and hand-excavated test pits (B-100 series samples). TTR personnel were on-site to observe the sampling activities on behalf of Organix. ENSR personnel collected 18 soil samples from discrete depth intervals from 13 soil boring locations at the Site. The soil boring locations are depicted on Figures 2, 3A and 3C. The ENSR soil samples were analyzed for arsenic, total chromium, hexavalent chromium and total lead. The results of laboratory analysis for ENSR soil samples are discussed in Section 8.

On August 4, 2008, TTR personnel advanced a single hand boring to assess the vertical extent of contaminated soils/waste materials upon the hillside to the west of the Removal Action/RAM area. This hand boring was originally identified as B-201; however, to be consistent with the established sampling nomenclature, this boring location has been renamed B-114 and is depicted on Figures 2 and 3A. One composite soil sample was collected of the encountered materials during the advancement of B-114 from the ground surface to approximately 5.5 feet below the ground surface (bgs), which was consistent with the encountered thickness of contaminated soils/waste material. In addition, four soil samples were collected from discrete depth intervals between 5.5 and 7.5 feet bgs at 6-inch intervals. The composite soil sample was submitted for typical waste characterization parameters (TCLP VOCs, TCLP SVOCs, TCLP metals, TCLP pesticides, PCBs, corrosivity, reactivity, and target metals (arsenic, chromium and lead)). The sample collected from 5.5 to 6 feet bgs was analyzed for VOCs, SVOCs (due to an observed chemical odor in the sample) and target metals (arsenic, chromium and lead). The remaining three discrete at-depth samples were analyzed for target metals (arsenic, chromium and lead). The results of laboratory analysis for the B-114 soil samples are discussed in Section 8.

5.4 Winter 2008/2009 Activities

On December 15, 2008, TTR observed the excavation of test pits at the Site to assess the horizontal and vertical extent of contaminated soils/waste material upon the hillside to the west of the Removal Action/RAM area. Test pits were excavated to depths of up to approximately 9 feet bgs. During test pit excavations, TTR personnel observed and described the encountered subsurface materials/soils. The locations of test pit explorations are depicted on Figures 2 and 3A, and test pit logs are provided in Appendix E.

In general, apparent contaminated soils/waste material was observed from the ground surface to depths of up to approximately 7.5 feet bgs upon the hillside area. The vertical profile and stratification of the fill deposits suggested a series of dumping events that occurred at the top of the hill in this area of the Site. A layer of bluish-gray stained soil/tannery waste was observed at TP-203 from approximately 6 to 7.5 feet bgs. The observed materials at this depth interval were consistent with the observations by Weston in 2004 and by TTR in 2006 at the bottom of the exposed hillside that was adjacent to the drainage swale. This suggests that a similar stratified deposition profile exists upon the hillside within the limits of the contaminated soils/waste material area. Contaminated soils/waste material were observed to diminish in thickness to the north and south of TP-203. Some evidence of filling was observed south of the Removal Action/RAM area at TP-206 and TP-207; however, these fill soils contained primarily construction-related fill materials (bricks, asphalt, etc.). Additional description of the nature and extent of contamination is presented in Section 8.0.

Three composite soil samples were collected of observed contaminated soils/waste material located in the central portion of the hillside area to the west of the Removal Action/RAM area for waste characterization purposes. These soil samples were analyzed at Alpha Analytical Laboratory in Westborough, Massachusetts for waste characterization parameters, extractable petroleum hydrocarbons (EPH) with target polycyclic aromatic hydrocarbons (PAHs), and target metals (arsenic, cadmium, chromium, lead and mercury). In addition, seven soil samples were collected from discrete depth intervals to assess the horizontal and vertical limits of the

contaminated soils/waste materials upon the hillside. These soil samples were analyzed at Alpha Analytical Laboratory in Westborough, Massachusetts for EPH with target PAHs and target metals (arsenic, cadmium, chromium, lead and mercury). The results of laboratory analysis for soil samples collected during test pitting explorations are discussed in Section 8.

Beginning on December 18, 2008, TTR conducted a subsurface investigation that included the advancement of 27 soil borings at the Site (B-200 series borings). Soil borings were installed by mechanized hydraulic direct push drilling equipment (Geoprobe[®]) and by hand boring techniques. Three of the soil borings were completed as groundwater monitoring wells. During the advancement of soil borings, TTR personnel observed and described the encountered subsurface materials/soils. The locations of soil borings are depicted on Figures 2, 3A and 3C, and soil boring logs and monitoring well construction diagrams are provided in Appendix E.

In general, observations from the soil boring program that was conducted upon the hillside area in the area of contaminated soils/waste material were consistent with the test pit program and further delineated the horizontal and vertical extent of contaminated soils/waste material upon the hillside to the west of the Removal Action/RAM area.

Soil borings were also advanced beginning within the drainage swale proximate to the Removal Action/RAM area which proceeded downstream in the northerly direction toward the MBTA railroad culvert and low-lying areas on the northern portion of the Site. Varying thicknesses of surficial deposits of moist, brown to reddish brown organic silt with trace fine sand (organic silt deposits) were encountered in borings within the drainage swale and downstream area approaching the MBTA culvert. The organic silt deposits are believed to be primarily comprised of soils/materials that were eroded from upstream areas and deposited during wet weather events.

The encountered thickness of organic silt deposits within the drainage swale varied from negligible thicknesses where steeper slopes and resulting higher stormwater flow velocities and scouring minimized material deposition to thicknesses of up to 5 feet in the low-lying northern portion of the Site approaching the MBTA culvert. In most borings, native granular sand and gravel soils were observed to underlie the deposited organic silt. However, a thin deposit of apparent tannery waste materials (pink/orange and blue sludge cake) was encountered between the deposited organic silt and native sand and gravel soils in boring B-210R.

A total of forty composite and discrete soil samples were collected from boring locations to assess the nature and extent of contamination at the Site. Soil samples were submitted to Alpha Analytical Laboratory in Westborough, Massachusetts for target metals (arsenic, cadmium, chromium, lead and mercury) and/or EPH with target PAHs. A composite soil sample was also collected of organic silt deposits at B-210 for soil characterization purposes. The results of laboratory analysis for soil samples collected during soil boring explorations are discussed in Section 8.

On December 30, 2008, TTR surveyed the location and elevation of each of the groundwater monitoring wells installed at the Site. TTR also gauged each of the groundwater monitoring wells to evaluate the depth to groundwater and the apparent direction of groundwater flow. The groundwater elevation data gathered at the Site are discussed in Section 6.3.

On February 13, 2009, TTR collected groundwater samples from monitoring wells MW-1, MW-2, and MW-3 to assess whether groundwater was impacted by elevated concentrations of metals in soil at the Site. Low-flow groundwater samples were collected from MW-2 and MW-3 in accordance with EPA protocol. During purging of MW-2 and MW-3, water quality parameters including pH, temperature, conductivity, dissolved oxygen and oxidation/reduction potential were monitored. The wells were purged at low flow rates until the water quality parameters were observed to stabilize. During purging/sampling of MW-1, the well was observed to have a limited saturated thickness (approximately 2 feet) and exhibited limited groundwater recharge making low-flow sampling infeasible. Instead, MW-1 was purged with a low-flow sampling pump to remove approximately three well volumes of water (standing water in MW-1 was removed three consecutive times) prior to sampling. Prior to collection of groundwater samples the water was filtered in the field using a 0.45 µm filter to evaluate the concentration of dissolved metals in groundwater. In addition, an unfiltered sample of water (apparent stormwater) discharging from the upstream culvert outfall (which discharges apparent stormwater from upstream off-site properties) was collected. Water samples were submitted to Alpha Analytical Laboratory in Westborough, Massachusetts for target metals (arsenic, cadmium, chromium, lead and mercury). The results of laboratory analysis for groundwater samples and the upstream stormwater sample collected at the Site are discussed in Section 8.

6.0 Site Hydrogeological Characteristics

The following sections describe the known hydrogeological characteristics of the Site. Data was gathered from available sources as referenced and site-specific data obtained during investigation activities conducted at the Site as described above.

6.1 Topography and Surface Features

The general location of the Site is shown on a United States Geological Survey (USGS) topographic map (USGS Map of Boston North and Lexington, Massachusetts Quadrangle, 1985 and USGS Map of Reading and Wilmington, Massachusetts Quadrangle, 1987) on Figure 1. The Site is located at elevations ranging from approximately 50 feet to 80 feet according to the Massachusetts (Mainland) State Plane Coordinate System (NAD83). Based on a review of the topographic map and observations made during Site visits, the topography of the Site is uneven. The southwestern portion of the Site is located upon a hillside (hillside area) with steep downward slope to the east. A drainage swale is located proximate to the toe of the hillside area as depicted on Figure 2. The drainage swale receives stormwater flows from two outfalls directing water from adjacent properties and parking areas. One outfall enters at the west-central portion of the Organix property and discharges stormwater from the abutting property to the west. A second outfall enters just downstream (northeast) of the first outfall and discharges overflow stormwater from a stormwater detention basin on the Organix property. The stormwater drainage swale slopes downward to the north toward a low-lying and relatively flat area (downstream area) approaching the Organix-MBTA property limits.

The surface of most of the Site is undeveloped vegetated land including both fast-growing young and mature deciduous trees and shrubs. The southwestern portion of the Site includes a historic

paved pathway leading from the Organix parking lot and terminating approximately 225 feet northeast of the embankment edge of the parking lot. The surface of the hillside area in the vicinity of the encountered contaminated soils/waste material is littered with leather scraps, glass bottles, metal and other solid waste materials. Minimal amounts of solid waste materials were also observed in the downstream area of the Site.

6.2 Site Geology

In the southwestern hillside portion of the Site, surficial deposits of contaminated soils/waste material were observed. Downstream from the southwestern hillside area, the surficial deposits of organic silt contain organic matter with minor amounts of tannery-related waste materials (sludge materials, leather scraps) in some areas, likely transported from the upstream hillside source area during stormwater runoff events.

Fill materials were observed primarily at the southwestern hillside area where dumping and accumulation of tannery-related materials and solid waste appears to have occurred. Fill materials include interbedded lenses of poorly sorted sand and bluish-gray, whitish-gray and orange/red colored cake-like tannery waste, hair and leather scraps. Other fill materials were also observed in the hillside area including brick and asphalt debris (likely associated with past construction activities). The tannery-related contaminated soils/waste material was observed in thicknesses up to approximately 7.5 feet upon the hillside area. Downstream from the hillside area, organic silt deposits were observed to generally increase in thickness to the north within the low-lying area. The observed thickness of organic silt deposits was observed to approach 5 feet proximate to B-210/B-210R where several inches of tannery waste cake were also observed near the bottom of the organic silt deposits, just above the native sand/gravel layer. The thickness of the organic silt deposits within the downstream area of the Site ranges from a negligible thickness to approximately 5 feet.

The Site is likely underlain by approximately 30 to 70 feet of sand and gravel glacial deposits. The overburden soils consist of fine to medium sand with discontinuous deposits of sand and gravel. These permeable materials are underlain by highly compacted glacial till (lower permeability), which overlies fractured bedrock consisting of gabbrodiorite. Prior to use a tannery, the Site area was reportedly operated as a gravel pit which is believed to have resulted in the steeply-sloping topography on the northwestern portion of the Organix property.

6.3 Site Hydrogeology

The Site is located within the Aberjona River drainage basin and is located within a potential drinking water source area high yield aquifer. The groundwater is not currently a source of drinking water, and Woburn municipal wells G and H have been inactive since 1979. Observations of Site soils suggest that encountered groundwater is present at depths ranging from approximately 3 to 15 feet bgs within the sand and gravel glacial deposits underlying the surficial organic silt deposit at the Site. A groundwater potentiometric surface map (Figure 4), generated using groundwater gauging data collected from the groundwater monitoring wells at the Site on December 30, 2008, was used to estimate the groundwater flow direction at the Site. According to this data, the localized groundwater flow direction is generally northeasterly with a

gradient of approximately 0.01 to 0.02 feet/foot. Based on a review of the topographic map of the Site (Figure 1), the regional groundwater flow is anticipated to be northeasterly to easterly, toward the Aberjona River.

The saturated soils observed at the Site generally consisted of medium to coarse sand with discontinuous deposits of sand and gravel. These granular soils are expected to have a moderate to high permeability. According to the FirstSearch report, the Aberjona River drainage basin aquifer (MAAQ-1974) is reported to have an aquifer yield of 300 gallons per minute and a transmissivity value greater than 4,000. Consistent with these soil types, the typical stormwater flow that has been observed flowing from the upstream culvert into drainage swale rapidly infiltrates the granular soils, and surface flow within the drainage swale often ceases without 100 to 150 feet north of the upstream culvert discharge. Based on Site observations, surface flow within the drainage swale reaches the northerly portions of the Site and approaches the MBTA culvert during moderate to heavy rain events. During heavy rain events, flooding of the northerly portion of the Site with a floodwater depth exceeding 12 inches has been documented (December 12, 2008). It is believed that the primary reason for flooding within the downstream area during heavy rain events is the presence of substantial sedimentation at the inlet of the culvert beneath the MBTA tracks.

7.0 Environmental Fate and Transport Characteristics

The following sections provide an evaluation of the environmental fate and transport characteristics of the OHM identified within the soils at the Site including: mobility, stability, volatility, persistence and bioaccumulative potential. In addition, we have evaluated the existing and potential migration pathways of OHM at the Site including: air, soil, groundwater, surface water, sediment and the food chain.

7.1 Identification of Contaminants of Concern

Sampling and laboratory analysis was performed during the various subsurface investigation activities at the Site to assess OHM attributable to RTN 3-25734. In general, the OHM attributable to the Site is related to past tannery operations at the former Riley tannery. The contaminants of concern (COCs) are considered those OHM which were detected at concentrations in excess of the applicable MCP Reportable Concentrations (RSC-1) at the Site. The following is a brief description of the mobility, stability, volatility, persistence and bioaccumulative potential characteristics of each of the COCs identified at the Site:

Arsenic

Arsenic is a metallic element that is commonly present in its elemental form and in inorganic and organic compounds. Elemental arsenic has low molecular weight, is a solid at room temperature, and displays low volatility. Its solubility in water, affinity for organic carbon (e.g., in soils and sediments), and tendency to bioaccumulate in aquatic organisms depend on the particular compound present. Organic arsenic complexed with carbon and hydrogen is generally less toxic than inorganic arsenic. Considering the high organic content of the tannery-related waste

material and the downstream organic silt deposits it is likely that the arsenic is bound to organic carbon in the soil as organic arsenic compounds. These organic arsenic compounds are relatively stable, and TCLP analysis suggests that the arsenic and arsenic compounds found at the Site are stable and are unlikely to dissolve at high concentrations into the aqueous phase. Arsenic is considered to be a persistent COC at the Site.

Cadmium

Cadmium is a metallic element that may be present in its elemental form or in inorganic and organic compounds. Elemental cadmium has a medium molecular weight, is a solid at room temperature, and displays low volatility. Its solubility in water, affinity for organic carbon (e.g., in soils and sediments), and tendency to bioaccumulate in aquatic organisms depend on the particular compound present. Considering the high organic content of the tannery-related waste material and the downstream organic silt deposits it is likely that the cadmium is bound to organic carbon in the soil as organic arsenic compounds. These organic cadmium compounds are relatively stable, and TCLP analysis suggests that the cadmium and cadmium compounds found at the Site are stable and are unlikely to dissolve as high concentrations into the aqueous phase. Cadmium is considered to be a persistent COC at the Site.

Chromium

Chromium is a metallic element that may be present in its elemental form or in inorganic and organic compounds. Chromium is a low molecular weight element and is a solid at room temperature. Its solubility in water, affinity for organic carbon (e.g., in soils and sediments), and tendency to bioaccumulate in aquatic organisms depend strongly on the compound type. Most chromium is found in the environment in two valence forms: trivalent chromium(III) and hexavalent chromium(VI). Chromium(VI) is much more toxic than chromium(III), which is the form found in foods. The predominant environmental form is chromium(III). Laboratory analysis of Site soils indicates that the predominant (almost exclusive) form of chromium at the Site is chromium(III), and chromium(VI) has been detected only at very low concentrations in the samples where the highest concentrations of total chromium were detected. Based on TCLP analysis of soil samples collected at the Site, the chromium and chromium compounds found at the Site are stable and are unlikely to dissolve as high concentrations into the aqueous phase. Chromium is considered a persistent COC at the Site.

Lead

Lead is a naturally occurring metal that is widely distributed throughout the environment and is found in small quantities in food and drinking water. Elemental lead has a medium molecular weight, is a solid at room temperature, and displays low volatility. Its solubility in water, affinity for organic carbon (e.g., in soils and sediments), and ability to bioaccumulate in aquatic organisms depend on the compound type. Considering the high organic content of the tannery-related waste material and the downstream organic silt deposits it is likely that the lead is bound to organic carbon in the soil as organic lead compounds. These organic lead compounds are relatively stable, and TCLP analysis suggests that the lead and lead compounds found at the Site

are stable and are unlikely to dissolve as high concentrations into the aqueous phase. Lead is considered to be a persistent COC at the Site.

Mercury

Mercury is a naturally occurring element often found associated with other chemicals in compounds. Mercury may exist in soils as organic or inorganic mercury, and bacterial processes may convert mercury from one form to the other. Mercury complexed with carbon, known as organic mercury, bioaccumulates in the tissues of exposed organisms. Elemental mercury is a medium molecular weight element and is a liquid at room temperature. Its volatility, solubility in water, affinity for organic carbon (e.g., in soils and sediments), and tendency to bioaccumulate in aquatic organisms depend strongly on the compound. Based on the nature of the mercury in soil at the Site it is unlikely that a release of liquid mercury occurred and volatilization of mercury is unlikely to be a significant migration pathway. Based on TCLP analysis of soil samples collected at the Site the mercury and mercury compounds found at the Site are stable and are unlikely to dissolve as high concentrations into the aqueous phase. Mercury is considered a persistent COC at the Site.

PAHs

The PAHs are a family of semi-volatile organic compounds that include: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, flouranthene, flourene, indeno(1,2,3-cd)pyrene, 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, phenathrene, and pyrene. PAHs are widely distributed in the environment and commonly formed as by-products of incomplete combustion. They are found, although not exclusively, in coal, coal tar, asphalt, and cigarette smoke, and they also occur in charred food. PAHs strongly adsorb to particulates and other carbonaceous matter including soils and sediments. Considering the nature of the PAHs identified at the Site, volatilization of PAHs from the soil is unlikely to be a significant migration pathway. Based on TCLP analysis of soil samples collected at the Site, the PAH compounds found at the Site are stable and are unlikely to dissolve as high concentrations into the aqueous phase. PAHs are considered persistent COCs at the Site.

7.2 Fate and Transport Characteristics

The fate and transport characteristics of COCs identified at the Site that are relevant to existing or anticipated future conditions may include: mobility, stability, persistence and bioaccumulative potential. The COCs identified at the Site are attributable to dumping of solid to semi-solid tannery waste and tannery waste-soil mixtures (contaminated soils/waste material). TCLP analysis of the soil samples has been conducted for each of the identified COCs and based on the analytical results the potential for leaching of COCs from the soils into the aqueous phase is considered low. The nature of the COCs, the high organic content of the soils and the TCLP laboratory analysis results for soil samples collected at the Site suggest that dissolution of significant concentrations of COCs from the solid into the aqueous phase is unlikely under current conditions. Therefore, in general the COCs are believed to be immobile and stable within

the soil matrix. However, the potential for the soil matrix itself to migrate via erosion to downgradient areas may exist due to presence of a stormwater drainage swale and the topography of the Site.

The metals and PAHs detected in Site soils are expected to be persistent and are unlikely to degrade in the foreseeable future. In addition, metals have a tendency to bioaccumulate in the environment.

7.3 Migration Pathways

The potential for migration of impacted soils exists through the following pathways:

Air. The COCs identified at the Site have low potential to volatilize into the air phase. There is the potential for airborne dispersion as a potential migration pathway, should fugitive dust be generated during dry conditions.

Soil. The concentrations of metals within the upper 6 inches of soil suggest that there is potential for soil to migrate via erosion, and migration of soils by stormwater flow may act as a potential migration pathway as discussed below.

Surface Water/Sediment. The presence of the stormwater drainage swale at the Site provides a potential mechanism for the downstream migration of COC-impacted materials that are susceptible to erosion. However, remedial actions implemented under a Removal Action/RAM in August 2006 (described in Section 4.0) are believed to have substantially reduced the downstream migration potential from the hillside area. However, during periods of moderate to heavy precipitation events with scouring velocities, sediments within the drainage swale and downstream area may be prone to migration via erosion.

The distance to the nearest wetland on the easterly-abutting Murphy's property is approximately 100 feet northeast of the Site, and a drainage culvert beneath the MBTA railroad appears to provide a potential pathway for stormwater flows to migrate from the Site to the Murphy's property. COC metals including arsenic, chromium and lead have been detected on Murphy's property in surficial soil samples which may suggest impacts due to erosion and migration of soils from the Site via stormwater flows. However, other potential sources of these metals on the Murphy's property are believed to have existed, as discussed in Section 8.0. In addition, based on recent observations, the MBTA culvert is substantially sedimented; not believed capable of conveying significant stormwater flows; and, as a result, significant flooding occurs in the low-lying area of the Site during heavy stormwater events. Therefore, it is not believed that stormwater flows through the culvert have presented a significant migration pathway for COCs from the Site to the Murphy's property for many years. The distance to the nearest surface water body (Aberjona River) is approximately 850 feet east of the Site (beyond the Murphy's property).

Groundwater. The potential for groundwater to act as a potential migration pathway has not been shown based on recent investigation findings. As previously discussed, the nature of the COCs, the high organic content of the soils and the TCLP laboratory analysis results for soil samples collected at the Site suggest that dissolution of significant concentrations of COCs from

the solid into the aqueous phase is not occurring under current conditions. This conclusion is further supported by groundwater sampling activities that are documented herein.

8.0 Nature and Extent of Contamination

The following sections summarize our understanding of the source, nature and extent of COCs in soil and groundwater at the Site. Soil and groundwater analytical data associated with Site is summarized in Tables 1 and 2, respectively.

8.1 Nature and Source of Contamination

Based on assessment activities and research as part of the CSA, it appears that during the period that the Site area was operated as a tannery, dumping of solid/semi-solid tannery-related wastes, impacted soils, and solid wastes occurred upon a hillside on the southwestern portion of the Site (the “hillside area” on Figures 2 and 3A). As previously described, the nature of the dumped materials is described as interbedded lenses of poorly sorted sand and bluish-gray, whitish-gray and orange/red colored sludge-like material, hair, leather scraps and solid waste including glass bottles, metal scrap. A maximum thickness of approximately 7.5 feet of contaminated soils/waste material has been measured upon the hillside.

The presence of the contaminated soils/waste material upon the hillside adjacent to a stormwater drainage swale appears to have resulted in the relocation of contaminants due to erosion and downstream migration. This mechanism appears to have resulted in and/or contributed to deposition of elevated concentrations some COCs on the northern portion of the Site (the “downstream area” on Figures 2 and 3C). Following completion of the Removal Action/RAM in 2006, it is believed the migration of contaminated soils/waste material from the hillside area was substantially mitigated through slope stabilization activities.

The nature of the contamination within the drainage swale and on the northern downstream area of the Site is described as varying thicknesses of organic silt deposits containing elevated concentrations of COCs (impacted deposited soils). In general, the thickness of impacted deposited soils was observed to increase to the north, with the greatest thickness in the low-lying area. The observed thickness of impacted deposited soils appears to approach 5 feet proximate to B-210/B-210R. In addition, several inches of pink/orange and blue tannery sludge cake were observed near the bottom of the organic silt deposits in B-210R, just above the native sand/gravel layer.

In the low-lying area of the Site that is easterly to southeasterly of the primary flow path of the drainage swale, a reduced thickness of impacted deposited soils was identified. It is believed that the primary mechanism for the occurrence of impacted deposited soils in this area was periodic heavy rain events that resulted in flooding conditions in this downstream area. However, impacts proximate to B-105 and B-220 may be due to possible waste management practices while the tannery was in operation.

The thickness of impacted deposit soils in the downstream area ranges from negligible to several feet with a typical pattern of increased concentrations of COCs with depth. The impacted deposit

soils are easily distinguishable from the underlying native sand and gravel soils, and the concentrations of COCs were observed to decrease rapidly within the underlying native soils.

8.2 Extent of Contamination

As previously described, contaminated soils/waste material is believed to have historically migrated downstream via stormwater flow within the drainage swale from the hillside area to the low-lying downstream area of the Site. The approximately horizontal extent of contamination is depicted on Figure 2 as the “Approximate Limits of the Disposal Site”. As documented in Section 5.0, subsurface investigation activities were conducted to assess the vertical and horizontal extent of COC impacts in soil including contaminated soils/waste material upon the hillside area as well as downstream migration of impacted deposit soils in the downstream area. In addition, groundwater samples were collected from the newly-installed monitoring wells (MW-1, MW-2, MW-3) for laboratory analysis of applicable COCs to assess possible impacts to groundwater. Sampling locations are shown on Figures 2, 3A, 3B and 3C; soil and groundwater analytical data are summarized in Tables 1 and 2, respectively; and, laboratory certificates of analysis are provided in Appendix F.

As described in Section 3.2.1., similar COCs have also been detected in soils and sediments upon the Murphy’s property which is located east of the Site and MBTA property. TTR reviewed the following reports:

- *Removal Program Preliminary Assessment/Site Investigation Report for the Wells G&H Site – Southwest Properties, Woburn Massachusetts, August 11, 2005, United States Environmental Protection Agency, Region I.*
- *Supplemental Remedial Investigation Report, Southwest Properties, Wells G&H Superfund Site, Woburn, Massachusetts, August 2003. The RETEC Group.*

Based on these reports, COCs were detected within surficial soils and sediments on the Murphy’s property including an area proximate to the outlet of a stormwater drainage culvert that is located on the western portion of this property. It is possible that the presence of COCs on the Murphy’s property could be due, in part, to historic erosion of contaminated soils/waste material from the hillside area that could have migrated down the drainage swale, through the MBTA culvert, and onto the Murphy’s property during heavy stormwater flow events. However, based on recent observations of the MBTA culvert, it appears to be substantially sedimented; not believed capable of conveying significant stormwater flows; and, as a result, significant flooding occurs in the low-lying area of the Site during heavy stormwater events. Therefore, it is not believed that stormwater flows through the culvert have presented a significant migration pathway for COCs from the Site to the Murphy’s property for many years.

In addition to possible historic migration of COCs from the Site via surficial stormwater flows, it is believed that the presence of COCs at the Murphy’s property has likely resulted from a combination of other past activities and uses of the area by the former Riley tannery and others. Descriptions of some possible sources of COCs on the Murphy’s property are presented in the above-referenced reports.

The Murphy's property is part of the Wells G&H Superfund Site that is referred to as Southwest Properties of the Central Area (Operable Unit II). Based on a Release Log Form Attachment (BWSC 1102B) that was reviewed in the RTN 3-2198 file for Murphy's Waste Oil (252 Salem Street), "The remedial investigation of the property by Wells G&H Responsible Parties is underway; therefore, the site is adequately-regulated under CERCLA, pending the result of the investigation." Therefore, MassDEP may consider the presence of COCs on the Murphy's property to be "adequately-regulated". In addition, based on a review of available resources, multiple sources of COCs have likely contributed to presence of COCs on the Murphy's property. Therefore, we have limited the horizontal extent of the RTN 3-25734 Disposal Site to the hillside area, the northern low-lying portion of the Organix property, and a small area of MBTA property located proximate to the culvert, as depicted on Figure 2.

8.2.1 Soil Analytical Data

The following sections describe the results of laboratory analysis of soil samples collected at the Site.

Hillside Area. A total of 50 soil samples were collected from the hillside area to assess the horizontal and vertical extent of soil contamination. The distribution of sampling locations that were used to assess the extent of soil contamination in the hillside area is depicted on Figure 3A and 3B.

The hillside area includes an apparent source of COCs impacts at the Site. Target metals (arsenic, cadmium, chromium, lead and mercury) were detected relatively consistently while PAHs and petroleum hydrocarbons were detected less frequently. Arsenic was detected in each of the 46 samples analyzed at concentrations ranging from 1.6 mg/kg to 195 mg/kg with 17 samples (37%) exceeding the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 20 mg/kg. Cadmium was detected in 3 of 14 samples analyzed at concentrations ranging from 0.78 mg/kg to 3 mg/kg with no samples detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 30 mg/kg. Chromium (Chromium III) was detected in each of the 50 samples analyzed at concentrations ranging from 25 mg/kg to 39,500 mg/kg with 12 samples (24%) detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 5,000 mg/kg. Lead was detected in each of the 46 samples analyzed at concentrations ranging from 3.7 mg/kg to 18,700 mg/kg with 18 samples (39%) detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 300 mg/kg. Mercury was detected in 11 of the 14 samples analyzed at concentrations ranging from 0.21 mg/kg to 69 mg/kg with two samples detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 30 mg/kg. Benzo(a)pyrene was detected in 7 of the 15 samples analyzed at concentrations ranging from 0.6 mg/kg to 3.5 mg/kg with no samples detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 30 mg/kg.

At the hillside area, the vertical extent of contaminated soils/waste material (maximum depth of approximately 7.5 feet bgs) was observed at the central area of the hillside proximate to B-224, TP-203, B-102, B-114 and B-112. The vertical extent of contaminated soils/waste material in this area (just above native deposits) generally corresponded with the highest detected concentrations of COCs in soil including samples where chromium and lead were detected above

the MCP Upper Concentration Limits (UCLs) of 10,000 mg/kg and 3,000 mg/kg respectively. The thickness of contaminated soils/waste material was observed to decrease to approximately 4 to 5 feet bgs at TP-202 and TP-204. Surficial COC-impacted soils (less than approximately 1 foot) were observed in the fringe areas around the contaminated soils/waste material area that is depicted on Figure 3A.

Downstream Area. A total of 52 soil samples were collected from the downstream area to assess the horizontal and vertical extent of soil contamination. The distribution of sampling locations that were used to assess the extent of soil contamination in the downstream area is depicted on Figure 3C.

Three COC metals (arsenic, chromium and lead) were detected relatively consistently while PAHs and petroleum hydrocarbons were detected less frequently. Arsenic was detected in 36 of the 46 samples analyzed at concentrations ranging from 1.1 mg/kg to 94 mg/kg with 2 samples (6%) exceeding the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 20 mg/kg. Chromium (as Chromium III) was detected in each of the 52 samples analyzed at concentrations ranging from 8.8 mg/kg to 39,000 mg/kg with 16 samples (31%) detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 5,000 mg/kg. Lead was detected in 45 of the 46 samples analyzed at concentrations ranging from 4.4 mg/kg to 872 mg/kg with 8 samples (18%) detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 300 mg/kg. Benzo(a)pyrene was detected in 19 of the 35 samples analyzed at concentrations ranging from 0.61 mg/kg to 4.9 mg/kg with no samples detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 30 mg/kg. Benzo(b)fluoranthene was detected in 21 of the 35 samples analyzed at concentrations ranging from 0.58 mg/kg to 8.6 mg/kg with no samples detected above the applicable MCP Method 1 S-3/GW-1 or S-3/GW-3 standard of 40 mg/kg.

At the downstream area, the vertical extent of impacted deposited soils was generally limited to surface and near surface soils (approximately 1 to 3 feet bgs); however, the maximum vertical extent (approximately 5 feet bgs) was observed at the northerly limit of the Organix property (B-209, B-210, B-210R, SD-01 and SD-02). Another smaller area where the vertical extent of impacted deposited soil approached 4 feet was identified proximate to B-220 and B-105, which may have been either the result of material deposition following heavy rain events or possibly the result of past waste management practices in this area.

8.2.2 Groundwater Analytical Data

A total of three groundwater samples were collected at the Site to assess potential impacts to groundwater from elevated concentrations of metals in Site soil. Low-flow groundwater samples were collected from monitoring wells MW-1, MW-2 and MW-3 on February 13, 2009 and analyzed for dissolved metals by EPA 6000/7000 series methods. The groundwater samples were not analyzed for EPH or PAHs since these COCs did not exceed the applicable MCP Method 1 standards in the downstream area. Also, one unfiltered sample of water discharging from the upstream culvert outfall (apparent stormwater) was collected and analyzed for total metals.

Laboratory analysis of groundwater did not detect metals at concentrations above the applicable MCP Reportable Concentrations for groundwater category RCGW-1 or the MCP Method 1 GW-

1 or GW-3 standards. Chromium was detected in monitoring well MW-1 at a concentration of 10 µg/L which is below the MCP Method 1 GW-1 standard of 100 µg/L. The results of laboratory analysis of Site groundwater indicate that the presence of COCs-impacted soils at the Site has not adversely impacted groundwater.

8.3 Background Characterization

The laboratory analytical data for Site soils was compared with background data published by the MassDEP in the Technical Update entitled “*Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*”, 2002. Since Site soils have not been identified as containing significant amounts of coal and/or wood ash, the soil data are compared to MassDEP published background levels in natural soil. In general, soils within the limits of the RTN 3-25734 Disposal Site contain concentrations of arsenic, cadmium, chromium, lead, mercury and PAHs above published background levels. Analytical results for soils at the periphery and beyond the limits of the Site (i.e. TP-201, B-222, and B-106) did not identify concentrations of COCs above published background levels.

9.0 Exposure Assessment

This exposure assessment includes the identification and characterization of potential human and environmental receptors that could be impacted by OHM at or migrating from the Site.

9.1 Potential Human Receptors

The potential human receptors who may be present at the Site or in the surrounding environment, and who may be exposed to OHM from the Site include Organix facility employees, hypothetical trespassers and construction/utility workers. Activities and uses at the Site are currently not restricted; therefore, future activities and uses at the Site could potentially include lifelong adult and child residents and future adult Site employees.

Resident Worker Population. The Organix facility is located proximate to the Site, and approximately 28 adult employees work at the Organix facility on a typical work day. The Site is located on an undeveloped portion of the Organix property and is not currently inhabited or routinely accessed by Organix personnel. However, it is possible that adult Site employees may visit the Site on a low frequency for low intensity uses (walking). A municipal sewer easement traverses a portion of the Site. It is possible that adult construction/utility workers may visit the Site for moderate to high intensity uses for short durations (utility excavations, maintenance and repair).

Residential Population. The residential population within one-half mile of the Site was obtained from the Environmental FirstSearch Site Information Report (FirstSearch Report) prepared by FirstSearch Technology Corporation and presented in the Phase I Report. According to the FirstSearch Report, the population within one-half mile of the Site is approximately 3,670 people. According to the EPA 9,806 people reside within one mile of the Site.

Potential exposure pathway to humans include: ingestion, inhalation, or dermal contact with the soils. Detected concentrations of metals and PAHs in soils collected from the upper 6" of soils could pose a threat to humans by direct contact with the soil and ingestion and inhalation of fugitive dust in the soil. However, the Site is not regularly occupied, and access to the Site is limited by a chain-link fence on the western, northern and eastern sides, excessive vegetative growth and undulating topography. The EPA previously documented evidence of a worn footpath and discarded beverage containers suggested unauthorized access to the Site (trespassers). However, shortly after this condition was documented, the access points through the chain-link fence were repaired, and "no trespassing" signs were installed several years ago. Evidence of trespassers has not been observed recently. In addition, the Site is not currently used for agricultural purposes, and an exposure pathway to humans via the food web is unlikely.

Routes by which metals and PAHs identified at the Site could potentially be transported to human receptors include ingestion, inhalation, or dermal contact with the soils. However, due to the distances to occupied residential dwellings, the limited access to the Site area and the absence of pre-schools, daycare facilities, and schools in the vicinity of the Site, a Critical Exposure Pathway has not been identified.

9.2 Potential Environmental Receptors

There are no sensitive environmental habitat receptors located at the Site including Areas of Critical Environmental Concern, surface water, or wetlands. Potential environmental receptors (small animals and plants) are located at the Site including the hillside area and downstream area. Since the hillside proximate to the drainage swale has been temporarily stabilized as part of the Removal Action/RAM, the primary mechanism of contaminant transport has been mitigated, and the potential for significant migration of OHM-impacted soils is considered low.

There are sensitive environmental receptors located downstream from the Site including wetlands on the Murphy's property followed by a surface water body (the Aberjona River). It is possible that historic erosion of contaminated soils/waste material from the hillside area could have migrated down the drainage swale, through the MBTA culvert, and onto downstream properties. However, based on recent observations of the MBTA culvert, it appears to be substantially sedimented; not believed capable of conveying significant stormwater flows; and, as a result, significant flooding occurs in the low-lying area of the Site during heavy stormwater events. The downstream Murphy's property is part of the Wells G&H Superfund Site that is referred to as Southwest Properties of the Central Area (Operable Unit II). As such, this property is currently being managed under the jurisdiction of the EPA and may be considered by MassDEP to be "adequately-regulated". In addition, based on a review of available resources, multiple sources of COCs have likely contributed to presence of COCs on the Murphy's property. Therefore, we have limited the horizontal extent of the RTN 3-25734 Disposal Site to the hillside area, the northern low-lying portion of the Organix property, and a small area of MBTA property located proximate to the culvert, as depicted on Figure 2. Nevertheless, due to the presence of sensitive environmental receptors downstream of the Site, the Phase III (Section 12.0) has evaluated remedial alternatives that can effectively mitigate the potential downstream migration of COCs from Site.

10.0 Risk Characterization

Pursuant to 310 CMR 40.0835(4)(h), TTR has performed a human health and environmental risk characterization in accordance with 310 CMR 40.0900. This risk characterization was performed to evaluate whether concentrations of OHM at the Site are at or below background levels; to identify and evaluate Site conditions which may pose an Imminent Hazard; and to establish whether a level of “No Significant Risk” (NSR) exists or has been achieved at the Site. The scope and level of effort of this risk characterization was commensurate with the limited complexity of the Site and the response actions performed to date. We believe that the risk characterization is of sufficient scope and has been adequately documented to demonstrate that the Response Action Performance Standards (RAPS) have been met in accordance with 310 CMR 40.0191.

10.1 Method Selection

Considering the nature of the risk being assessed, the response actions that have been performed at the Site and the nature of the Site, we have evaluated approaches to characterizing risk of harm to applicable receptors at the Site. MCP Method 1 standards have been promulgated for each of the OHM detected in soil at the Site above the applicable MCP RCS-1 standards. In addition, the presence of OHM is limited to soil and groundwater and the foreseeable future human exposure to OHM would occur predominantly through contact with soil. Therefore, Method 1 is used to characterize the potential human health risks at the Site. A Method 1 risk characterization allows for a relatively comprehensive, rapid evaluation of risk by comparing calculated exposure point concentrations (EPCs) to the MCP Method 1 standards promulgated by MassDEP. The MCP Method 1 standards incorporate health protective assumptions for both contaminant transport and exposure, resulting in an overall conservative analysis of risk. Since Environmental Receptors were identified at the Site, this Method 1 risk characterization was combined with a Method 3 Stage I Environmental Screening to characterize the risk of harm to health, public welfare and the environment. A Method 1/Method 3 risk characterization was selected due to the fact that although Method 1 standards have been published by the MassDEP for all analytes detected in Site soil and groundwater, some analytes (metals) which bioaccumulate were detected in surficial soils at the Site. Therefore, Method 3 Stage I Screening Assessment is used to evaluate potential risk to the environment. The Stage I Screening Assessment identifies whether there is potential for exposure and assesses whether “apparent significant harm” has occurred to environmental receptors at a site.

10.2 Identification of Exposure Points

In accordance with 310 CMR 40.0924, potential exposure points are identified and described below in consideration of relevant Site and receptor information. The following exposure points were identified for the Site:

- **Soil Exposure Point A- Hillside Area:** A volume of surficial and near surficial soil currently accessible to hypothetical trespassers, current employees, other transient persons and potential environmental receptors;

- **Soil Exposure Point B- Downstream Area:** A volume of surficial and near surficial soil currently accessible to hypothetical trespassers, current employees, potential construction/utility workers, other transient persons and potential environmental receptors;
- **Groundwater Exposure Points:** Groundwater at each monitoring point that is considered a potential future drinking water supply.

10.3 Identification of Soil and Groundwater Categories

Categories of groundwater and soil have been established by MassDEP for use in risk characterization evaluations. In accordance with 310 CMR 40.0930 we have identified the soil and groundwater categories applicable to the Site.

10.3.1 Identification of Applicable Groundwater Categories

Groundwater at the Site is categorized as GW-3 since all groundwater is considered a potential source of discharge to surface water. Groundwater is also characterized as GW-1 since the Site is located within a current IWPA. However, the IWPA is for two former water supply wells (Wells G & H) that have been inactive since 1979. Groundwater at the Site is not characterized as GW-2 since there are no existing or planned occupied buildings located within 30 feet of the limits of the Site.

10.3.2 Identification of Applicable Soil Categories

Soils at the Site may be classified as any of the three soil categories presented in the MCP (S-1, S-2 or S-3). In general, the S-1 soil category represents the greatest exposure potential, followed by S-2 and finally S-3, which represents the least exposure potential (low frequency, low intensity and low accessibility).

Soil Exposure Point A soils may be accessible to hypothetical trespassers, current employees and other transient persons who may be present at a low frequency for low intensity uses (i.e. walking). Soils within Exposure Point A are categorized S-3/GW-1 and S-3/GW-3.

Soil Exposure Point B soils may be accessible to hypothetical trespassers, current employees and other transient persons who may be present at a low frequency for low intensity uses (soils categorized S-3/GW-1 and S-3/GW-3). Also Soil Exposure Point B may be accessible to potential future construction/utility workers who may be present at low frequency for high intensity uses (i.e. excavation). Soils within Exposure Point B (within the sewer utility easement only) for the hypothetical construction/utility scenario are categorized S-2/GW-1 and S-2/GW-3.

10.4 Identification of Exposure Point Concentrations

In accordance with 310 CMR 40.0926, an EPC was identified for COCs in each medium at each exposure point at the Site. The following summarizes the justification for the identified EPC at each exposure point identified at the Site.

Soil Exposure Point A. The EPC at Soil Exposure Point A was estimated as the arithmetic average concentrations for COCs as reported for samples collected within the limits of the Site upon the hillside area. The data and summary statistics for Soil Exposure Point A are provided in Appendix G. Although the data set does not meet the strict data criteria established in 310 CMR 40.0926(b)(1), the use of the arithmetic average concentration of COCs is considered suitable for this screening risk characterization since it is likely that remedial response actions will be necessary to mitigate risk at the Site. The use of the arithmetic average concentration of COCs at Soil Exposure Point A is unlikely to substantially underestimate the true mean concentration of OHM at this exposure point since most of the samples collected from the hillside area were collected from materials expected to contain the highest concentrations of COCs impacts at the Site. Therefore, it is not unexpected that COCs were detected in greater than 25% of the data points at concentrations above the applicable MCP Method 1 standard.

Soil Exposure Point B. The EPC at Soil Exposure Point B was estimated as the arithmetic average concentration for COCs as reported for samples collected within the limits of the Site within the downstream area. The data and summary statistics for Soil Exposure Point B are provided in Appendix G. Although the data set does not meet the strict data criteria established in 310 CMR 40.0926(b)(1), the use of the arithmetic average concentration of COCs is considered suitable for this screening risk characterization since it is likely that remedial response actions will be necessary to mitigate risk at the Site. The use of the arithmetic average concentration of COCs at Soil Exposure Point B is unlikely to substantially underestimate the true mean concentration of OHM at this exposure point since most of the samples collected from the downgradient area were collected from materials expected to contain the highest concentrations of COCs impacts at the Site. Therefore, it is not unexpected that COCs were detected in greater than 25% of the data points at concentrations above the applicable MCP Method 1 standard.

Groundwater Exposure Points. The EPCs for groundwater at the Site were estimated as the maximum detected concentration of each applicable COC at each monitoring well. The use of the maximum detected concentration of each COC is considered adequate to evaluate risk at the Site since limited temporal sampling data are available to evaluate variability of COCs concentrations in groundwater. The data for the groundwater exposure points are summarized in Table 2.

10.5 Risk Characterization

Under the MCP a condition of NSR exists if each of the EPCs is equal to or less than their applicable MCP Method 1 standards, and there are no risks to public welfare, public safety or the environment. This section presents a comparison of the risk conditions with the conditions identified at the Site.

10.5.1 Risks to Human Health

Under the MCP a condition of NSR to human health exists if EPCs are equal to or less than their applicable MCP Method 1 standards for each COC.

Soil Exposure Point A. The calculated EPCs for arsenic and lead at Soil Exposure Point A exceed the applicable MCP Method 1 S-3/GW-1 and S-3/GW-3 standards indicating that a condition of “Significant Risk” of harm to human health for current activities and uses exists at this location. In addition, the calculated EPCs for arsenic, chromium and lead at Soil Exposure Point A exceed the applicable MCP Method 1 S-1/GW-1 and S-1/GW-3 standards indicating that a condition of “Significant Risk” of harm to human health would exist for the current and future activities and uses at the Site.

Soil Exposure Point B. The calculated EPC for chromium (chromium III) exceeds the MCP Method 1 S-1, S-2 and S-3 standards indicating that a condition of “Significant Risk” of harm to human health exists for the current and future activities and uses at the Site.

Groundwater Exposure Points. The estimated EPCs for metals at each monitoring well are below the applicable Method 1 GW-1 and GW-3 standards indicating that a condition of NSR of harm to human health exists for the current and future activities and uses at the Site.

10.5.2 Risks to the Environment

Potential risks to the environment were evaluated using the Method 3 Stage I Screening Assessment. As noted above, the Stage I Screening Assessment identifies whether there is potential for exposure and to assess whether “apparent significant harm” has occurred to environmental receptors at a disposal site. The objective of the Screening Assessment is to eliminate from further evaluation those situations that are unlikely to result in ecological harm. For sites for which either potential for exposure has not been identified or at which “apparent significant harm” is not likely to occur, a condition of “no significant risk of harm to the environment” exists. However, for sites at which the potential for exposure exists and “apparent significant harm” may occur, a quantitative assessment for that site must be performed.

Stage I Screening Assessment

The Site setting was reviewed to determine if potential environmental receptors, exposure pathways, and exposure points were situated on and near the Site. Potential receptors were defined as those receptors situated within 500 feet of the Site and exposed to oil and/or hazardous materials in soil and groundwater. The Massachusetts Natural Heritage Atlas (11th Edition – valid from July 1, 2003) and the Massachusetts Surface Water Quality Standards, Basin Classification and Maps (314 CMR 4.06) were also reviewed to determine the presence of rare wetlands wildlife habitat and the MassDEP-assigned surface water classification in the area of the Site.

The nearest identified surface water feature to the Site is Aberjona River, which is located approximately 850 feet east of the Site. According to the MassGIS MassDEP Wetlands map, a wetland area is located approximately 100 feet east-northeast of the northeastern limit of Site on

the eastern side of the MBTA railroad. Based on a review of the topographic map of the Site (Figure 1), the regional groundwater flow is anticipated to be northeasterly to easterly, toward the Aberjona River. A groundwater potentiometric surface map (Figure 4), generated using groundwater gauging data collected from the groundwater monitoring wells at the Site on December 30, 2008, indicates that the localized groundwater flow direction is generally northeasterly. Discharge of groundwater contaminants to the river was considered to be a potentially complete exposure pathway for aquatic organisms. The Massachusetts Surface Water Quality Standards, classify the Aberjona River as Class B surface water. Class B surface waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary recreation. Potential environmental receptors identified within 500 feet of the Site include the wetland areas located approximately 100 feet east-northeast of the Site and transient wildlife. Potential exposure points identified include contact with soil and groundwater.

According to the Massachusetts Natural Heritage Atlas (11th Edition), no Priority Habitat for Rare Species, Estimated Habitat of Rare Wildlife or Certified Vernal Pools are located at the Site and its immediate vicinity. In addition, the MassGIS map of the Site area shows no Protected Open Space, Areas of Critical Environmental Concern (ACEC), Natural Heritage and Endangered Species Program (NHESP) Wetlands Habitat, Sole Source Aquifers, Approved Zone 2 or Surface Water Supply Zone A within 500 feet of the Site. The MassGIS map shows that the Site is located within an IWPA, a Potentially Productive Aquifer and a Non-Potential Drinking Water Source Area. As noted above, no active public groundwater drinking water sources were identified within a one-mile radius of the Site. Woburn municipal wells G and H are located approximately 3,000 feet northeast of the Site but have reportedly been inactive since 1979. These wells were deactivated in 1979 as a result of elevated concentrations of VOCs. Use of the Site by terrestrial wildlife is expected to be very minimal due to the developed, urban nature of the surrounding area. Although the Site is undeveloped, it is less than two acres in size and thus considered not sufficient to support a balanced terrestrial community in accordance with the Guidance. Additionally, exposure of state-listed threatened or endangered species or other species of special concern to OHM identified at the Site and OHM transport from surface soils at the Site to an ACEC is not considered possible. Thus, in accordance with the Guidance, no further assessment is necessary. However, we conservatively evaluate potential exposures of environmental receptors to OHM in Site soils.

The potential for adverse effects on environmental receptors that may be present within 500 feet of the Site, that are potentially exposed to OHM in soil and groundwater, was evaluated using an effects-based screening approach. Ecological EPCs were estimated as the average of concentrations detected in the analysis of soil and groundwater samples. The EPCs for soil and groundwater were compared to MCP UCLs as shown in Table G-4. The Groundwater EPC was diluted by a factor of 10, corresponding to the percentage used by MassDEP to calculate GW-3 groundwater standards from EPA surface water Ambient Water Quality Criteria (AWQC). The adjusted data was compared to the AWQC acute and chronic values for freshwater environments in Table G-5. No exceedences of UCLs or the AWQC were identified. Therefore, we find a condition of NSR of harm to the environment.

Therefore, it is determined that a condition of “No Significant Risk” of harm to the environment exists for the Site conditions evaluated. Based on the Stage I Screening Assessment, a Stage II Environmental Risk Characterization is not required for this Site.

10.5.3 Risks to Public Welfare

Threats to public welfare include conditions that may result in the existence of nuisance conditions, loss of property value, or the unilateral restriction of the use of other people's property and other societal costs due to the degradation of public and private resources, both physical and intangible. For a threat to exist, these conditions must preclude the full use of the resources at the Site under existing conditions or conditions about to occur. No nuisance conditions, loss of property value, or restriction of the use of other people's property were identified in connection with the Site. Also, the EPCs identified at the Site do not exceed the MCP UCLs. Therefore, no risks to public welfare were identified at the Site.

10.5.4 Risks to Public Safety

Threats to public safety include physical conditions and chemical agents that may cause bodily harm or injury (e.g. burns or fractures) as opposed to illness. There are no open pits, lagoons, drums, dangerous structures, or other apparent threats to public safety and no danger of fire or explosion from the conditions evaluated at the Site. Although contaminated soils/waste material (hillside area) and impacted deposited soils (downstream area) were identified in near surface soils at the Site, laboratory analysis indicates that these materials are not a characteristic hazardous waste and do not present a risk to public safety at this time. Therefore, no risk to public safety was observed at the Site.

10.6 Risk Characterization Conclusions

Based on the results of this combined Method 1 and Method 3 risk characterization we find that a condition of "Significant Risk" of harm to human health exists at the Site for the current and anticipated future conditions evaluated. A condition of "No Significant Risk" of harm to the environment exists at the Site. Also, there is a potential threat that COCs from the Site may migrate downstream if a migration pathway exists.

11.0 Conclusions and Phase II Completion Statement

TTR has prepared this Phase II Report to summarize the completion of CSA activities completed in accordance with the MCP. This Phase II Report was prepared under the supervision of the LSP-of-Record for RTN 3-25734 and conforms to the applicable requirements of the MCP under 310 CMR 40.0830. It is the opinion of the LSP-of-Record that the findings of this Phase II Report have not disclosed new or additional information which may affect the Tier Classification or permit category for the Site, and rescoring under the Numerical Ranking System is not necessary. The data gathered during Phase II CSA activities were used to evaluate risks posed by the Site via a combined MCP Method 1 and Method 3 risk characterization. The results of the risk characterization indicate that a condition of NSR cannot be achieved for the Site at this time. Further Comprehensive Response Actions (CRAs) are necessary at the Site to achieve a Response Action Outcome (RAO). A Phase III evaluation under the MCP is necessary to select a remedial action alternative for the Site. A copy of the MassDEP Transmittal Form for submittal

of this Phase II Report is provided in Appendix B. The public involvement activities were conducted in accordance with 310 CMR 40.0839, and copies are provided in Appendix H.

12.0 Phase III – Evaluation of Remedial Alternatives

This section presents the results of the Phase III – Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives (Phase III) for the Site pursuant to 310 CMR 40.0850. The conclusions of the Phase II indicate that implementation of a CRA is necessary to achieve a Permanent or Temporary Solution under the MCP. The following sections present the selection of the Remedial Action Plan (RAP) to mitigate the conditions which present the increased risk to human health.

12.1 Goals of the Remedial Action Plan

The conclusions of the Phase II CSA identified a condition of “Significant Risk” of harm to human health for current and hypothetical future activities and uses at the Site due to the presence of COCs-impacted soil at the Site. In addition, a potential risk of migration of COCs-impacted soils at concentrations in excess of the MCP RCS-1 standards was identified due to the presence of impacted deposited soils along the drainage swale which may be subject to erosion from stormwater if a downstream migration pathway exists. Therefore, the following goals have been established for the CRA that will be considered by this Phase III to mitigate these potential risks at the Site, as feasible:

- Mitigate the potential risks resulting from unrestricted access to COCs-impacted soils at the Site by potential human;
- Mitigate the potential risk of migration of COCs-impacted soils to downstream/downgradient areas; and,
- Reduce to the extent feasible, the concentrations of COCs in soil to concentrations that achieve or approach background.

12.2 Identification and Initial Screening of Likely Remedial Alternatives

An initial screening of remedial action alternatives was conducted to identify those alternatives that are likely to be feasible given the COC characteristics and Site conditions identified during Phase II CSA investigations. In accordance with the MCP, an initial screening was conducted to identify those remedial alternatives that are reasonably likely to be feasible and achieve a level of NSR at the Site. This initial screening is based on an evaluation of available remedial technologies in consideration of: the types of COCs present at the Site; the nature of the impacted media; and other Site characteristics identified at the Site. Remedial action alternatives are reasonably likely to be feasible if the technologies to be employed are reasonably likely to achieve a Permanent or Temporary Solution, and individuals with the expertise needed to effectively implement the available solution would be available. The following presents a list of

general Site characteristics identified during the Phase II CSA that are relevant to a discussion of the remedial action alternatives for the Site:

- The COCs for the Site are related to historic waste management activities associated with former tannery operations at the Site which has resulted in impacts to soil;
- A condition of “Significant Risk” of harm to human health is believed to exist at the Site due to the potential for direct contact and incidental ingestion of contaminated soils from the ground surface to depths of up to approximately 7.5 feet bgs;
- The primary source of COCs-impacts at the Site is believed to be a volume of contaminated soils/impacted material upon a hillside at the southwesterly portion of the Site. This area is topographically upgradient from other areas of the Site with steep slopes down to an adjacent drainage swale;
- The deposition of COCs-impacted soils along the drainage swale presents a potential threat of off-site migration of COCs at concentrations in excess of the MCP reportable concentrations should a pathway for downgradient off-site flows exist (i.e. unrestricted culvert across the MBTA property);
- A total volume of approximately 1,650 cubic yards of COCs-impacted soil has been identified at the Site which may pose a risk to human health;
- Approximately 500 cubic yards of COCs-impacted soils with concentrations of chromium and/or lead at concentrations approaching or exceeding the MCP UCLs were identified upon the hillside area. These COCs-impacted soils are considered source area materials;
- Approximately 350 cubic yards of COCs-impacted soils with concentrations of chromium (chromium III) approaching or exceeding the MCP UCL were identified at two locations within the downstream area. These COCs-impacted soils may present a threat of migration to downstream or downgradient areas;
- Approximately 800 cubic yards of COCs-impacted soils in the hillside and downstream areas were identified at concentrations exceeding one or more MCP Method 1 S-1 standards for COCs but below the MCP UCLs including approximately 300 cubic yards of impacted deposited soils within the drainage swale that could potentially be subject to downstream migration;
- TCLP analysis of Site soils did not identify COCs at concentrations above the regulatory levels for toxicity characteristic as defined in 310 CMR 30.125 indicating that the COCs-impacted soils are not a characteristic hazardous waste;
- The fate and transport characteristics of the COCs considered to be most relevant to the Site include mobility, stability, persistence and bioaccumulative potential;
- The low solubility of COCs identified at the Site indicates that a remedial technology based on mass transfer of COCs to a aqueous media will not be sufficient to reduce

elevated concentrations of COCs in soil without substantially enhancing the water solubility of the COCs;

- A portion of the downstream area of the Site is located within the boundaries of the buffer zone for wetlands and a proposed 100-year flood plain (pending final determination by FEMA and adoption by Woburn City Council) that are regulated by the Woburn Conservation Commission. The presence of these features may impact the areas where on-site consolidation and/or engineered barriers remedial options may be implemented;
- Access to the MBTA property approaching the culvert will need to be coordinated for the purpose of removing impacted deposited soils located proximate to the culvert near the Site limit;
- Impacted deposited soils in the downstream area appear to be located at elevations above the typical groundwater elevation during dryer months when excavation work is to be conducted, and it is believed and assumed (for cost estimating purposes) that the work may be conducted without dewatering;
- Access to the downstream area is restricted by the width of the historic paved access road; however, it is believed and assumed (for cost estimating purposes) that the access road can be improved to provide access for a tri-axle dump truck to access to downstream area;
- A City of Woburn municipal sewer line and associated easement transect the Site area which could impact the remedial plan and/or be damaged during remedial implementation. It is believed and assumed (for cost estimating purposes) that the sewer line and associated easement will not significantly impact the proposed remedial approach; and,
- There are no permanent building structures at the Site. However, an abandoned industrial production well and pump house building remain at the Site. The abandoned production well may need to be decommissioned and the pump house building demolished to optimize implementation of one or more remedial alternatives that include on-site consolidation of COCs-impacted soils.

The results of initial screening and the remedial action alternatives selected for detailed evaluation are summarized in Table 3. The initial screening identified three remedial action alternatives for detailed evaluation. The selected remedial alternatives are evaluated below based on their benefits, risks, limitations and ability to meet the requirements of the MCP.

12.3 Detailed Evaluation of Remedial Alternatives

The following sections present our detailed evaluation of remedial action alternatives selected during the initial screening. This detailed evaluation was conducted to provide the basis for selection of the RAP for the Site. The selected remedial action alternatives are evaluated herein using the following criteria: the comparative effectiveness; the comparative short-term and long-

term reliability; the comparative difficulty of implementation; the comparative costs; the comparative risks; the comparative benefits; the comparative timeliness; and the affects on non-pecuniary interests.

12.3.1 Excavation and Off-Site Disposal

The excavation and off-site disposal alternative would involve the mobilization of construction equipment to the Site to excavate COCs-impacted soils from the hillside and downstream areas at the Site in order to achieve condition of NSR without the use of an Activity and Use Limitation (AUL). Excavated soils would then be transported off-site to an approved disposal/treatment facility, and excavated areas would be backfilled, followed by Site restoration.

Effectiveness: Implementation of this remedial alternative would be very effective at reducing the extent and concentrations of COCs at the Site to achieve a Permanent Solution under the MCP. Removal of COCs-impacted soils that mitigate risks to human health and mitigate the threat of off-site migration could be accomplished via this alternative. This alternative is considered to be highly effective for the known Site conditions.

Reliability: This technology is considered to be reliable at reducing the extent and concentrations of COCs by bulk removal of the mass of COCs-impacted soils present at the Site. The excavation alternative could be reliable at reducing concentrations of COCs to levels that achieve and/or approach background levels, or at a minimum to concentrations that mitigate risks at the Site. In addition, COCs could be transported off-site for disposal at a RCRA Subtitle D landfill which would permanently isolate the COCs, reducing future long-term liability to the Site owner from the COCs. This alternative is considered to be very reliable in the short and long term.

Implementability: Implementation of this remedial action alternative at the Site would require mobilization of an environmental construction contractor to the Site with equipment capable of traversing the undulating terrain and working upon sloped hillsides. Truck accessibility to the hillside and downstream areas is complicated by steep slopes and constrictions in the access roadway which could have a significant impact on project costs (we have assumed that suitable access for a tri-axle truck to the downstream can be reasonably achieved).

Considering that environmental construction contractors are available and persons with expertise implementing this technology are available, this alternative is considered to be viable for implementation at the Site. Implementation of this alternative requires the identification of an approved off-site disposal facility to receive the COCs-impacted soils. A comparison of the acceptance criteria in MassDEP policy COMM-97-001 indicates that the soils would not be acceptable for disposal/reuse at an in-state lined or unlined landfill. Therefore, excavated soils would likely be disposed at an out-of-state facility (approved RCRA Subtitle D landfill). Implementation of this alternative would require preparation, planning, engineering and permitting of similar magnitude to that necessary for the other remedial alternatives.

Cost: The cost for implementation of this remedial alternative will depend on the extent of the reduction of COCs selected for implementation (e.g. cleanup to background versus cleanup to NSR). Implementation of this alternative to mitigate risks to human health would involve excavation and off-site disposal of up to approximately 1,650 cubic yards of COCs-impacted

soils located upon the hillside area and within the downstream area. Excavation and off-site disposal of COCs-impacted soils to reduce the concentrations of COCs to achieve or approach background is estimated to require the excavation and off-site removal of approximately 3,000 cubic yards of soil. The estimated costs for each of these scenarios are summarized below:

- **Excavation and Off-Site Disposal to Mitigate Risk.** The costs of remediation under this alternative can be minimized by limiting the excavation and off-site disposal of COCs-impacted soils to those soils presenting an increased risk of harm to human health. Under this implementation scenario the estimated cost is approximately \$510,000 which includes: \$20,000 for engineering plans and permitting; \$440,000 for contractor expenses; \$35,000 for construction-phase engineering oversight and reporting; and \$25,000 for confirmatory sampling and preparation of a Class A-2 RAO.
- **Excavation and Off-Site Disposal to Achieve or Approach Background.** Full scale implementation of this alternative with excavation and off-site disposal of COCs and achievement of background is estimated to cost approximately \$800,000 which includes: \$20,000 for engineering plans and permitting; \$730,000 for contractor expenses; \$35,000 for construction-phase engineering oversight and reporting; and \$15,000 for confirmatory sampling and preparation of a Class A-1 RAO.

Risks: This remedial alternative would involve some short term risks associated with large scale excavation work including: worker safety, excavation/hillside slope shoring measures, required truck accessibility; potential risks to subsurface utilities, and potential risks to the public. Additional short-term risks may include: acute exposure of construction workers to COCs-impacted soils above the MCP Method 1 standards and the potential for generation of fugitive dust containing COCs during excavation and soil handling activities. Long term risks may include potentially liability associated with off-site disposal of contaminated media.

Benefits: This alternative has the potential to provide both short and long term benefits in terms of contaminant reduction and permanent isolation of COCs off-site and away from sensitive human and environmental receptors. In addition, this alternative could provide the benefit of reducing COCs concentrations at the Site to levels that achieve or approach background. Finally, this alternative would eliminate the need for permanent deed restrictions (AUL) at the Site.

Timeliness: The timeline for implementation of this alternative would be short (several months). However, excavation and off-site disposal should not be attempted during periods of wet weather due to potential high groundwater issues and surface water runoff that flows through the drainage swale and downstream area at the Site during wet weather events.

Effect on Non-Pecuniary Interests: Implementation of this alternative will require the coordination with on-going activities at the Organix facility. This alternative would require temporary disruption of the use of the parking area at the northerly limit of the Organix parking lot. Considering the distance from the Site to sensitive environmental or residential receptors, it is unlikely that this scenario would have a significant negative impact on nearby receptors or their non-pecuniary interests as compared to other alternatives.

12.3.2 Excavation and On-Site Consolidation / Engineered Barrier

The excavation and on-site consolidation / engineered barrier alternative would involve the mobilization of construction equipment to the Site to excavate, as needed, the COCs-impacted soils from the hillside and downstream areas at the Site followed by on-site consolidation of COC- impacted soils at on-site consolidation area(s). It is believed that an engineered barrier may be required to isolate and contain soils with concentrations of COCs above UCLs upon the hillside area. The remainder of soils with residual concentrations of COCs above MCP Method 1 standards but below the MCP UCLs may be consolidated on-site without an engineered barrier. Following completion of the consolidation effort, the excavated areas would be backfilled, and Site restoration activities would be completed at disturbed areas. This alternative would require the implementation of an AUL to restrict certain activities and uses within the consolidation/engineered barrier area(s).

Effectiveness: Implementation of this technology would be effective at isolating soils containing elevated concentrations of COCs at the Site to achieve a Permanent Solution under the MCP with the implementation of an AUL. The excavation and on-site consolidation / engineered barrier alternative could reduce the presence of COCs over much of the Site to concentrations that mitigate risks to human health and mitigate the threat of off-site migration. However, COCs would be present within the consolidation/engineered barrier area(s) that could pose a potential risk of harm to human health to current and future receptors and would not be permanently removed from the Site. Consolidation of these residual COCs-impacted soils on-site beyond the drainage swale area would be effective at mitigating the potential threat of off-site migration of COCs to downgradient areas. This alternative is considered to be effective at mitigating risk to current and hypothetical future activities and uses at the Site.

Reliability: This technology is considered to be reliable at isolating concentrations of COCs from potential direct contact exposures to humans and environmental receptors. The construction of an engineered barrier would improve the reliability of this alternative to mitigate potential future direct contact exposures at the Site. This alternative would not be reliable at reducing concentrations of COCs to levels that achieve and/or approach background levels at the Site. In addition, since the COCs that would be permanently isolated on-site would be present at concentrations which may present a risk of harm to human health for current receptors (trespassers, utility workers, employees etc.), this alternative may have some potential for future long-term liability to the Site owner from the COCs and would require maintenance of the engineered barrier. With appropriate maintenance, this alternative is considered to be reliable in the short and long term.

Implementability: Implementation of this remedial action alternative at the Site would require mobilization of an environmental construction contractor to the Site with equipment capable of traversing the undulating terrain and working upon sloped hillsides. In addition, implementation would require the establishment of one or more consolidation areas and construction of an engineered barrier at the Site. Considering that environmental construction contractors are available, materials to construct the engineered barrier are readily available and persons with expertise implementing this technology are available, this alternative is considered to be viable for implementation at the Site. However, implementation of this alternative would require extensive preparation, planning, and permitting since a consolidation area may need to be located

within areas of jurisdiction of the local Conservation Commission (i.e. buffer zone and possible FEMA flood plain). The engineering and permitting components for this alternative would increase the difficulty to implement. Given the topography of the Site and the presence of a portion of the Site within the wetlands buffer zone and/or flood plain, locating and constructing an engineered barrier with a capacity of 1,650 cubic yards within the limits of the Site may not be feasible.

Cost: The cost for implementation of this remedial alternative will involve on-site consolidation of approximately 1,650 cubic yards of COC-impacted soils located upon the hillside area and within the downstream area; the construction of one or engineered barriers, and Site restoration. Implementation of this alternative is estimated to cost approximately \$480,000 which includes: \$20,000 for preparation and permitting; \$50,000 for construction-phase engineering design, oversight and reporting; \$370,000 for contractor expenses; and \$40,000 for confirmatory sampling, implementing an AUL, and preparation of a Class A-4 RAO.

Risks: This remedial alternative would involve some short term risks associated with large scale excavation work including: worker safety, excavation/hillside slope shoring measures, required truck accessibility; potential risks to subsurface utilities. Since this work would be conducted on-site, this alternative would have negligible risks to the public. Additional short-term risks may include: acute exposure of construction workers to COCs-impacted soils above the MCP Method 1 standards and the potential for generation of fugitive dust containing COCs during excavation and soil handling activities. Since this alternative would involve the on-site management of contaminated soils/impacted material, this alternative would involve long term risks related to maintaining the consolidation area and engineered barrier to ensure that the COCs impacted soils are permanently isolated on-site. Finally, this alternative would require a deed restriction at the Site via implementation of an AUL to restrict activities and uses at the location of the engineered barrier.

Benefits: This alternative has the potential to provide both short and long term benefits in terms of containment and permanent isolation of COCs on-site and away for sensitive human and environmental receptors. However, this alternative likely presents greater risks since the soils would be isolated on-site where maintenance and upkeep of the consolidation area(s) would be the responsibility of the property owner. This alternative would not provide the benefit of reducing COCs concentrations at the Site to levels that achieve or approach background.

Timeliness: The timeline for implementation of this alternative would be short (several months). However, excavation and on-site consolidation should not be attempted during periods of wet weather due to potential high groundwater issues and surface water runoff that flows through the drainage swale and downstream area at the Site during wet weather events.

Effect on Non-Pecuniary Interests: Implementation of this alternative would require some disruption of parking area at the northerly limit of the Organix parking lot. Considering the distance from the Site to sensitive environmental or residential receptors, it is unlikely that this scenario would have a significant negative affect on nearby receptors or their non-pecuniary interests compared to other alternatives.

12.3.3 Combined Excavation and Off-Site Disposal / On-Site Consolidation

This alternative combines the soil excavation and off-site disposal and the soil excavation and on-site consolidation alternatives. This alternative would involve the excavation and off-site disposal of COCs-impacted soils that contribute most significantly to risk at the Site (COC concentrations approaching or exceeded UCLs) while limiting the volume of soils that would require off-site disposal via on-site consolidation of some of the impacted soils. This alternative would involve: the mobilization of construction equipment to the Site to excavate the COCs impacted soils from the hillside and downstream areas at the Site; transportation of some or all of the soils with COCs concentrations approaching or above MCP UCLs (500 to 850 cubic yards) to an off-site disposal facility; on-site consolidation of COCs-impacted soils with concentrations above the MCP Method 1 S-1 standards but below the MCP UCLs (as applicable based on site constraints); covering the consolidation area with cover material, as needed; backfilling of excavated areas; followed by Site restoration of disturbed areas. This alternative would require the implementation of an AUL to restrict certain activities and uses within the consolidation area.

Effectiveness: Implementation of this technology would be very effective at removal of UCL exceedance soils to reduce residual COCs in Site soils to concentrations below the MCP Method 1 S-2 and S-3 standards such that risks to current and hypothetical receptors at the Site (i.e. trespassers, construction/utility workers, Organix employees) are minimized. This alternative would be effective at achieving a Permanent Solution under the MCP with the implementation of an AUL on a limited portion of the Site. The residual COCs that would not be permanently removed from the Site would remain within the consolidation area where soils with minimal concentrations of COCs would not pose a potential risk of harm to current or hypothetical receptors. Consolidation of these residual COCs-impacted soils on-site beyond the drainage swale area would be effective at mitigating the potential threat of off-site migration of COCs to downgradient areas. This alternative is considered to be highly effective at mitigating risk to current and hypothetical future activities and uses at the Site.

Reliability: This alternative would be very reliable at reducing concentrations of COCs on-site to levels that do not pose a risk to current or anticipated receptors (i.e. trespassers, construction/utility workers, Organix employees). This alternative is also considered to be reliable at isolating residual COCs from potential direct contact exposures to humans via placement of cover material. This alternative would not be reliable at reducing concentrations of COCs to levels that achieve and/or approach background levels at the Site. Since the Site is not expected to be redeveloped for residential use in the future this alternative would be more reliable in terms of future long-term liability to the Site owner since the COCs impacted soils that contribute the most risk to current receptors are removed from the Site. This alternative is considered to be very reliable in the short and long term.

Implementability: Implementation of this remedial action alternative at the Site would require mobilization of an environmental construction contractor to the Site with equipment capable of traversing the undulating terrain and working upon slopped hillsides. In addition, implementation would require the establishment of a consolidation area at the Site. Considering that environmental construction contractors are available, receiving facilities to dispose of COCs impacted soils exist, materials to construct the consolidation area are readily available and persons with expertise implementing this technology are available, this alternative is considered

to be viable for implementation at the Site. Implementation of this alternative would require preparation, planning, and permitting of greater magnitude than that of the excavation and off-site disposal only alternative. The engineering component for this alternative is also more difficult than the excavation and off-site disposal alternative since a consolidation area would have to be located on-site. Considering the Site conditions, the construction of a consolidation area with a capacity of 800 to 1,150 cubic yards within the limits of the Site may not be feasible.

Cost: The cost for implementation of this remedial alternative will involve costs associated with excavation and off-site disposal of approximately 500 to 850 cubic yards of soils with concentrations of COCs above MCP UCLs, and on-site consolidation of approximately 800 to 1,150 cubic yards of metals and PAHs impacted soils located upon the hillside area and within the downstream area, the construction of a consolidation area for residual COCs impacted soils and Site restoration. The cost of implementation of this alternative is estimated to range from approximately \$400,000 to \$510,000 based on the volume of soil that may be consolidated on-Site which includes: \$20,000 for preparation and permitting; \$310,000 to \$420,000 for contractor expenses; \$40,000 for construction-phase engineering oversight and reporting; and \$30,000 for confirmatory sampling and preparation of a Class A-3 RAO. However, if a suitable consolidation that can accommodate the required volume of soils cannot be located on-site due to permitting or other constraints, the volume of soils that must be disposed off-site (and associated cost of this alternative) will increase.

Risks: This remedial alternative would involve some short term risks associated with large scale excavation work including: worker safety, excavation/hillside slope shoring measures, required truck accessibility; and potential risks to subsurface utilities. This alternative would have limited risks to the public due to off-site transport of COCs-impacted soils. Additional short-term risks may include: acute exposure of construction workers to COCs impacted soils above the MCP Method 1 standards and the potential for generation of fugitive dust containing COCs during excavation and soil handling activities. Since this alternative would involve the on-site management of residual COCs impacted soils, this alternative would involve some long term risks related to maintaining the consolidation area to ensure that the COCs impacted soils are permanently isolated on-site. This alternative would also require a deed restriction at the Site via implementation of an AUL to restrict activities and uses at the site of the engineered barrier.

Benefits: This alternative has the potential to provide both short and long term benefits in terms of contaminant reduction and permanent isolation of COCs on-site and away for sensitive human and environmental receptors. This alternative would not provide the benefit of reducing COCs concentrations at the Site to levels that achieve or approach background.

Timeliness: The timeline for implementation of this alternative would be short (several months). However, excavation and off-site disposal should not be attempted during periods of wet weather due to potential high groundwater issues and surface water runoff that flows through the drainage swale and downstream area at the Site during wet weather events.

Effect on Non-Pecuniary Interests: Implementation of this alternative will require the coordination with on-going commercial activities at the Organix facility. This alternative would require temporary disruption of the use of the parking area at the northerly limit of the Organix parking lot. Considering the distance from the Site to sensitive environmental or residential

receptors it is unlikely that this scenario would have a significant negative affect on nearby receptors or their non-pecuniary interests compared to other alternatives.

12.4 Remedial Action Alternative Selection

Based on the evaluation of the detailed evaluation criteria of 310 CMR 40.0858, we have compared the three remedial alternatives for the Site identified during initial screening. Each of the remedial alternatives evaluated are technologically feasible. Each of the identified remedial alternatives has the potential to achieve a Permanent Solution. However, each of the remedial alternatives presents varying costs, risks and limitations that were considered as part of remedial action alternative selection. Based on a comparison of costs, risks and limitations of the above remedial alternatives, the selected alternative is a combination of excavation and off-site disposal of soils with concentrations of COCs approaching or exceeding MCP UCLs and on-site and consolidation of other COCs-impacts soils, as feasible, in the downstream area of the Site. It is believed that the selected remedial action will also mitigate the downstream threat of migration of COCs-impacted soils to off-Site areas. However, the selection of this alternative is subject to receiving permit approval from the Woburn Conservation Commission to construct a sufficiently-sized consolidation area in the downstream area. Additional details of the selected remedial alternative are presented in the RAP below. It is believed that the selected remedial action will result in the Permanent Solution and also presents the lowest risk and cost for implementation.

12.5 Remedial Action Plan

The results of this Phase III Evaluation have identified a feasible remedial alternative involving a combination of soil excavation and off-site disposal and on-site consolidation with the implementation of an AUL on a portion of the Site. The goal of this RAP is to remove COCs-impacted soils that contribute most significantly to risk at the Site (soils with concentrations of COCs approaching or above MCP UCLs) and consolidating the remaining COCs-impacted soils within an on-site consolidation area with a resulting EPC equal to or less than the MCP Method 1 S-3 standards. It is also believed that the selected RAP will mitigate potential downstream off-Site migration of COCs-impacted soil.

Selection of a combination of soil excavation and off-site disposal and on-site consolidation assumed that a significant volume of soils containing concentrations of COC that exceed MCP Method 1 S-1 standards may remain on-site. If only a small portion of the remaining COC-impacted soils can be accommodated within an on-site consolidation area (as determined during the permitting process and/or Phase IV Remedy Implementation Plan (Phase IV RIP) preparation), and an excavation and off-site disposal option to achieve NSR may be more applicable for the Site.

Prior to construction, a Phase IV RIP will be prepared and submitted to MassDEP detailing the planned remedial action. Also, permitting with applicable regulatory authorities (Woburn Conservation Commission) will be completed. The results of the Phase IV and permitting process may substantially impact the volume of soils that may remain at the Site. Following

permitting and submission of the Phase IV RIP, construction activities may proceed. Following is a summary of the planned RAP for the Site:

- Site clearing will be conducted to remove trees and brush in planned excavation areas and to improve accessibility;
- A temporary gravel roadway will be constructed from the Organix parking lot, along the westerly fence line, and up the hillside;
- A work zone would be established at the top of the hillside to facilitate excavation and off-site disposal of the source area material in the central portion of the hillside;
- A second temporary access roadway would be constructed following the historic paved pathway from the Organix parking lot to the downstream area. This roadway would be widened and stabilized as necessary to permit adequate clearance for heavy construction equipment (estimated width of up to approximately 15 feet);
- A second work zone would be established at the downstream area to facilitate excavation and off-site disposal or consolidation of soils;
- A third work zone would be established at the northerly portion of the Organix parking lot to facilitate staging of construction equipment and temporary stockpiling of soils prior to off-site disposal;
- Soils that have been identified with concentration of COCs approaching or exceeding UCLs from the hillside area with lesser volumes from the downstream area will be excavated and transported to an approved disposal facility (out-of-state RCRA Subtitle D landfill). It is estimated that a minimum of between 500 to 850 cubic yards of soils approaching or exceeding UCLs for COCs will be excavated and transported for off-site disposal from the Site.
- Following removal and off-site disposal of 500 to 850 cubic yards of COCs-impacted soils approaching or exceeding UCLs, an estimated volume of 800 to 1,150 cubic yards of COCs-impacted soils will remain on-site. It is anticipated that soils to remain on-site will be consolidated into an appropriate area and covered using non-COCs impacted soil (or equivalent cover method) to establish a barrier to mitigate potential exposure to hypothetical future receptors (residents) and environmental receptors. However, it is possible that a significant portion of the soils that may remain on-site based on risk-based criteria will need to be transported off-site due to permitting and/or engineering constraints.
- Excavations will be backfilled with non-COC impacted soils from the Site or imported granular fill soils.
- A defined channel would be constructed within the drainage swale from the hillside area to the MBTA culvert and rip-rap would be placed to stabilize the bottom to direct stormwater flows off-site and mitigate flooding of the downstream area.

- The limits of the consolidation area will be surveyed and an AUL would be recorded and a Class A-3 RAO would be submitted to MassDEP representing a Permanent Solution unless permitting and engineering constraints dictated removal of a sufficient volume of COCs-impacted soils to achieved Permanent Solution and a Class A-2 RAO (no consolidation area).

12.5.1 Feasibility of Achieving or Approaching Background

Since the selected remedial alternative is capable of achieving a Permanent Solution, an evaluation under 310 CMR 40.0860 of the feasibility of reducing the concentrations of OHM at the Site to levels that achieve or approach background was evaluated. The feasibility of achieving or approaching background was evaluated in accordance with the MCP and MassDEP Guidance Document “*Conducting Feasibility Evaluations under the MCP*” (Policy # WSC-04-160) dated July 16, 2004. The selected remedial alternative is not capable of achieving or approaching background since COCs will remain within the consolidation area on-site. The alternative that could achieve or approach background was found to be infeasible for implementation at the Site. In accordance with Section 9.3.3.4 of Policy # WSC-04-160, a remedial alternative shall be considered not feasible to achieve or approach background conditions if the additional costs to achieve or approach background are greater than 20 percent of the cost to remediate to NSR. The costs to remediate to NSR are estimated at approximately \$400,000 to \$510,000 and the costs to remediate to achieve or approach background (via excavation and off-site disposal) are estimated at approximately \$800,000. The additional costs to remediate beyond NSR to approach or achieve background (\$350,000 to \$400,000) are greater than 20 percent of the cost to remediate to NSR; therefore, the additional costs are substantial and disproportionate to the incremental benefit to human health and the environment.

12.5.2 RAP Implementation Schedule

The anticipated schedule for the implementation of the RAP is summarized below:

- Before March 2010 – planning and permitting, complete engineering design and submit Phase IV RIP to MassDEP
- Summer 2009 or 2010 – construction activities
 - Week 1 – contractor mobilization, site preparation and clearing
 - Week 2 and Week 3 – soil excavation, off-site disposal and on-site consolidation
 - Week 3 and Week 4 – complete off-site disposal and complete consolidation area
 - Week 4 – confirmatory sampling
 - Week 5 – Site restoration and AUL survey
- Fall 2009 or 2010 (or before March 2012) – Prepare and submit AUL and Class A-3 RAO

13.0 Phase III Completion Statement

This report presents the findings of a Phase III conducted pursuant to the MCP. The selected RAP is a combination of soil excavation and off-site disposal and on-site consolidation with the implementation of an AUL on a portion of the Site. It is the opinion of the LSP-of-Record for the Site that the selected remedial action alternative is likely to achieve a Permanent Solution under the MCP. This Phase III Evaluation conforms with the applicable Phase III requirements and performance standards under the MCP. A Phase IV RIP will be submitted to detail the implementation of the selected RAP at the Site on or before March 2010. The public involvement activities specified under 310 CMR 40.0863 were completed and copies of public involvement submittals are provided in Appendix H.

Soil Analytical Data (mg/kg)										
Location:	jjr-050811-02									
Sample Name:	jjr-050811-02									
Sample Depth:	SD-01	SD-01	SD-01	SD-01	SD-02	SD-02	SD-02	SD-03	SD-03	SD-03
	SD-01A	SD-01B	SD-01C	SD-02A	SD-02B	SD-02C	SD-03A	SD-03B	SD-03C	SD-03C
	0-1 ft.	1-2 ft.	2-3 ft.	0-1 ft.	1-1.5 ft.	2-3 ft.	0-1 ft.	1-2 ft.	2-3 ft.	2-3 ft.
Laboratory:	USEPA New England Lab									
Laboratory I.D.:	AA52248	D15541	D15542	D15543	D15544	D15545	D15546	D15547	D15548	D15549
Sample Date:	11-Aug-05	22-Jun-04								
Consultant:	EPA									
Method(s):										
Acenaphthene	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Acenaphthylene	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Anthracene	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Benzo(a)anthracene	1.600	1.600	1.600	1.300	3.100	0.870	1.000	1.900	<0.520	<0.850
Benzo(a)pyrene	2.400	1.800	1.800	1.400	4.900	1.200	1.500	2.400	0.650	<0.850
Benzo(b)fluoranthene	4.300	2.900	2.900	2.200	8.600	2.100	2.400	4.100	0.930	<0.850
Benzo(g,h,i)perylene	1.600	1.100	1.100	0.940	4.500	0.820	1.100	1.700	<0.520	<0.850
Benzo(k)fluoranthene	2.700	1.900	1.900	1.300	4.800	1.800	2.200	2.400	0.920	<0.850
Chrysene	3.000	2.200	2.200	1.700	6.300	1.500	1.900	3.100	0.780	<0.850
Dibenzo(a,h)anthracene	<0.860	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	0.690	<0.520	<0.850
Fluoranthene	3.800	3.400	3.400	2.100	7.700	2.000	2.400	4.100	1.000	<0.850
Fluorene	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Indeno(1,2,3-cd)pyrene	1.500	0.990	0.990	0.870	3.800	0.740	0.910	1.500	<0.520	<0.850
Methylnaphthalene, 2-	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Naphthalene	<0.830	<0.830	<0.830	<0.630	<1.800	<0.480	<0.860	<0.550	<0.520	<0.850
Phenanthrene	1.900	1.800	1.800	1.800	4.100	0.920	1.000	2.000	0.550	<0.850
Pyrene	4.700	3.000	3.000	<0.630	8.200	2.200	2.600	4.400	0.990	<0.850
Arsenic, Total	<19	<1.4	<1.3	<1.5	<1.1	1.1	1.3	<1.4	<1.2	<2.7
Cadmium, Total	<2.9	1.8	1.5	1.7	1.1	0.84	<0.45	1.4	<0.56	<0.83
Chromium, Total	2,100	3,850	9,060	19,300	2,708	3,990	17,900	5,240	8,390	1,600
Chromium, VI										
Lead, Total	260	317	395	468	220	204	91.6	235	134	146
Mercury, Total		4.1	4.4	5.3	3.8	6.6	1.2	1.3	1.2	4.3
C ₉ -C ₁₈ Aliphatics										
C ₁₉ -C ₃₆ Aliphatics										
C ₁₁ -C ₂₂ Aromatics										

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Soil Analytical Data (mg/kg)										
Location:	SD-04	SD-04	SD-04	SD-07	A-1	A-2	A-3	A-4	A-5	B-1
Sample Name:	SD-04A	SD-04B	SD-04C	SD-07	A-1	A-2	A-3	A-4	A-5	B-1
Sample Depth:	0-1 ft.	1-2 ft.	2-3 ft.	0-0.5 ft.	0-6 in.	0-6 in.	0-6 in.	0-6 in.	0-6 in.	0-6 in.
Laboratory:	USEPA New England Lab	Contest	Contest	Contest	Contest	Contest	Contest			
Laboratory I.D.:	D15550	D15551	D15552		06B25983	06B25984	06B25985	06B25986	06B25987	06B25988
Sample Date:	22-Jun-04	22-Jun-04	22-Jun-04	22-Jun-04	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06
Consultant:	EPA	EPA	EPA	EPA	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):					6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene	<0.650	<0.410	<0.400	<0.530						
Acenaphthylene	<0.650	<0.410	<0.400	<0.530						
Anthracene	<0.650	<0.410	<0.400	<0.530						
Benzo(a)anthracene	1.000	<0.410	<0.400	1.200						
Benzo(a)pyrene	1.300	<0.410	<0.400	1.300						
Benzo(b)fluoranthene	2.800	0.580	<0.400	1.500						
Benzo(g,h,i)perylene	0.950	<0.410	<0.400	4.000						
Benzo(k)fluoranthene	1.500	<0.410	<0.400	1.100						
Chrysene	1.700	<0.410	<0.400	1.500						
Dibenzo(a,h)anthracene	<0.650	<0.410	<0.400	<0.530						
Fluoranthene	2.300	0.420	<0.400	1.200						
Fluorene	<0.650	<0.410	<0.400	<0.530						
Indeno(1,2,3-cd)pyrene	0.810	<0.410	<0.400	1.200						
Methylnaphthalene, 2-	<0.650	<0.410	<0.400	<0.530						
Naphthalene	<0.650	<0.410	<0.400	<0.530						
Phenanthrene	0.840	<0.410	<0.400	1.500						
Pyrene	2.400	0.450	<0.400	3.500						
Arsenic, Total	<1.7	<0.98	2.3	127	10.9	9.36	15.9	19.1	9.33	195
Cadmium, Total	1.7	<0.49	<0.50	3.0						
Chromium, Total	16,700	2,670	799	1,490	456	783	1,159	1,320	859	5,547
Chromium, VI					10.1	13.8	71.3	9.65	6.11	2.77
Lead, Total	508	93.4	42.2	3,770	80.8	99.5	217	730	87.9	527
Mercury, Total	2.4	0.59	0.70	3.7						
C ₉ -C ₁₈ Aliphatics										
C ₁₉ -C ₃₆ Aliphatics										
C ₁₁ -C ₂₂ Aromatics										

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)										
Location:	B-2	B-3	B-4	B-5	C-0	C-4	D-3	D-5	D-5	
Sample Name:	B-2	B-3	B-4	B-5	C-0	C-4	D-3	D-5 0-3	D5 3.1	
Sample Depth:	0-6 in.	0-6 in.	0-6 in.	0-6 in.	0-12 in.	0-36 in.	0-12 in.	0-36 in.	36-40 in.	
Laboratory:	Contest	Contest	Contest	Contest	Contest	Contest	Contest	Contest	Contest	Contest
Laboratory I.D.:	06B25989	06B25990	06B25991	06B25992	06B25999	06B26994	06B26995	06B26996	06B26997	
Sample Date:	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	14-Aug-06	
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	
Method(s):	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene										
Acenaphthylene										
Anthracene										
Benzo(a)anthracene										
Benzo(a)pyrene										
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Chrysene										
Dibenzo(a,h)anthracene										
Fluoranthene										
Fluorene										
Indeno(1,2,3-cd)pyrene										
Methylnaphthalene, 2-										
Naphthalene										
Phenanthrene										
Pyrene										
Arsenic, Total	82.2	98.2	99.2	10.9	57.0	110	8.73	20.4	18.3	
Cadmium, Total										
Chromium, Total	5,880	2,290	5,560	242	1,670	1,600	155	1,790	893	
Chromium, VI	<2.52	<2.11	<2.23	<2.30	<2.09	<2.26	<1.94	<2.22	<2.16	
Lead, Total	782	1,070	1,780	225	9,350	18,700	42.0	858	417	
Mercury, Total										
C ₉ -C ₁₈ Aliphatics										
C ₁₉ -C ₃₆ Aliphatics										
C ₁₁ -C ₂₂ Aromatics										

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)									
Location:	E-0	E-3	S-1S-5	B-101	B-101	B-102	B-102	B-103	B-103
Sample Name:	E-0	E-3	S-1S-5	B-101 0-1	B-101 1-2	B-102 2-3	B-102 5.5-6.5	B-103 0-1	B-103 3-4
Sample Depth:	0-12 in.	0-12 in.	0-6 in.	0-1 ft.	1-2 ft.	2-3 ft.	5.5-6.5 ft.	0-1 ft.	3-4 ft.
Laboratory:	Contest	Contest	Contest	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory I.D.:	06B26000	06B26998	06B26993	SA79283-01	SA79283-02	SA79283-03	SA79283-04	SA79283-05	SA79283-06
Sample Date:	14-Aug-06	14-Aug-06	14-Aug-06	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08
Consultant:	TTR	TTR	TTR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR
Method(s):	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene									
Acenaphthylene									
Anthracene									
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Fluoranthene									
Fluorene									
Indeno(1,2,3-cd)pyrene									
Methylnaphthalene, 2-									
Naphthalene									
Phenanthrene									
Pyrene									
Arsenic, Total	63.1	16.7	14.8	15.5	15.1	38.0	130	18.3	13.2
Cadmium, Total									
Chromium, Total	6,450	6,880	2,600	94	19.8	3,040	21,000	366	221
Chromium, VI	<2.16	<4.67	<2.73	<1.08	<0.989	<1.23	<1.33	<1.19	<1.33
Lead, Total	190	83.2	213	45.1	5.50	545	797	1,060	606
Mercury, Total									
C ₉ -C ₁₈ Aliphatics									
C ₁₉ -C ₃₆ Aliphatics									
C ₁₁ -C ₂₂ Aromatics									

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)

Location:	B-104	B-105	B-105	B-106	B-107	B-108	B-109	B-110	B-111
Sample Name:	B-104 0-1	B-105 0-1.25	B-105 1.5-2	B-106 0-1	B-107 2.3-3	B-108 0-1	B-109 0-2	B-110 0-1	B-111 0-1
Sample Depth:	0-1 ft.	0-1.25 ft.	1.5-2 ft.	0-1 ft.	2.3-3 ft.	0-1 ft.	0-2 ft.	0-1 ft.	0-1 ft.
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum
Laboratory I.D.:	SA79283-07	SA79283-08	SA79283-09	SA79283-10	SA79283-11	SA79283-12	SA79283-13	SA79283-14	SA79283-15
Sample Date:	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08	28-May-08
Consultant:	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR	ENSR
Method(s):	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000	6000/7000
Acenaphthene									
Acenaphthylene									
Anthracene									
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Fluoranthene									
Fluorene									
Indeno(1,2,3-cd)pyrene									
Methylnaphthalene, 2-									
Naphthalene									
Phenanthrene									
Pyrene									
Arsenic, Total	8.78	49.4	93.5	7.16	7.59	7.52	5.80	20.5	98.5
Cadmium, Total									
Chromium, Total	49.9	8,550	23,300	29.9	565	83.1	329	557	102
Chromium, VI	<1.03	<1.81	<2.22	<1.22	<1.29	<1.23	<1.09	<1.06	<1.12
Lead, Total	41.7	503	872	38.4	9.48	56.9	36.9	189	84.4
Mercury, Total									
C ₉ -C ₁₈ Aliphatics									
C ₁₉ -C ₃₆ Aliphatics									
C ₁₁ -C ₂₂ Aromatics									

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)									
Location:	B-112	B-113	B-113	B-114	B-114	B-114	B-114	B-114	TP-201
Sample Name:	B-112 3-4	B-113 0-1.5	B-113 2-3	B-201-COMP	B-201-5.5-6'	B-201-6-6.5'	B-201-6.5-7'	B-201-7-7.5'	TP-201 (0-3)
Sample Depth:	3-4 ft.	0-1.5 ft.	2-3 ft.	0-5.5 ft.	5.5-6 ft.	6-6.5 ft.	6.5-7 ft.	7-7.5 ft.	0-3 ft.
Laboratory:	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Spectrum	Alpha
Laboratory I.D.:	SA79283-16	SA79283-17	SA79283-18	SA82632-01	SA82632-02	SA82632-03	SA82632-04	SA82632-05	L0818443-01
Sample Date:	28-May-08	28-May-08	28-May-08	4-Aug-08	4-Aug-08	4-Aug-08	4-Aug-08	4-Aug-08	15-Dec-08
Consultant:	ENSR	ENSR	ENSR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	6000/7000	6000/7000	6000/7000	8260B, 8270C, 8081Am 8151A, 6000/7000	8260B, 8270C, 6000/7000	6000/7000	6000/7000	6000/7000	EPH-04-1, 6000/7000
Acenaphthene					<1.850				<0.388
Acenaphthylene					<1.850				<0.388
Anthracene					<1.850				<0.388
Benzo(a)anthracene					<1.850				<0.388
Benzo(a)pyrene					<1.850				<0.388
Benzo(b)fluoranthene					<1.850				<0.388
Benzo(g,h,i)perylene					<1.850				<0.388
Benzo(k)fluoranthene					<1.850				<0.388
Chrysene					<1.850				<0.388
Dibenzo(a,h)anthracene					<1.850				<0.388
Fluoranthene					3.030				<0.388
Fluorene					<1.850				<0.388
Indeno(1,2,3-cd)pyrene					<1.850				<0.388
Methylnaphthalene, 2-					<1.850				<0.388
Naphthalene					<1.850				<0.388
Phenanthrene					2.870				<0.388
Pyrene					2.100				<0.388
Arsenic, Total	67.7	16.7	7.0	93.6	6.31	7.53	6.71	8.53	5.6
Cadmium, Total									<0.53
Chromium, Total	39,500	452	30.9	4,120	983	49.1	54.7	210	19
Chromium, VI	<1.57	<1.30	<1.08						
Lead, Total	291	456	15.3	393	18.1	7.14	7.25	9.32	9.4
Mercury, Total									<0.08
C ₉ -C ₁₈ Aliphatics									<7.75
C ₁₉ -C ₃₆ Aliphatics									<7.75
C ₁₁ -C ₂₂ Aromatics									<7.75

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)									
Location:	TP-202	TP-202	TP-203	TP-203	TP-204	TP-204	TP-205	TP-206	TP-207
Sample Name:	TP-202 (0-5)	TP-202 5-7'	TP-203 (0-7.5)	TP-203 7.5-9'	TP-204 (0-4)	TP-204 4-5'	TP-205 (0-3)	TP-206 (0-3)	TP-207 (0-2)
Sample Depth:	0-5 ft.	5-7 ft.	0-7.5 ft.	7.5-9 ft.	0-4 ft.	4-5 ft.	0-3 ft.	0-3 ft.	0-2 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818443-02	L0900327-09	L0818443-03	L0900327-10	L0818443-04	L0900327-11	L0818443-05	L0818443-06	L0818443-07
Sample Date:	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08	15-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000
Acenaphthene	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Acenaphthylene	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Anthracene	<0.463		2.12		<2.52		<0.406	<0.813	<1.94
Benzo(a)anthracene	0.634		4.31		<2.52		<0.406	1.02	<1.94
Benzo(a)pyrene	0.599		3.50		<2.52		<0.406	0.984	<1.94
Benzo(b)fluoranthene	0.634		3.43		<2.52		<0.406	1.02	<1.94
Benzo(g,h,i)perylene	0.744		1.79		<2.52		<0.406	<0.813	<1.94
Benzo(k)fluoranthene	0.607		3.57		<2.52		<0.406	0.942	<1.94
Chrysene	0.642		4.76		<2.52		<0.406	1.25	<1.94
Dibenzo(a,h)anthracene	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Fluoranthene	1.62		10.0		<2.52		<0.406	2.84	<1.94
Fluorene	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Indeno(1,2,3-cd)pyrene	<0.463		2.07		<2.52		<0.406	<0.813	<1.94
Methylnaphthalene, 2-	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Naphthalene	<0.463		<1.43		<2.52		<0.406	<0.813	<1.94
Phenanthrene	1.32		8.45		<2.52		<0.406	2.48	<1.94
Pyrene	1.33		8.59		<2.52		<0.406	2.37	<1.94
Arsenic, Total	13		43		15		12	9.8	7.4
Cadmium, Total	<0.65		<0.69		0.78		<0.59	<0.59	<0.58
Chromium, Total	12,000	720	32,000	180	19,000	330	39	170	320
Chromium, VI									
Lead, Total	480		360		290		18	27	48
Mercury, Total	11		69		13		<0.10	0.63	0.89
C ₉ -C ₁₈ Aliphatics	<9.26		<28.6		<50.5		<8.13	<16.3	<38.8
C ₁₉ -C ₃₆ Aliphatics	69.5		309		125		<8.13	<16.3	51.1
C ₁₁ -C ₂₂ Aromatics	55.4		222		102		<8.13	53.7	50.5

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1

Soil Analytical Data (mg/kg)

Location:	B-200	B-201	B-202	B-202	B-203	B-204	B-205	B-206	B-207
Sample Name:	B-200 0-5'	B-201 0-5'	B-202 (SED)	B-202 0-5'	B-203 0-5'	B-204 0-5'	B-205 0-5'	B-206 0-5'	B-207 0-5'
Sample Depth:	0-5 ft.	0-5 ft.	0-12 in.	0-5 ft.					
Laboratory:	Alpha								
Laboratory I.D.:	L0818721-01	L0818721-02	L0818443-08	L0818721-03	L0818721-04	L0818721-05	L0818721-06	L0818721-07	L0818721-08
Sample Date:	18-Dec-08	18-Dec-08	15-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR								
Method(s):	EPH-04-1, 6000/7000								
Acenaphthene	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Acenaphthylene	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Anthracene	<0.388	<0.457	<0.490	<0.383	<0.438	1.23	<0.463	<0.469	<0.450
Benzo(a)anthracene	<0.388	0.478	0.636	0.613	<0.438	2.64	1.35	1.19	0.557
Benzo(a)pyrene	<0.388	0.670	0.960	0.890	<0.438	2.71	1.28	1.08	0.674
Benzo(b)fluoranthene	<0.388	0.862	1.31	1.24	<0.438	3.24	1.32	1.18	0.906
Benzo(g,h,i)perylene	<0.388	0.575	0.916	0.823	<0.438	1.91	0.762	0.606	0.548
Benzo(k)fluoranthene	<0.388	0.710	1.09	0.910	<0.438	2.87	1.38	1.15	0.729
Chrysene	<0.388	0.852	1.33	1.19	<0.438	3.54	1.63	1.21	0.826
Dibenzo(a,h)anthracene	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Fluoranthene	<0.388	1.46	2.35	2.07	<0.438	6.77	3.18	2.65	1.41
Fluorene	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Indeno(1,2,3-cd)pyrene	<0.388	0.694	0.967	0.951	<0.438	2.16	0.962	0.945	0.705
Methylnaphthalene, 2-	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Naphthalene	<0.388	<0.457	<0.490	<0.383	<0.438	<0.490	<0.463	<0.469	<0.450
Phenanthrene	<0.388	0.586	0.929	0.984	<0.438	4.90	1.94	1.21	0.702
Pyrene	<0.388	1.18	1.84	1.59	<0.438	5.38	2.54	2.21	1.17
Arsenic, Total	3.7	16	8.0	4.9	4.8	10	13	14	8.5
Cadmium, Total	<0.57	0.79	<0.73	<0.54	<0.66	0.82	0.77	1.2	0.68
Chromium, Total	970	1,400	780	150	28	1,500	2,600	6,000	2,200
Chromium, VI									
Lead, Total	37	110	66	33	6.6	140	170	240	140
Mercury, Total	0.53	1.4	0.45	0.84	<0.10	2.7	2.8	4.9	3.2
C ₉ -C ₁₈ Aliphatics	<7.75	<9.13	<9.80	<7.66	<8.77	<9.80	<9.26	<9.39	<9.01
C ₁₉ -C ₃₆ Aliphatics	20.5	26.3	44.4	59.7	<8.77	56.2	72.1	105	81.1
C ₁₁ -C ₂₂ Aromatics	12.7	22.2	29.2	34.4	<8.77	82.4	66.4	68.7	43.3

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)									
Location:	B-208	B-209	B-210R	B-210R	B-210R	B-210R	B-210R	B-210R	B-210
Sample Name:	B-208 0-5'	B-209 0-5'	B-210R 0-1'	B-210R 1-2'	B-210R 2-3'	B-210R 3.75-4'	B-210R 4-4.25'	B-210R 4.25-4.5'	B-210 0-5'
Sample Depth:	0-3 ft.	0-5 ft.	0-1 ft.	1-2 ft.	2-3 ft.	3.75-4 ft.	4-4.25 ft.	4.25-4.5 ft.	0-5 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-09	L0818721-10	L0900327-03	L0900327-04	L0900327-05	L0900327-06	L0900327-07	L0900327-08	L0818721-11
Sample Date:	18-Dec-08	18-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	30-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6010B	6010B	6010B	6010B	6010B	6010B	EPH-04-1, 6000/7000
Acenaphthene	<0.490	<0.538							<0.575
Acenaphthylene	<0.490	<0.538							<0.575
Anthracene	<0.490	<0.538							0.897
Benzo(a)anthracene	1.27	0.879							2.35
Benzo(a)pyrene	1.72	0.919							2.42
Benzo(b)fluoranthene	2.37	0.972							2.63
Benzo(g,h,i)perylene	1.19	0.551							1.66
Benzo(k)fluoranthene	1.77	0.994							2.47
Chrysene	2.20	1.12							2.38
Dibenzo(a,h)anthracene	<0.490	<0.538							<0.575
Fluoranthene	3.80	2.20							5.84
Fluorene	<0.490	<0.538							<0.575
Indeno(1,2,3-cd)pyrene	1.62	0.794							1.95
Methylnaphthalene, 2-	<0.490	<0.538							<0.575
Naphthalene	<0.490	<0.538							<0.575
Phenanthrene	1.66	1.63							4.29
Pyrene	3.00	1.81							4.66
Arsenic, Total	15	11							14
Cadmium, Total	1.4	1.4							1.6
Chromium, Total	4,300	14,000	1,800	3,400	7,000	28,000	39,000	3,700	10,000
Chromium, VI									
Lead, Total	260	400							340
Mercury, Total	2.0	2.2							4.4
C ₉ -C ₁₈ Aliphatics	<9.8	<10.8							<11.5
C ₁₉ -C ₃₆ Aliphatics	125	116							134
C ₁₁ -C ₂₂ Aromatics	79.1	67.7							107

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)

Location:	B-210	B-211	B-212	B-212	B-213	B-214	B-214	B-215	B-216
Sample Name:	B-210 5-10'	B-211 0-3'	B-212 0-5'	DUP-1	B-213 0-5'	B-214 0-5'	DUP-2	B-215 0-5'	B-216 0-5'
Sample Depth:	5-10 ft.	0-3 ft.	0-5 ft.						
Laboratory:	Alpha								
Laboratory I.D.:	L0818938-01	L0818721-12	L0818721-13	L0818721-21	L0818721-14	L0818721-15	L0818721-22	L0818721-16	L0818721-17
Sample Date:	18-Dec-08								
Consultant:	TTR								
Method(s):	EPH-04-1, 6000/7000								
Acenaphthene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Acenaphthylene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Anthracene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Benzo(a)anthracene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.672
Benzo(a)pyrene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.610
Benzo(b)fluoranthene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.719
Benzo(g,h,i)perylene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Benzo(k)fluoranthene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.598
Chrysene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.907
Dibenzo(a,h)anthracene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Fluoranthene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	1.36
Fluorene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Indeno(1,2,3-cd)pyrene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.485
Methylnaphthalene, 2-	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Naphthalene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	<0.427
Phenanthrene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	0.807
Pyrene	<0.444	<0.438	<0.417	<0.406	<0.402	<0.463	<0.538	<0.476	1.14
Arsenic, Total	3.2	4.8	4.6	3.5	4.5	6.6	9.9	3.9	5.1
Cadmium, Total	<0.64	0.63	<0.60	<0.56	<0.55	1.2	<0.79	<0.70	0.61
Chromium, Total	170	1,200	2,500	760	190	2,000	1,200	1,500	770
Chromium, VI									
Lead, Total	4.4	43	42	22	34	93	110	27	74
Mercury, Total	<0.10	0.70	0.16	0.17	0.84	3.1	1.9	0.28	0.18
C ₉ -C ₁₈ Aliphatics	<8.89	<8.77	<8.33	<8.13	<8.03	<9.26	<10.8	<9.52	<8.55
C ₁₉ -C ₃₆ Aliphatics	<8.89	14.1	31.6	9.65	<8.03	37.0	<10.8	15.1	23.7
C ₁₁ -C ₂₂ Aromatics	<8.89	11.1	18.1	<8.13	<8.03	37.8	11.7	20.5	27.8

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)									
Location:	B-217	B-218	B-219	B-219	B-220	B-220	B-221	B-221	B-222
Sample Name:	B-217 0-5'	B-218 0-5'	B-219 0-3'	B-219 3-4'	B-220 0-5'	B-220 5-10'	B-221 0-5'	B-221 5-10'	B-222 0-5'
Sample Depth:	0-5 ft.	0-5 ft.	0-3 ft.	3-4 ft.	0-5 ft.	5-10 ft.	0-5 ft.	5-10 ft.	0-5 ft.
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha
Laboratory I.D.:	L0818721-18	L0818721-19	L0900327-01	L0900327-02	L0818721-20	L0818721-30	L0818721-23	L0900327-12	L0818721-24
Sample Date:	18-Dec-08	18-Dec-08	30-Dec-08	30-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR	TTR
Method(s):	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6000/7000	6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	EPH-04-1, 6000/7000	6010B	EPH-04-1, 6000/7000
Acenaphthene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Acenaphthylene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Anthracene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Benzo(a)anthracene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Benzo(a)pyrene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Benzo(b)fluoranthene	<0.939	<0.529			0.667	<0.402	<0.397		<0.347
Benzo(g,h,i)perylene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Benzo(k)fluoranthene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Chrysene	<0.939	<0.529			0.591	<0.402	<0.397		<0.347
Dibenzo(a,h)anthracene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Fluoranthene	<0.939	<0.529			0.801	<0.402	<0.397		<0.347
Fluorene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Indeno(1,2,3-cd)pyrene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Methylnaphthalene, 2-	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Naphthalene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Phenanthrene	<0.939	<0.529			<0.575	<0.402	<0.397		<0.347
Pyrene	<0.939	<0.529			0.654	<0.402	<0.397		<0.347
Arsenic, Total	5.0	7.2	12	4.5	1.4	1.7	9.6		5.3
Cadmium, Total	<0.65	<0.73	<1.1	<0.62	<0.84	<0.57	<0.59		<0.51
Chromium, Total	630	990	6,600	38	8,000	8.8	3,600	160	16
Chromium, VI									
Lead, Total	57	51	200	6.6	230	<2.8	46		2.9
Mercury, Total	0.66	0.59	2.1	<0.10	0.87	<0.10	0.83		<0.08
C ₉ -C ₁₈ Aliphatics	<18.8	<10.6			<11.5	<8.03	<7.94		<6.94
C ₁₉ -C ₃₆ Aliphatics	<18.8	<10.6			77.4	<8.03	<7.94		<6.94
C ₁₁ -C ₂₂ Aromatics	<18.8	<10.6			41.4	<8.03	12.2		<6.94

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 1 Soil Analytical Data (mg/kg)

Location:	B-223	B-224	B-224	B-224	B-225	B-225					
Sample Name:	B-223 0-5'	B-224 0-5'	B-224 5-10'	B-224 10-15'	B-225 0-5'	B-225 5-10'					
Sample Depth:	0-5 ft.	0-5 ft.	5-10 ft.	10-15 ft.	0-5 ft.	5-10 ft.	2007	2007	2007	2007	2007
Laboratory:	Alpha	Alpha	Alpha	Alpha	Alpha	Alpha	Method 1	Method 1	Method 1	Method 1	MCP
Laboratory I.D.:	L0818721-25	L0818721-26	L0818721-27	L0818721-28	L0818721-29	L0818721-31	Standard	Standard	Standard	Standard	UCLs
Sample Date:	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	18-Dec-08	S-1/GW-1	S-1/GW-3	S-3/GW-1	S-3/GW-3	
Consultant:	TTR	TTR	TTR	TTR	TTR	TTR					
Method(s):	EPH-04-1, 6000/7000										
Acenaphthene	<0.397	<0.498	<0.427	<0.344	<0.370	<0.355	4	1,000	4	5,000	10,000
Acenaphthylene	<0.397	<0.498	<0.427	<0.344	<0.370	<0.355	1	10	1	10	10,000
Anthracene	0.406	1.43	<0.427	<0.344	<0.370	<0.355	1,000	1,000	5,000	5,000	10,000
Benzo(a)anthracene	0.969	1.57	<0.427	<0.344	<0.370	<0.355	7	7	300	300	3,000
Benzo(a)pyrene	0.908	1.11	<0.427	<0.344	<0.370	<0.355	2	2	30	30	300
Benzo(b)fluoranthene	0.930	2.48	<0.427	<0.344	<0.370	<0.355	7	7	300	300	3,000
Benzo(g,h,i)perylene	0.664	0.612	<0.427	<0.344	<0.370	<0.355	1,000	1,000	5,000	5,000	10,000
Benzo(k)fluoranthene	0.925	1.70	<0.427	<0.344	<0.370	<0.355	70	70	3,000	3,000	10,000
Chrysene	1.22	1.74	<0.427	<0.344	<0.370	<0.355	70	70	3,000	3,000	10,000
Dibenzo(a,h)anthracene	<0.397	<0.498	<0.427	<0.344	<0.370	<0.355	0.7	0.7	30	30	300
Fluoranthene	2.65	4.40	<0.427	<0.344	<0.370	<0.355	1,000	1,000	5,000	5,000	10,000
Fluorene	<0.397	0.566	<0.427	<0.344	<0.370	<0.355	1,000	1,000	5,000	5,000	10,000
Indeno(1,2,3-cd)pyrene	0.672	0.831	<0.427	<0.344	<0.370	<0.355	7	7	300	300	3,000
Methylnaphthalene, 2-	<0.397	<0.498	<0.427	<0.344	<0.370	<0.355	0.7	300	0.7	500	5,000
Naphthalene	<0.397	<0.498	<0.427	<0.344	<0.370	<0.355	4	500	4	3,000	10,000
Phenanthrene	2.72	5.48	<0.427	<0.344	<0.370	<0.355	10	500	10	3,000	10,000
Pyrene	2.23	3.55	<0.427	<0.344	<0.370	<0.355	1,000	1,000	5,000	5,000	10,000
Arsenic, Total	26	2.1	1.6	3.7	12	4.1	20	20	20	20	200
Cadmium, Total	<0.56	<0.73	<0.62	<0.49	<0.53	<0.49	2	2	30	30	300
Chromium, Total	25	22,000	12,000	30	230	26	1,000	1,000	5,000	5,000	10,000
Chromium, VI							30	30	200	200	2,000
Lead, Total	20	100	85	3.7	17	4.0	300	300	300	300	3,000
Mercury, Total	0.21	43	28	<0.08	0.31	<0.08	20	20	30	30	300
C ₉ -C ₁₈ Aliphatics	<7.94	<9.95	<8.55	<6.87	<7.41	<7.09	1,000	1,000	5,000	5,000	20,000
C ₁₉ -C ₃₆ Aliphatics	<7.94	<9.95	52.4	<6.87	<7.41	<7.09	3,000	3,000	5,000	5,000	20,000
C ₁₁ -C ₂₂ Aromatics	23.8	82.4	23.1	<6.87	<7.41	<7.09	1,000	1,000	1,000	5,000	10,000

Notes: ND or < indicates compound not detected
 Blank indicates analysis not performed
Bold indicates concentration exceeds MCP Method 1 S-1 standard
 indicates concentration exceeds MCP Method 1 S-3 standard
 Bold indicates concentration exceeds MCP UCL

Table 2 Groundwater Analytical Data (µg/L)							
Location:	Stormwater Culvert	MW-2	MW-3	MW-1			
Sample Name:	Culvert-Upstream	MW-2-20090213	MW-3-20090213	MW-1-20090213			
Laboratory:	Alpha	Alpha	Alpha	Alpha	Method 1	Method 1	RCGW-1
Laboratory I.D.:	L0901867-01	L0901867-02	L0901867-03	L0901867-04	Standard	Standard	Standard
Sample Date:	13-Feb-09	13-Feb-09	13-Feb-09	13-Feb-09	GW-1	GW-3	µg/L
Consultant:	TTR	TTR	TTR	TTR			
Method(s):	6000/7000 series	6000/7000 series	6000/7000 series	6000/7000 series			
Arsenic, Dissolvec	<5	<5	<5	<5	10	900	10
Cadmium, Dissolvec	<4	<4	<4	<4	5	4	4
Chromium, Dissolvec	<10	<10	<10	10	100	300	100
Lead, Dissolvec	<10	<10	<10	<10	15	10	10
Mercury, Dissolved	<0.2	<0.2	<0.2	<0.2	2	20	2

Notes: < indicates compound not detected

Table 3 Initial Screening of Remedial Action Alternatives

Remedial Action Alternative	Selected for Detailed Evaluation	Comments
Excavation and Off-Site Disposal	Yes	Technology is applicable to Site conditions, is readily available, technically feasible and proven
		Could achieve a Permanent Solution without implementation of an Activity and Use Restriction
		Estimated that up to approximately 1,650 cubic yards of soil would need to be excavated, transported and disposed off-site to achieve "No Significant Risk" without an Activity and Use Limitation
		Extensive effort and cost required for excavation, loading and off-site transport of impacted soils including staging and accessibility methods
Achieving background concentrations are possible but would require removal of additional soils	Would require substantial disturbance of the Site and would require backfilling of some excavations with appropriate backfill materials followed by Site restoration. Site restoration would include measures to restore the disturbed portions of the drainage swale (subject to Conservation Commission requirements)	
Excavation and On-Site Consolidation / Engineered Barrier	Yes	Technology is applicable to Site conditions, is readily available, technically feasible and proven
		Alternative could achieve a Permanent or Temporary Solution
		Site layout and physical constraints (steep slopes and sewer/sewer easement) could make implementation difficult on the hillside area, potentially inhibiting the feasibility of this alternative or adding substantially to costs
		Alternative would require implementation of an AUL to restrict future activities and uses in the area of the engineered barrier and consolidation areas
		Estimated that up to approximately 1,650 cubic yards of soil would need to be placed beneath one or more engineered barriers and consolidation areas to achieve "No Significant Risk"
		Presence of soils with concentrations of COCs above UCLs and above the Method 1 S-3/GW-1 and S-3/GW-3 standards would require installation of an engineered barrier and preparation of a Method 3 Risk Characterization
		Engineered barrier and/or consolidation areas may be located in areas that are subject to the jurisdiction of the Woburn Conservation Commission which could impact the volume, location, approach and site restoration requirements
Alternative would not achieve or approach background in the area of the engineered barrier and consolidation areas	Alternative could have a lifespan of over 30 years with maintenance and upkeep of the engineered barrier	
Would require substantial disturbance of the Site and would require backfilling of some excavations with appropriate backfill materials followed by Site restoration. Site restoration would include measures to restore the disturbed portions of the drainage swale (subject to Conservation Commission requirements)		

Table 3 Initial Screening of Remedial Action Alternatives

Remedial Action Alternative	Selected for Detailed Evaluation	Comments
Combined Excavation and Off-Site Disposal / On-Site Consolidation	Yes	Technology is applicable to Site conditions, is readily available, technically feasible and proven
		Alternative could achieve a Permanent or Temporary Solution
		Estimated that up to approximately 850 cubic yards of soils with concentrations of COCs at or approaching UCLs would be excavated, transported and disposed off-site. Off-site removal of soils approaching UCL concentrations may mitigate the requirement for an engineered barrier and preparation of a Method 3 Risk Characterization.
		Estimated up to approximately 800 cubic yards of soil would need to be placed beneath one or more consolidation areas to achieve "No Significant Risk".
		Alternative would require implementation of an AUL to restrict future activities and uses in the area of the consolidation area
		Alternative would not achieve or approach background for the area of the Site where the consolidation area is sited
Consolidation area may be located in area that is subject to the jurisdiction of the Woburn Conservation Commission which could impact the volume, location, approach and site restoration requirements.	Would require substantial disturbance of the Site and would require backfilling of some excavations with appropriate backfill materials followed by Site restoration. Site restoration would include measures to restore the disturbed portions of the drainage swale (subject to Conservation Commission requirements)	
Phytoremediation	No	Technology applicable to the Site conditions and regional climatic conditions may not be adequately developed
		Depth of treatment zone is determined by plants used and is limited to shallow soils in most cases. COCs impacted soils at the Site extend to depths of up to 7.5 feet bgs reducing the effectiveness of this alternative.
		Treatment by phytoremediation would not adequately address potential off-site migration of COCs impacted soils via erosion in the short term.
Vegetation would require regular maintenance to remove growth. Removed vegetation would require treatment or disposal in accordance with applicable regulations	Technology applicable to the Site conditions is not well developed with few if any full scale applications referenced in the United States	
Electrokinetic separation and enhanced removal or on-site treatment	No	Technology would involve the installation of electrodes at the Site to induce a low-intensity direct current to mobilize metallic ions toward collection points for subsequent removal or concentration in a smaller volume of soil
		Could be combined with on-site consolidation to allow treatment and removal of metals impacted soils and eliminate the need for an AUL
		The presence of buried metallic items in heterogeneous fill soil may inhibit electrical conductivity of soil via preferred pathways
		Removal of concentrated metals impacted soils may increase disposal costs
Oxidation/reduction reactions at the electrode sites could produce unknown byproducts		

Table 3 Initial Screening of Remedial Action Alternatives

Remedial Action Alternative	Selected for Detailed Evaluation	Comments
Incineration (on-site or off-site)	No	COCs including heavy metals may volatilize at operating temperatures for incinerators and emissions are difficult to remove using conventional air pollution control equipment
		Alternative would not reduce materials handling costs of excavation based alternatives
		Incineration of soils with high organic content may reduce the overall volume of soils requiring off-site disposal Ash residue likely to have very high concentrations of metals and other COCs, making transport and disposal difficult and costly
		Operation of a large scale incineration plant on-site would require extensive permitting and approvals
Vitrification	No	Extent of impacted area is too large to utilize in-situ vitrification and air collection above treatment zone is not practical
		If the treatment area could be limited (consolidation), alternative could mitigate potential off-site migration issues of COCs impacted soils
		Vitrification of soils with high organic content may reduce the overall volume of soils at the Site requiring import of backfill materials to maintain current grades at the Site
		COCs including heavy metals may volatilize at operating temperatures and emissions would be difficult to capture over such a large treatment area
		Significant public safety hazards associated with the use of high-amperage current to heat soil to required temperatures
Processing of contamination below the water table may require dewatering		
Would limit future Site usage thus providing little advantage over closure in-place		
Soil flushing/solvent extraction	No	Site topography may inhibit adequate rapid delivery and distribution of flushing agent throughout soil matrix
		Highly permeable soils present below COCs-impacted soil unit may result in mobilization of COCs to groundwater.
		Nature of COCs (low solubility) would require specialized soil flushing chemicals (solvents) to effectively desorb COCs from highly organic soils
		Difficult or impossible to recover flushing fluids and desorbed contaminants
Approach would limit use of a large area of the Site		



Project No. #12700673



Information obtained from
 USGS Map of Boston North & Lexington, Massachusetts
 Quadrangle dated 1995
 USGS Map of Reading and Wilmington, Massachusetts
 Quadrangle dated 1997

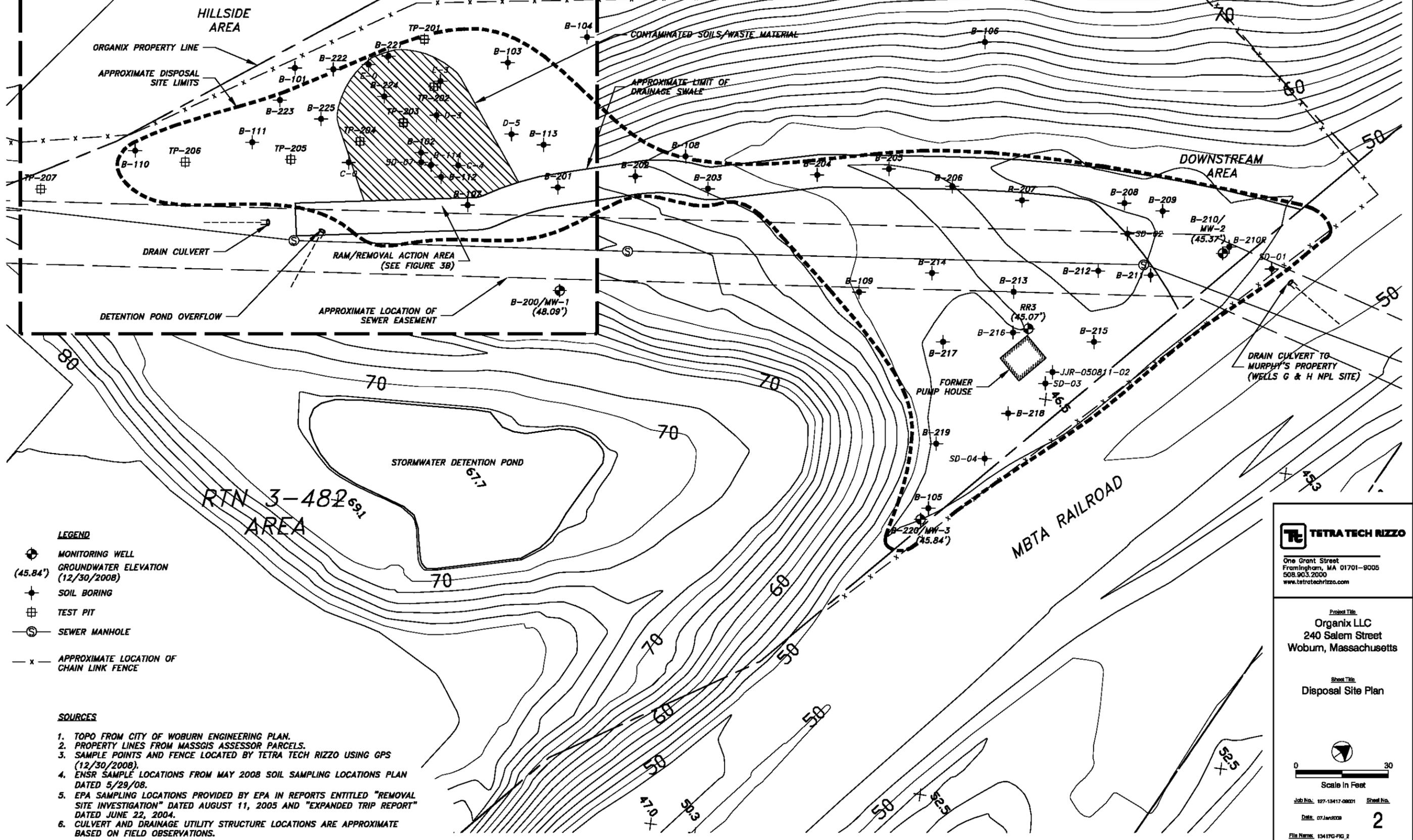
Organix LLC.
 240 Salem Street
 Woburn, Massachusetts

Site Locus Plan

Figure
1

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REFER TO FIGURE 3A FOR TOPOGRAPHY IN THIS AREA



LEGEND

- ⊕ MONITORING WELL
- ⊕ GROUNDWATER ELEVATION (12/30/2008)
- ⊕ SOIL BORING
- ⊕ TEST PIT
- ⊕ SEWER MANHOLE
- x - APPROXIMATE LOCATION OF CHAIN LINK FENCE

SOURCES

1. TOPO FROM CITY OF WOBURN ENGINEERING PLAN.
2. PROPERTY LINES FROM MASSGIS ASSESSOR PARCELS.
3. SAMPLE POINTS AND FENCE LOCATED BY TETRA TECH RIZZO USING GPS (12/30/2008).
4. ENSR SAMPLE LOCATIONS FROM MAY 2008 SOIL SAMPLING LOCATIONS PLAN DATED 5/29/08.
5. EPA SAMPLING LOCATIONS PROVIDED BY EPA IN REPORTS ENTITLED "REMOVAL SITE INVESTIGATION" DATED AUGUST 11, 2005 AND "EXPANDED TRIP REPORT" DATED JUNE 22, 2004.
6. CULVERT AND DRAINAGE UTILITY STRUCTURE LOCATIONS ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.



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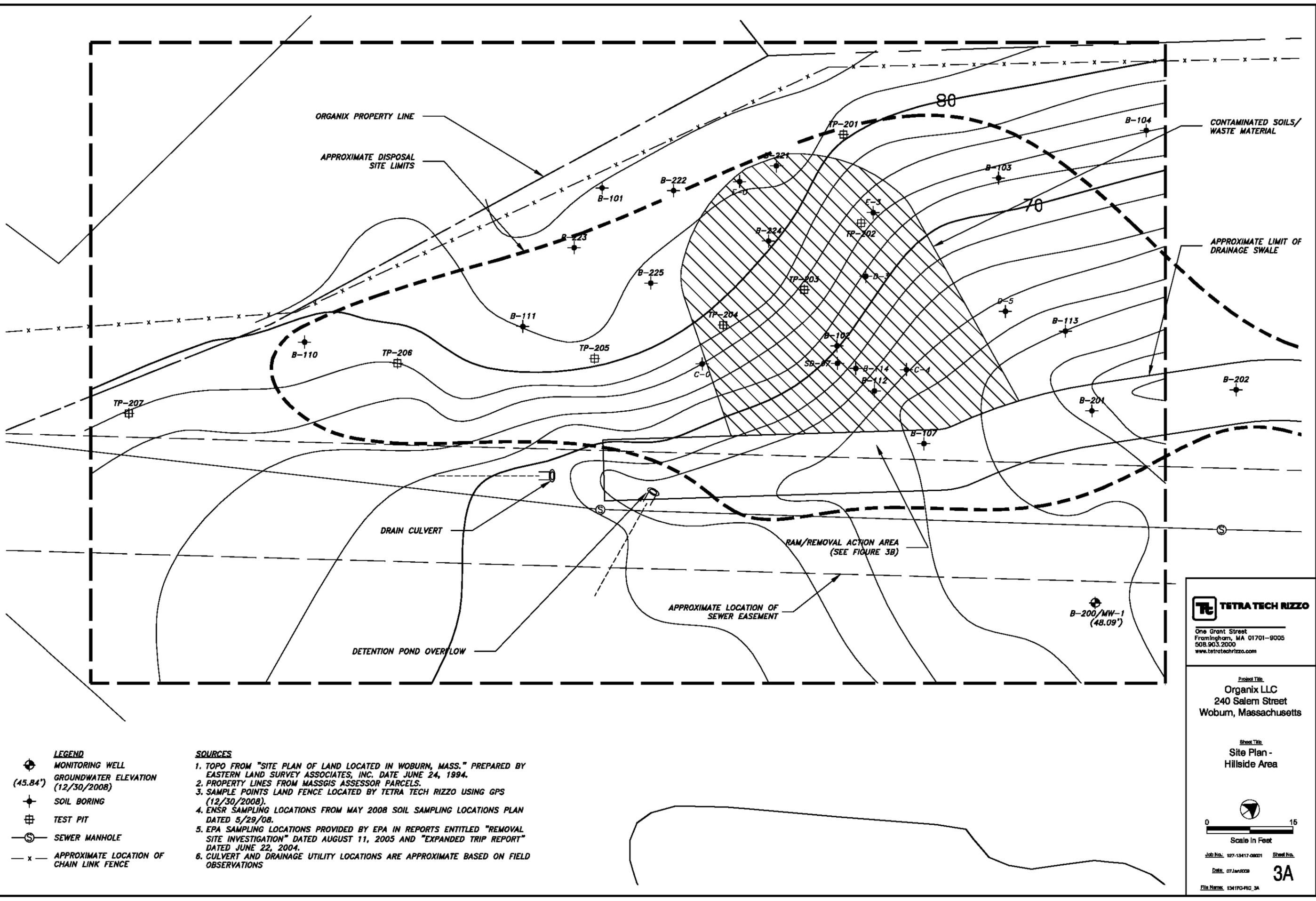
Project Title
Organix LLC
240 Salem Street
Woburn, Massachusetts

Sheet Title
Disposal Site Plan



Job No. 127-13417-00001
Date: 07/Jan/2008
File Name: 13417G-FIG_2
Sheet No. **2**

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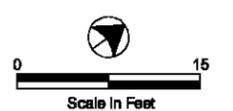
- LEGEND**
- ⊕ MONITORING WELL
 - (45.84') GROUNDWATER ELEVATION (12/30/2008)
 - ◆ SOIL BORING
 - ⊞ TEST PIT
 - ⊙ SEWER MANHOLE
 - x - APPROXIMATE LOCATION OF CHAIN LINK FENCE

- SOURCES**
1. TOPO FROM "SITE PLAN OF LAND LOCATED IN WOBURN, MASS." PREPARED BY EASTERN LAND SURVEY ASSOCIATES, INC. DATE JUNE 24, 1994.
 2. PROPERTY LINES FROM MASSGIS ASSESSOR PARCELS.
 3. SAMPLE POINTS LAND FENCE LOCATED BY TETRA TECH RIZZO USING GPS (12/30/2008).
 4. ENSR SAMPLING LOCATIONS FROM MAY 2008 SOIL SAMPLING LOCATIONS PLAN DATED 5/29/08.
 5. EPA SAMPLING LOCATIONS PROVIDED BY EPA IN REPORTS ENTITLED "REMOVAL SITE INVESTIGATION" DATED AUGUST 11, 2005 AND "EXPANDED TRIP REPORT" DATED JUNE 22, 2004.
 6. CULVERT AND DRAINAGE UTILITY LOCATIONS ARE APPROXIMATE BASED ON FIELD OBSERVATIONS

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Project Title
Organix LLC
 240 Salem Street
 Woburn, Massachusetts

Sheet Title
Site Plan -
 Hillside Area



Job No.: 127-19417-0001 Sheet No.: **3A**
 Date: 07/Jan/2008
 File Name: 134170-FIG_3A

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12700673G-ESS04

Not to Scale

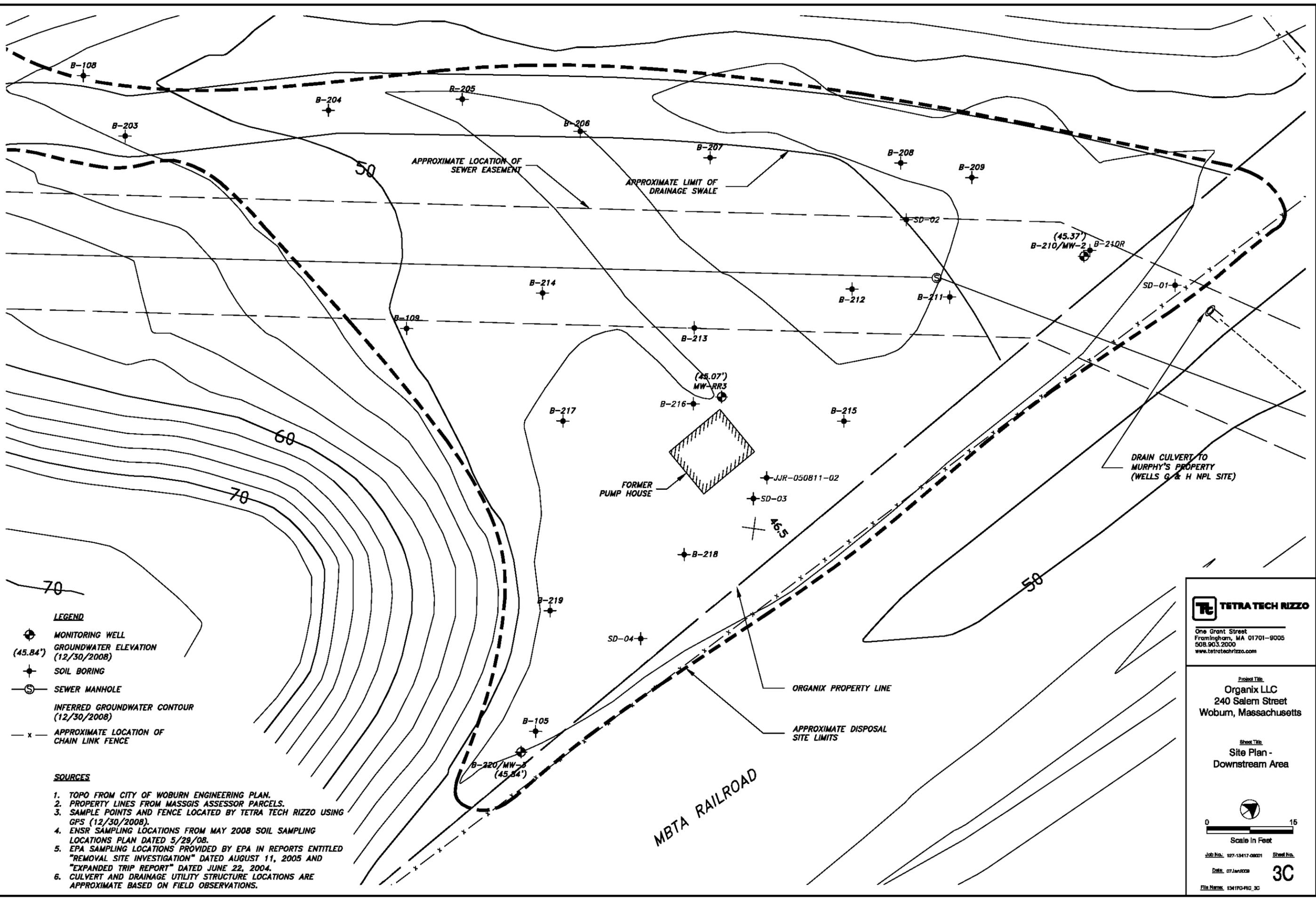


Organix LLC.
240 Salem Street
Woburn, Massachusetts

Post-RAM
Sampling Locations

Figure
3B

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LEGEND

- ⊕ MONITORING WELL
(45.84') GROUNDWATER ELEVATION (12/30/2008)
- ⊕ SOIL BORING
- ⊙ SEWER MANHOLE
- INFERRED GROUNDWATER CONTOUR (12/30/2008)
- x - APPROXIMATE LOCATION OF CHAIN LINK FENCE

SOURCES

1. TOPO FROM CITY OF WOBURN ENGINEERING PLAN.
2. PROPERTY LINES FROM MASSGIS ASSESSOR PARCELS.
3. SAMPLE POINTS AND FENCE LOCATED BY TETRA TECH RIZZO USING GPS (12/30/2008).
4. ENSR SAMPLING LOCATIONS FROM MAY 2008 SOIL SAMPLING LOCATIONS PLAN DATED 5/29/08.
5. EPA SAMPLING LOCATIONS PROVIDED BY EPA IN REPORTS ENTITLED "REMOVAL SITE INVESTIGATION" DATED AUGUST 11, 2005 AND "EXPANDED TRIP REPORT" DATED JUNE 22, 2004.
6. CULVERT AND DRAINAGE UTILITY STRUCTURE LOCATIONS ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

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Project Title
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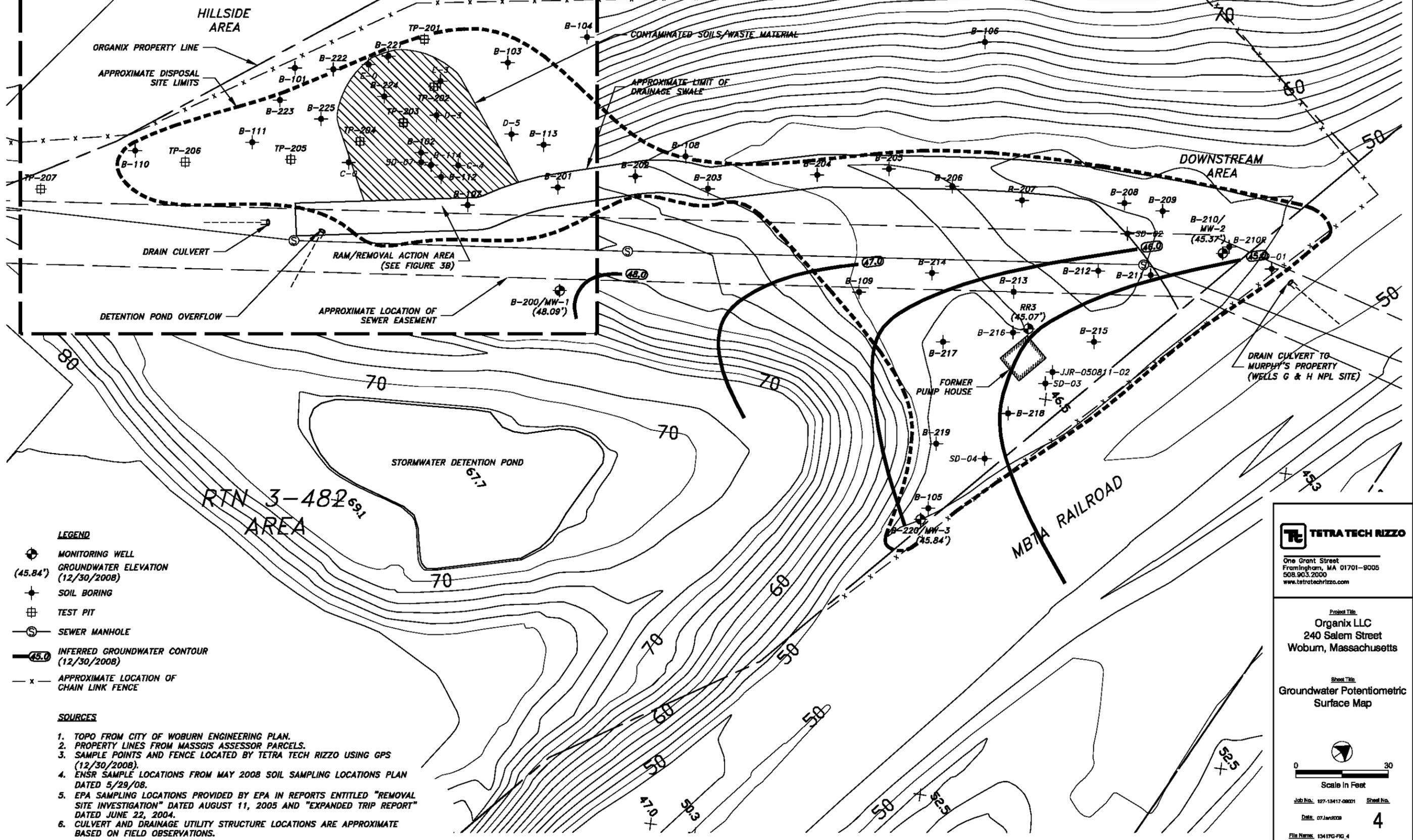
Sheet Title
Site Plan -
 Downstream Area

0 15
 Scale In Feet

Job No. 127-19417-00001 Sheet No.
 Date: 07/Jan/2009 **3C**
 File Name: 134170-FIG_3C

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REFER TO FIGURE 3A FOR TOPOGRAPHY IN THIS AREA



LEGEND

- ⊕ MONITORING WELL
- (45.84') GROUNDWATER ELEVATION (12/30/2008)
- ⊕ SOIL BORING
- ⊕ TEST PIT
- ⊕ SEWER MANHOLE
- (45.0) INFERRED GROUNDWATER CONTOUR (12/30/2008)
- x - APPROXIMATE LOCATION OF CHAIN LINK FENCE

SOURCES

1. TOPO FROM CITY OF WOBURN ENGINEERING PLAN.
2. PROPERTY LINES FROM MASSGIS ASSESSOR PARCELS.
3. SAMPLE POINTS AND FENCE LOCATED BY TETRA TECH RIZZO USING GPS (12/30/2008).
4. ENSR SAMPLE LOCATIONS FROM MAY 2008 SOIL SAMPLING LOCATIONS PLAN DATED 5/29/08.
5. EPA SAMPLING LOCATIONS PROVIDED BY EPA IN REPORTS ENTITLED "REMOVAL SITE INVESTIGATION" DATED AUGUST 11, 2005 AND "EXPANDED TRIP REPORT" DATED JUNE 22, 2004.
6. CULVERT AND DRAINAGE UTILITY STRUCTURE LOCATIONS ARE APPROXIMATE BASED ON FIELD OBSERVATIONS.

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Sheet Title
**Groundwater Potentiometric
 Surface Map**



Job No.: 127-13417-00001 Sheet No.: **4**
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