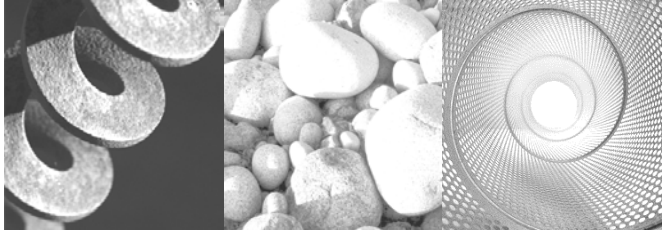

GEI Consultants

Consulting
Engineers and
Scientists

MassDEP RTN 3-15009 and RTN 3-36365

Release Abatement Measure Plan

Parcel P-3: Tremont and Whittier Streets,
Boston (Roxbury), Massachusetts

Submitted to:
Massachusetts Department of Environmental Protection
Northeast Regional Office
150 Presidential Way
Woburn, MA 01801

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March 30, 2023

Project 2103938

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Executive Summary

GEI Consultants, Inc. prepared this Release Abatement Measure (RAM) Plan on behalf of the Boston Planning & Development Agency (BPDA) for the management and disposal of contaminated soil at the property identified as Parcel P-3 (the Property) and at Whittier and Tremont Streets in Roxbury, Massachusetts. The RAM is for the targeted cleanup of a lead contaminated soil hot spot and a portion of an approximately 10,000 cubic yards soil mound. The mound is mixed soil and debris including metal, concrete, and brick debris, tires, and trash. This area is entirely unpaved and is surrounded by a fence. Two Massachusetts Department of Environmental Protection (MassDEP) disposal sites are on the Property; Release Tracking Numbers (RTNs) 3-15009, originally notified to MassDEP in 1997 and RTN 3-36365 notified to MassDEP on July 16, 2020. RTN 3-36365 has been linked to RTN 3-15009 creating a combined disposal site (the Site).

The soil contamination at the Property is volatile organic compounds (VOCs), volatile and extractable petroleum hydrocarbons (VPH and EPH), PAHs, and metals. The groundwater contamination is chlorinated VOCs, PAHs, and metals. The source of the contamination observed in the soil is likely contaminants common in urban fill and possibly historic releases from former industrial use of the Site. Sources of groundwater contamination include historic industrial use of the Site, and possible upgradient sources of VOC contamination.

The objective of this RAM Plan is to excavate, treat if necessary, and otherwise handle soil, including transport for off-site reuse, disposal, recycling, and/or treatment. Management of groundwater is not anticipated. The RAM Plan has been developed to be protective of construction workers and surrounding receptors from direct contact with potentially contaminated soil and/or fugitive dust inhalation.

The RAM includes removal of the lead hot spot that is approximately 5 to 7 feet below ground surface as the primary risk reduction measure to eliminate exposure pathways and avoid the need for an Engineered Barrier. This soil will require on-site treatment of leachable lead to de-characterize the soil as hazardous waste prior to disposal at an out-of-state lined landfill as non-hazardous waste. The lead hot spot is estimated to be approximately 250 cubic yards.

Off-site disposal of the soil mound will require disposal at various different soil receiving facilities, such as in-state landfills, asphalt batch recycling plants, and/or out-of-state landfills. The RAM includes removal of a portion of this soil mound as a risk reduction measure to reduce exposure pathways. The RAM will be used to dispose off-site the most highly contaminated soil in the mound based on soil pre-characterization sampling and testing previously performed. The soil mound is estimated to be approximately 10,000 cubic yards; however, the quantity of the soil mound identified for excavation and off-site disposal under this RAM is approximately 200 cubic yards.

Approximately 450 cubic yards of soil may be excavated as part of the RAM. We are requesting approval to manage up to 1,000 cubic yards of soil as Remediation Waste during the RAM, which accounts for potential changes in scope or design.

The RAM is expected to begin in Spring 2023.

1. Introduction

GEI Consultants, Inc. prepared this Release Abatement Measure (RAM) Plan on behalf of the Boston Planning & Development Agency (BPDA) for the management and disposal of contaminated soil at the property identified as Parcel P-3 (the Property) and at Whittier and Tremont Streets in Roxbury, Massachusetts (the Site; Figs. 1 and 2). Two Massachusetts Department of Environmental Protection (MassDEP) disposal sites are on the Property; Release Tracking Numbers (RTNs) 3-15009, originally notified to MassDEP in 1997 and RTN 3-36365 notified to MassDEP on July 16, 2020. RTN 3-36365 has been linked to RTN 3-15009 creating a combined disposal site (the Site). This RAM Plan was prepared in accordance with the Massachusetts Contingency Plan (MCP; 310 CMR 40.0440).

1.1 Purpose

The purpose of this RAM Plan was to meet the requirements of the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000).

1.2 Submittals

The MassDEP RAM Transmittal Form (BWSC106) is being submitted electronically via eDEP, and a copy is in Appendix A. Two separate forms were filed for the two RTNs (RTNs 3-15009 and 3-36365).

1.3 Public Involvement

As required by 310 CMR 40.1403, letters were distributed to the Chief Municipal Officer (Boston Mayor) and Board of Health (Boston Public Health Commission) notifying them of the availability of the Report. Copies of the notification letters are in Appendix B.

1.3.1 PIP Activities

Disposal site RTN 3-15009 was designated a Public Involvement Plan (PIP) site in 2005. In accordance with the requirements of the PIP, a public comment period was opened following the submission on January 8, 2021 of the draft RAM Plan. An initial public meeting was hosted virtually on January 11, 2021 to present the findings of the report. Copies of the meeting notification letters and PIP meeting minutes were previously submitted to MassDEP. The initial 20-day public comment period was set for February 1, 2021 but the public requested an extension. BPDA granted additional time and the comment period closed on February 26, 2021. Comments received and the BPDA's responses to the comments are in Appendix B, and were incorporated into this final report as appropriate.

1.4 Project Description

The RAM is for the targeted cleanup of lead contaminated soil which is considered a "hot spot" under the MCP and a portion of an approximately 10,000 cubic yards soil mound. The lead contaminated soil hotspot is east of Vernon Street and south of an undeveloped road, formerly Hampshire Street (Fig. 2). The soil mound is on the northeast portion of the Site (Fig. 2), east of Vernon Street, north of Hampshire Street and south of Tremont Street. It is a large artificial mound, 5 to 10 feet above the surrounding pavement, except for the northeast corner which is landscaped and at normal grade. The mound is mixed soil and debris including metal, concrete, and brick debris, tires, and trash. This area is entirely unpaved and is surrounded by a fence.

1.4.1 Lead Hot Spot Removal

The lead contaminated soil in the hot spot area is within approximately 5 to 7 feet of the ground surface. Due to the active utility along the paper Hampshire Street, there is a greater exposure potential to subsurface soil during a utility repair at this portion of the Site; therefore, this area is defined as a soil hot spot for lead. The lead levels in the hot spot also exceed the MCP upper concentration limit, which if left in place would require an Engineered Barrier. The lead hot spot is estimated to be approximately 250 cubic yards.

The RAM includes removal of the lead hot spot as the primary risk reduction measure to eliminate exposure pathways and avoid the need for an Engineered Barrier. This soil will require on-site treatment of leachable lead to de-characterize the soil as hazardous waste prior to disposal at an out-of-state lined landfill as non-hazardous waste.

1.4.2 Soil Mound Removal

The source of the soil mound is unknown, but it is likely from unauthorized dumping of construction debris and excavated soil from another construction site (Fig. 2). The mound has been on the Site for at least 25 years. There are a range of contaminants in the soil mound, primarily attributable to urban fill and include lead, petroleum hydrocarbons and polycyclic aromatic hydrocarbons (PAHs). The soil mound is estimated to be approximately 10,000 cubic yards.

Off-site disposal of the soil mound will require various different soil receiving facilities, such as in-state landfills, asphalt batch recycling plants, and/or out-of-state landfills. The RAM includes removal of a portion of this soil mound as a risk reduction measure to reduce exposure pathways using a grant from the MassDevelopment's Brownfields Redevelopment Fund. The RAM will be used to dispose off-site the most highly contaminated soil in the mound based on soil pre-characterization sampling and testing previously performed.

To achieve a Permanent Solution under the MCP, additional off-site soil disposal from the mound may be required. Excavation and disposal of that additional soil will be part of future remediation phases, likely associated with redevelopment of the Property.

1.5 Contact Information (310 CMR 40.0444[1][a])

Responsibility for the RAM	**Licensed Site Professional (LSP) for the RAM**
William J. Epperson	Ileen S. Gladstone, P.E., LSP (No. 9719)
BPDA	GEI Consultants, Inc.
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617.918.6202	781.424.9924

2. Description of Release, Site Conditions, and Surrounding Receptors (310 CMR 40.0444[1][b])

2.1 Site Description

The Site is at the intersection of Tremont Street and Whittier Street in Boston, Massachusetts (Fig. 1). The Site is vacant and owned by the BPDA. The latitude and longitude of the Site are 42°19'59.88"N and 71° 5'21.33"W, and UTM coordinates for the Site are 4,688,888mN and 327,826mE. The City of Boston Assessor's database identifies the Site as parcel #902980100.

The Site is approximately 334,546 square feet or 7.7 acres. The Site is bounded by Tremont Street to the north, Whittier Street to the east, Downing Street to the south, and an unnamed road to the west that accesses the parking lots behind the Madison Park High School. Additionally, Vernon Street bisects the eastern and western portions of the Site. In the eastern portion of the Site, an undeveloped road, formerly Hampshire Street, bisects the Site north of the former Whittier Street Health Center (WSHC) building (Fig. 2).

The former WSHC, a vacant, four-story brick building, is on the southeast portion of the Site (Fig. 2, east of Vernon Street and south of Hampshire Street). The building is surrounded by pavement, which is in poor condition and a fence. A large artificial mound, approximately 5 to 10 feet above the surrounding pavement, except for the northeast corner, which is landscaped and at normal grade, is on the northeast portion of the Site (Fig. 2, east of Vernon Street and north of Hampshire Street). The mound is mixed soil and debris including metal, concrete, and brick debris, tires, and trash. This area is entirely unpaved and is surrounded by a fence.

The western portion of the Site (Fig. 2, west of Vernon Street) is primarily paved asphalt parking lots, which are in good condition. In this area there are also some landscaped areas and a small community garden (Whittier Community Garden) with raised planter beds.

2.2 Natural Resource Areas and Surrounding Land Use

Based on our review of the MassGIS Natural Resources Map for the Site (Fig. 3) and City of Boston assessor's maps, the environmental setting and potential sensitive receptors at the Site and in its vicinity include:

- Residential Population: The Site is in an urban area of Boston. We estimate that there are more than 1,000 residents within 0.5-mile of the Site.
- On-site Workers: There are fewer than 10 workers at the Site.

- Institutions: There are no institutions, as defined by the MCP, within 500 feet of the Site boundary. However, Madison Park High School is approximately 100 feet southwest and upgradient of the Site and the current WSHC is approximately 100 feet northwest and upgradient of the Site.
- Drinking Water Supplies: There are no known drinking water supplies (Zone II areas, Interim Wellhead Protection Areas, Zone A areas, Potentially Productive Aquifers [PPA], or private wells) or Sole Source Aquifers within 500 feet of the Site.
- Surface Waters and Wetlands: There are no surface water bodies or wetlands within 0.5 mile of the Site. The Back Bay Fens is approximately 0.5 mile to the northwest.
- Fish Habitat: The Back Bay Fens, approximately 0.5 mile from the site, is presumed fish habitat.
- Area of Critical Environmental Concern (ACEC): According to the MassGIS map, the Site is not located in an ACEC.
- Threatened or Endangered Species: According to the MassGIS map, there are no Natural Heritage and Endangered Species Program Estimated Habitats for Rare Wetlands Wildlife within 500 feet of the Site. According to the Massachusetts Natural Heritage Atlas, there are no priority habitats of rare species, estimated habitats of rare wildlife, or certified vernal pools within 0.5 mile of the Site.
- Protected Open Space: According to the MassGIS map, there is one public park, associated with Roxbury Community College, approximately 300 feet south of the Site.

2.3 Release Description

The BRA, predecessor to the BPDA, engaged W&S to conduct subsurface investigations on the eastern portion of the Property in 1996 and 1997. The investigation identified TPH, PAHs, and lead in excess of the RCS-1 standards. The BRA reported the release to the MassDEP on April 11, 1997 and the Site was assigned RTN 3-15009. The Site was classified as Tier II on April 10, 1998.

In 2002, W&S conducted Phase II investigations at the Site. W&S collected soil and groundwater samples for analysis of VPH, EPH, PCBs, and RCRA 8 metals. The detected contaminants were predominantly TPH, PAHs, and lead. As a result of this investigation, W&S identified the RTN 3-15009 disposal site as the eastern portion of the Property except for the former WSHC and its parking lot (Fig. 2).

W&S also conducted a combined Method 1 and 3 Risk Characterization for the RTN 3-15009 disposal site. The risk characterization indicated that a condition of NSR did not exist at the Site. In their Phase III RAP, W&S proposed excavating a hot spot of

lead-contaminated soil on the southeast portion of the RTN 3-15009 disposal site and placing an AUL on the northern portion of the disposal site to restrict residential development.

The lead hot spot was not excavated and the AUL was not prepared. The next regulatory deadline for the RTN 3-150009 disposal site was a Phase IV RIP by 2003; which was not completed.

In 2017, on behalf of the then-designated developer, P-3 Partners, GEI conducted a subsurface investigation. Based on the results of our investigation, concentrations of chlorinated VOCs including TCE, cis-1,2-DCE, and vinyl chloride in groundwater on the western portion of the Property exceeded the applicable MCP RCGW-2 standard. This constituted a new MassDEP reportable condition for the property owner (BPDA).

In addition, the concentration of lead and PAHs in soil samples collected from one test pit and one soil boring were greater than the RCS-1 standard. The test pit was within the boundary of the RTN 3-15009 disposal site, but the boring was in the western portion of the Property which had not been reported to MassDEP. However, the lead and PAHs concentrations are consistent with the coal and coal ash observed in the upper 8 to 10 feet of soil.

The new groundwater and soil exceedances were reported to MassDEP by BPDA on July 16, 2020 and the release was assigned RTN 3-36365.

On April 26, 2021, GEI, on behalf of the BPDA, submitted a Supplemental Phase II Comprehensive Site Assessment (CSA), Phase III Remedial Action Plan (RAP) Addendum, and Temporary Solution Statement (GEI 2021 Supplemental Phase II/III Report). The report linked RTN 3-36365 to the RTN 3-15009, enlarging the historic disposal site to incorporate both (Fig. 2). In the report, GEI concluded that a condition of No Significant Risk did not exist at the Site from exposure to soil and groundwater. However, a condition of No Substantial Hazard to human health existed at the Site. GEI identified and evaluated remedial action alternatives (RAA) that were reasonably likely to achieve a Permanent or Temporary Solution and were feasible considering the expertise exists to effectively implement them. GEI recommended Site Maintenance as the selected remedy since it achieved a Temporary Solution and was more cost-effective than other RAAs that could potentially achieve a Permanent Solution. Definitive and enterprising steps were also recommended to achieve a Permanent Solution, including evaluating the feasibility of removing the large, artificial mound of soil at the Site.

3. Subsurface Conditions

3.1 Previous Investigations

3.1.1 Phase I Initial Site Investigation/Tier Classification (1996-1998)

The BRA retained W&S to perform a Phase I Initial Site Investigation at the Property in 1996. During their site reconnaissance and records review, permits for seven historic storage tanks were identified. These historic storage tanks included a 3,000-gallon fuel oil UST in the basement of the former WSHC. No permits were identified for the abandonment or removal of these storage tanks. In addition, W&S observed dumping of solid waste including fill, construction, and demolition debris throughout the site.

Between November 1996 to March 1997, W&S excavated 7 test pits, advanced 31 soil borings, and installed 12 monitoring wells throughout the eastern portion of the Site. Fig. 2 shows the locations of W&S's explorations. They submitted soil and groundwater samples to AMRO Environmental Laboratories Corporation (AMRO) of Merrimack, New Hampshire, for an analysis of TPH, VOCs, PAHs, and RCRA 8 metals. W&S's soil and groundwater data are summarized in Tables 1 and 2, respectively.

Soil samples collected from the fill mound on the northeastern portion of the Site contained TPH, PAHs, and lead in excess of RCS-1 standards. Some PAHs exceeded RCS-1 standards below the pavement southwest of the former WSHC.

The BRA reported the release to MassDEP on April 11, 1997. MassDEP assigned RTN 3-15009. W&S classified the Site as Tier II on April 10, 1998 and submitted the Phase I ISI Report/Tier Classification to MassDEP. The Numerical Ranking System (NRS) for the disposal site was 143. The disposal site was limited to the eastern portion of the Property (Fig. 2).

3.1.2 Phase II Comprehensive Site Assessment and Phase III Remedial Action Plan (2002)

BRA retained W&S to perform a Phase II CSA and prepare a Phase III Remedial Action Plan (RAP) (W&S 2002 Phase II/III Report) for the Site. This was limited to the eastern portion of the Property. W&S conducted additional subsurface investigations, including advancing soil borings, installing monitoring wells, and collecting soil and groundwater samples for analysis of VPH with targets, EPH with targets, PCBs, and RCRA 8 metals. Fig. 2 shows the locations of W&S's explorations. W&S's soil and groundwater data are summarized in Tables 1 and 2, respectively.

Contaminants in the urban fill and soil mound were predominantly TPH, PAHs, and lead east of Vernon Street (Fig. 2). One soil sample (B211) collected east of Vernon Street also exceeded the Toxicity Characteristic Leaching Procedure (TCLP) hazardous waste threshold for lead. As a result of the chemical testing at the Property, W&S identified the RTN 3-15009 disposal site as the area north and west of the former WCHC, bounded to west by Vernon Street (Fig. 2). The former WSHC and its parking lot were not included in the RTN 3-15009 site boundary, nor was the portion of Property west of Vernon Street.

W&S prepared a combined Method 1 and 3 Risk Characterization for the RTN 3-15009 disposal site. The risk characterization indicated that a condition of NSR did not exist, due to the lead contamination in the soil west of the former WSHC. W&S proposed excavating the lead-contaminated soil and placing an AUL on the northern portion of the disposal site, to restrict residential development.

The lead hot spot was not excavated and the AUL was not prepared. The next regulatory deadline for the site was a Phase IV RIP by 2003, which was never completed.

3.2 GEI Subsurface Investigations 2013-2017

3.2.1 Geotechnical Soil Borings, 2013 and 2016

GEI observed Northern Drill Service, Inc. (Northern) of Northborough, Massachusetts drill two borings (B101 and B102) between July 25, 2013 and July 27, 2013. The borings were advanced using wash-rotary techniques with driven casing and drilling mud. The boring locations are shown in Fig. 2.

GEI observed New England Boring Contractors of Derry, New Hampshire drill ten borings (B201 through B210) between June 28, 2016 and July 19, 2016. The borings were advanced using wash-rotary techniques with driven casing and drilling mud. The boring locations are shown in Fig. 2.

Standard Penetration Tests (SPTs) were performed and split spoon samples were generally collected at 5-foot intervals. All SPTs were performed using a safety hammer with a rope and cathead. Recovered split-spoon soil samples were placed in jars and sent to our laboratory for verification of field classification. Individual sample descriptions were provided in the boring logs in GEI's 2021 Supplemental Phase II/III Report.

3.2.2 Phase II Environmental Site Assessment, 2017

In February 2017, GEI prepared an ASTM Phase II ESA, to evaluate potential releases of OHM associated with the industrial history of the Site, particularly on the western portion (west of Vernon Street; Fig. 2).

3.2.2.1 Field Investigation and Soil Sampling

GEI observed Northern excavate seven test pits (TP101, TP103 to TP108) (Fig. 2). The test pits were excavated to depths ranging from 2 to 10 feet deep and logged for soil type, debris, and buried structures. Test pits logs were in GEI's 2021 Supplemental Phase II/III Report.

The fill contained abundant concrete and brick in a fine to coarse sandy matrix. We observed several pipes and historic structures during excavations. A buried concrete pipe was observed in TP-103, a competent brick layer was observed in TP-104, and a concrete foundation was observed 5.0 ft northeast of TP-104. TP-105, on the northeastern side of the Property, contained a layer of degraded concrete approximately 8 feet deep. Steel and copper pipes were observed in TP-106 and TP-107.

GEI also observed Northern advance seven soil borings (B301 through B303 and B305 through B308) (Fig. 2). The borings were advanced through the water table using hollow stem augers (HSA) to a depth of 20 to 30 feet below ground surface and completed as groundwater monitoring wells. Boring logs and monitoring well installation logs were in GEI's 2021 Supplemental Phase II/III Report.

The soil samples from each split spoon were screened for VOCs using a photoionization detector (PID), with a 10.6 eV bulb. The SPTs were conducted continuously from the ground surface to the groundwater table and at 5-foot intervals from the groundwater table to the bottom of each boring.

Soil samples for chemical analysis were collected from both the test pits and the borings. The samples were collected to characterize shallow soils and deeper soils near historic industrial operations. Soil samples were collected for laboratory analysis based upon field test data and visual/olfactory evidence of OHM. In general, one soil sample was collected from each boring and test pit.

Soil samples from test pits were generally collected from 0 to 3 feet and submitted to Alpha Analytical of Westborough, Massachusetts for analysis of PCBs and either RCRA 8 metals or MCP 14 metals. Soil samples from borings were collected from the interval with the highest PID reading, or from the water table, and generally analyzed for VOCs, VPH, and EPH.

Additional soil samples were collected for pre-characterization from TP-105 and B308. One soil sample was characterized from TP-105 within the upper fill and two soil samples were characterized from B308, one sample from within upper fill and one sample from within the underlying glacial outwash.

3.2.2.2 Well Installation and Groundwater Sampling

Northern completed the seven borings as monitoring wells using 2-inch diameter PVC and 10 feet of slotted well screen. The monitoring wells were advanced through the fill layer and screened across the estimated water table.

The monitoring wells were backfilled from the bottom to above the screened sections using clean sand and sealed above that with bentonite chips. They were finished with 4-inch steel road boxes mounted flush with the ground surface and surrounded by a concrete pad. Monitoring well installation logs were in GEI's 2021 Supplemental Phase II/III Report.

We developed the seven newly installed monitoring wells after the completion of drilling and one existing monitoring well B205(OW) by purging them with a submersible pump. A well was considered developed when 10 well volumes were removed, when water removed from the well was relatively free of fine-grained material, or after the well ran dry.

Between March 2 and March 5, 2017, we collected groundwater samples, and surveyed the vertical elevations of the eight monitoring wells. We surveyed the vertical elevations of the monitoring wells relative to an onsite benchmark. The benchmark used was the top of the fire hydrant located adjacent to B(MW)305.

Based on groundwater measurements, groundwater flows south to north across the Site. The groundwater gradient appears to be steeper on the southern side of the Property, between B(MW)306 and B(MW)307, and shallower to the east.

Each well was sampled with a peristaltic pump, using low-flow methods. The groundwater samples were submitted to Alpha for chemical testing of VOCs, EPH, and VPH. One sample, from B(MW)307, was tested for groundwater discharge permit requirements.

3.2.2.3 Chemical Testing Results: Soil

The chemical testing results for soil associated with the western portion of the Site are summarized in Table 3 and the laboratory data report was in GEI's 2021 Supplemental Phase II/III Report. The chemical testing results for soil associated with the eastern portion of the Site (original RTN 3-15009) were summarized in W&S's 2002 Phase II/III Report and are also presented in Table 1 of this report.

Results indicated the presence of the following at concentrations above the laboratory reporting limit:

- VOCs: Benzene, TCE.
- PAHs: 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, dibenzofuran, di-n-butyl phthalate, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene.

- EPH: C_{11}–C_{12} aromatics, C_{19}–C_{36} aliphatics, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.
- PCBs: Aroclor 1254
- Pesticides: Endosulfan II.
- Total Petroleum Hydrocarbons.
- Metals: Arsenic, barium, beryllium, chromium, lead, mercury, nickel, vanadium, and zinc.

Based on the soil chemical testing results, we identified lead and four PAHs above the RCS-1 reporting standard: benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene.

3.2.2.4 Chemical Testing Results: Groundwater

The chemical testing results for groundwater associated with the western portion of the Site are summarized in Table 2 and the laboratory data report was in GEI's 2021 Supplemental Phase II/III Report. The chemical testing results for groundwater associated with the eastern portion of the Site (original RTN 3-15009) were summarized in W&S's 2002 Phase II/III Report and are also presented in Table 2 of this report.

Results indicated the presence of the following in wells B(MW)302, B(MW)305, B(MW)306, B(MW)307, and B(MW)308 at concentrations above the laboratory reporting limit:

- VOCs: Tetrachloroethene (PCE), TCE, cis-1,2- DCE, 1,2-dichloroethene, ethyl ether, 1,4-dioxane, p-isopropyltoluene, vinyl chloride.
- PAHs: Acenaphthene, fluoranthene, fluorene, 2-methylnaphthalene, phenanthrene, and pyrene.
- EPH: Acenaphthene, anthracene, fluoranthene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene.
- Metals: Cadmium, copper, and nickel.

Based on the groundwater chemical testing results, we identified three chlorinated VOCs at or above the RCGW-2 standard: TCE, cis-1,2-DCE, and vinyl chloride. Exceedances of RCGW-2 for TCE were detected in B(MW)302, B(MW)306, and B(MW)308. Additionally, B(MW)306 also contained vinyl chloride and cis,1,2-DCE above the RCGW-2.

3.3 GEI Soil Pre-characterization Investigation, 2021

Between December 9 and 10, 2021, GEI observed Northern Drill Service of Northborough, Massachusetts (NDS) advance 23 borings (B401 through B423) using direct-push drilling techniques. The borings were advanced for environmental sampling to depths ranging from 5 to 10 feet to correspond approximately with the anticipated bottom of excavation. The borings were completed to characterize soil for off-site disposal. Boring locations are shown on Fig. 4.

Soil samples collected from the borings were continuously logged (lithology and physical observations) in accordance with the USCS guidelines. Field screening for VOCs in soil samples was performed with a photoionization detector (PID) equipped with a 10.6 eV lamp. PID field screening results are summarized on the boring logs. Boring logs summarizing subsurface conditions are in Appendix C. Jar headspace screening results ranged from 0.0 to 0.2 ppm in the soil samples collected.

In each boring, one to two soil samples were collected over the planned depth of excavation (generally, one sample every 5 feet). The soil samples were submitted to ESS Laboratory of Cranston, Rhode Island (ESS) for analysis of the waste characterization parameters in Table 4. Comparison of contaminant concentrations to RCS-1 values and typical off-site reuse, recycling and/or disposal acceptance criteria are summarized in Table 5. The associated laboratory data reports are in Appendix D. No soil samples from borings B422, B423, or B424 were analyzed by the laboratory as these were contingency locations only, which ultimately were not needed to define the limits of TCLP lead contaminated soil.

Concentrations of VOCs, SVOCs and PAHs, TPH, pesticides, and metals were detected above laboratory reporting limits in soil samples from at least one boring.

- The VOC naphthalene was detected in several soil samples above the laboratory reporting limit but below the RCS-1 standard.
- SVOCs including 2-methylnaphthalene, acenaphthene, acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, and/or phenanthrene were detected above their RCS-1 standards in at least one sample.
- TPH was detected above the laboratory reporting limit in several samples but did not exceed the RCS-1 standard (1,000 mg/kg).
- PCBs were not detected above the laboratory reporting limits in any of the samples.
- The pesticide 4,4'-DDT was detected in three samples, B408(0-5), B410(0-5), and B411(0-5). However, concentrations of 4,4'-DDT were well below the RCS-1 standards.

- Lead was detected above the RCS-1 standard (200 mg/kg) in 12 of the 17 samples (ranging from 210 to 2,020 mg/kg. Leachable lead (by TCLP) was not detected above the regulated hazardous waste limit (5 mg/L) in any of the samples.

3.4 Topography

The Site is in an area that is naturally level; however, a large, artificial, mound of mixed soil and debris (brick, concrete, etc.) is on the northeast corner of the Site. Based on the United States Geological Survey (USGS) Topographic Quadrangle (7.5 x 15 Minute Series), the surface elevation is approximately 40 feet above National Geodetic Vertical Datum (NGVD). Surface water runoff is likely directed to the catch basins located on the Property.

3.5 Geology

The soil layers encountered in the borings are described below, starting at the ground surface. This description incorporates the results of both the geotechnical and environmental drilling programs. The soil conditions are known only at the boring locations. Conditions between borings may differ significantly from those shown in the subsurface profiles and described below.

- Asphalt/Concrete – A 6-inch-thick layer of asphalt or concrete was encountered at the ground surface at borings B302(MW) and B305(MW). However, most of the site is unpaved.
- Topsoil – A 6 to 12-inch layer of brown soil with roots and sand was present in the test pits in the landscaped areas and in B301(MW), B303(MW), B306(MW) and B308(MW).
- Fill – A 3- to 17.5-foot-thick layer of miscellaneous fill was encountered in all of the borings. The fill generally consisted of fine to coarse sand with varying amounts of gravel to widely graded gravel with varying amounts of silt, sand, and clay. Brick, concrete, coal ash, and asphalt fragments were very common throughout the fill; however, odors or staining associated with OHM were not observed. PID readings ranged from 0.0 to 55.0 parts per million.
- Organic Soil – A 5 to 10-foot-thick layer of organic soil was encountered beneath the fill, approximately 9 to 12 feet deep, in B302(MW) and B303(MW). The organic soil consisted of black organic silt with layers of peat or brown to gray peat with silt lenses.
- Glacial Outwash – A layer of glacial outwash consisting of sand and gravel was encountered in all of the borings, overlain either by the fill or by the peat. The layer thickness varied from 25 to 65 feet in the most recent borings. Up to 71.5 feet of glacial outwash was encountered in B102. The glacial outwash tended to be thinner

on the southwest portion of the site and thicker in the northeast portion of the site. The glacial outwash generally consisted of widely graded to narrowly graded sand with silt and gravel. The silt and gravel content varied across the site.

- Weathered Bedrock/Bedrock – Highly weathered to slightly weathered Roxbury Conglomerate was encountered below the glacial till. The Roxbury Conglomerate is a sedimentary rock with clasts (rounded to subrounded gravel to boulder size rocks) set in a finer-grained (sand and silt size particles) sedimentary matrix. In most of the borings, the upper 5 to 15 feet of bedrock was moderately to highly weathered. The weathering appeared to affect the sand matrix more than the clasts resulting in recoveries of rounded to subrounded gravel missing the sand and silt matrix that was washed away due to the coring process. Typically, the degree of weathering decreased with depth which resulted in better recoveries with depth. Recoveries and Rock Quality Designations (RQDs) ranged from 17% to 100% and from 0% to 69%, respectively.

3.6 Hydrogeology

Depth to groundwater measured from ground surface on March 5, 2017 ranged from approximately 8 to 13 feet deep. Based on the results of GEI's groundwater elevation survey, groundwater flows from south to north toward the Back Bay Fens.

4. RAM Objectives, Plan, and Schedule (310 CMR 40.0444[1][c])

The planned RAM activities are limited in scope and complexity and so meet the performance criteria described in 310 CMR 40.0441(2). Soil is being excavated across the Site as a risk reduction measure. The planned RAM activities, as further described in Section 4.2, are common activities performed on construction projects in urban areas.

4.1 Objectives

The objective of this RAM Plan is to excavate, treat if necessary, and otherwise handle soil, including transport for off-site reuse, disposal, recycling, and/or treatment. Management of groundwater is not anticipated. The RAM Plan has been developed to be protective of construction workers and surrounding receptors from direct contact with potentially contaminated soil and/or fugitive dust inhalation.

This RAM is being performed with a grant from the MassDevelopment's Brownfields Redevelopment Fund.

4.2 Planned RAM Activities

4.2.1 Soil Excavation and Off-site Reuse, Recycling, and/or Disposal

The total volume of soil to be removed off-site under this RAM is limited to the funding available by the MassDevelopment Grant. The total estimated quantity of lead hot spot soil requiring excavation and off-site disposal is approximately 250 cubic yards (Figs. 5 and 6). The total estimated quantity of the soil mound identified for excavation and off-site disposal is approximately 200 cubic yards. Based on existing Site data, we have concluded that portions of the soil mound need to be recycled at an asphalt batch recycling plant (Figs. 5 and 6). These soils have the highest concentrations of lead and/or petroleum-related compounds and contribute most to the potential risk to human health. The remediation will be implemented to optimize the removal of these more contaminated soils.

Approximately 450 cubic yards of soil may be excavated as part of the RAM. Soil will be excavated to depths up to approximately 10 feet below the current grade on the Property. Management of soil as Remediation Waste is further described in Section 5.

The hot spot excavation will be backfilled with soil from the mound that is deemed acceptable for on-site reuse. The soil mound will not require any backfill since partial removal of the mound will not result in a below grade excavation.

Refer to construction drawings in Appendix E for specific areas planned for excavation under this RAM.

4.2.2 Soil Handling

The soil is likely to be loaded directly onto trucks and transported off site for reuse, recycling, and/or disposal at an appropriate receiving facility. The soil may be re-used onsite as backfill. Soil may also be temporarily stockpiled on-site while awaiting off-site transport.

If stockpiled, excavated material will be separated based on the anticipated disposal location (based on existing pre-characterization) or based on field screening results. At a minimum, excavated material with visible stains or unnatural odor indicative of oil and hazardous materials (OHM) will be separated from material that does not exhibit these characteristics. Soil will be stockpiled on a 6-mil-thick, polyethylene barrier or other impervious surface, if necessary, and covered with a 6-mil-thick, polyethylene barrier in bermed areas where storm water runoff is diverted from the stockpile(s).

An excavated materials management specification is part of the contract documents and includes provisions for the contractor to follow, including handling, stockpiling, storing, loading, reusing, recycling, disposing, transporting, and tracking of excavated material. In addition, various earthwork and site restoration specifications are part of the contract documents and include provisions for excavation, backfilling, erosion control, and final grading. Copies of these specifications are in Appendix E.

4.2.3 Soil Screening and Additional Characterization

We will periodically screen soil on site as it is excavated. The screening will be olfactory observations combined with jar-headspace measurements of VOCs using a PID. If we identify material during excavation as having characteristics inconsistent with those identified during pre-characterization, the material will be stockpiled separately and further characterized.

4.2.4 On-site Treatment of TCLP Contaminated Soils

Up to approximately 250 cubic yards of soil in the lead hot spot has been categorized as potentially hazardous waste if excavated and disposed off site because the TCLP results for leachable lead were greater than 5 milligrams per liter (mg/L). Total lead concentrations in this area were up to 13,000 milligrams per kilogram (mg/kg). The soil will be treated prior to excavation and off-site removal. A proprietary reagent will be applied to the affected soil and mixed with the bucket of an excavator. The mixing zone will be constantly sprayed with water to suppress dust and to activate reagents.

After treatment is completed, confirmatory samples will be collected to ensure that the soil no longer contains leachable lead greater than 5 mg/L. Treated material will be transported off site to an out-of-state non-hazardous landfill. Management of soil as Remediation Waste is further described in Section 5.

This treatment includes applying Remedial Additives. Per 310 CMR 40.0046(3), a Remedial Additives Plan is required if application is performed within 100 feet of an occupied residential dwelling, school, or childcare center. There is an occupied residential dwelling approximately 350 feet east of the treatment area and a school and childcare center approximately 400 feet west of the treatment area. Although not required given these distances, a Remedial Additives Plan has still been developed (Appendix F). No approval, presumptive or otherwise, is needed from MassDEP to apply the Remedial Additives under this RAM Plan.

4.2.5 Construction Dewatering and Groundwater Management

We do not anticipate that dewatering will be necessary to manage groundwater during construction. Excavations will generally be shallow and are likely to be above the groundwater table. If groundwater is encountered during excavation, the construction dewatering effluent will be recharged on site. Recharging of the construction dewatering effluent will be performed in accordance with the MCP (310 CMR 40.0045[4]).

4.2.6 Underground Storage Tank/Drum Removal

Although not expected, if evidence of a possible drum or underground storage tank (UST) is encountered, work will be temporarily stopped. The area will be screened for the presence of OHM using a PID, and visual and olfactory observations. Material contained within the drum/UST will be evaluated by the LSP or representative. The materials and drum/UST will be excavated and disposed of properly. If a new MCP reportable condition is identified during drum/UST removal, MassDEP will be notified and the appropriate MCP response actions will be performed.

4.2.7 Mechanical Screening

If required, mechanical screening (separation) of buried debris, rubble and oversize cobbles and boulders from soil will be performed prior to off-site disposal to reduce disposal volumes. Materials which do not exhibit visual/olfactory evidence of contamination will be disposed off site as solid waste.

4.3 Greener Cleanups

The MCP requires that site assessment and remediation eliminate or reduce the environmental footprint of cleanup activities to the maximum extent possible, per 310 CMR

40.0191(3)(e). This RAM Plan addresses the requirements for conducting Greener Cleanups in general accordance with MassDEP's policy "Greener Cleanups Guidance" (Policy WSC #14-450). A checklist based on ASTM Standard Guide for Greener Cleanups (ASTM E2893-16) was used to qualitatively document the Greener Cleanup Best Management Practices (Greener Cleanup BMPs) that apply to the Site and cleanup. These include:

- Preparing, storing, and distributing documents electronically using an information management system.
- Contracting a laboratory that uses green practices and/or chemicals.
- Selecting local waste disposal and recycling facilities to minimize transportation impacts.
- Using a local laboratory to minimize transportation impacts.
- Using local staff (including subcontractors) to minimize transportation impacts.
- Segregating excavation waste based on composition to reduce the volume of waste disposed off site.
- Using drilling methods which minimize the generation and disposal of cuttings (i.e., Geoprobe direct-push).

4.4 Schedule

The RAM is expected to begin in Spring 2023.

5. Remediation Waste Management (310 CMR 40.0444[1][d])

Approximately 450 cubic yards of soil may be excavated as part of the project. On behalf of the BPDA, we are requesting approval to manage up to 1,000 cubic yards of soil as Remediation Waste during the RAM, which accounts for potential changes in scope or design.

We pre-characterized soil to be excavated to identify the likely soil management categories for Remediation Waste. Soil to be disposed off-site or reused on site has been classified as follows (further defined in Table 5):

- Category B – Reuse as Unlined Landfill Cover in Massachusetts
- Category D – Recycling at Asphalt Batch Plant
- Category F-1 – On-Site Treatment of Hazardous Waste and Disposal in Out-of-State Landfill as Non-Hazardous Waste

Soil from the mound will be reused as backfill in the lead-contaminated soil hot spot excavation.

6. Worker Protection and Environmental Monitoring (310 CMR 40.0444[1][e])

The contractor will prepare and implement a project Health and Safety Plan (HASP) to protect Site workers from potentially contaminated material. A health and safety specification is part of the contract documents and includes provisions for the contractor to follow. A copy of this specification is in Appendix E.

Air monitoring for the health and safety of construction workers will be performed by the contractor during excavation activities. Dust monitoring will be performed by GEI at the Property perimeter for the health and safety of surrounding receptors. The action level for dust (measured as PM10) at the perimeter is in the Perimeter Air Monitoring Plan (PAMP) in Appendix G (including derivation of the risk-based action level) and in the Health and Safety specification in Appendix E.

Dust mitigating measures, such as wetting down soils with water, will be conducted if the dust generation action levels are exceeded. The contractor will take necessary measures and provide equipment and/or materials to minimize dust from rising and blowing across the site, and from impacting neighboring property.

GEI as LSP will prepare our own HASP for the protection of GEI employees. If action levels as defined in our HASP are exceeded, we will notify the BPDA and the contractor who will notify workers in the immediate area.

7. Federal, State and Local Permits (310 CMR 40.0444[1][f])

Remediation Waste will be transported off site under a BOL. BPDA will sign all BOLs and/or manifests as the generator in accordance with 310 CMR 40.0034/0035.

No other permits are required to perform the RAM.

8. Certification (310 CMR 40.0444[1][g])

The seal and signature of the LSP who will oversee this RAM is on MassDEP RAM Transmittal Form (BWSC106) in Appendix A.

9. Financial Assurance (310 CMR 40.0444[1][h])

The generation of Remediation Waste will be limited to up to approximately 1,000 cubic yards of soil. Therefore, the certification required by 310 CMR 40.0442(5) if greater than 1,500 cubic yards of material are to be generated is not required.

10. Limitations

This report was prepared for the use of BPDA and MassDEP, exclusively. Our conclusions are based on the information reported in this document. Additional information not available to GEI at the time this report was prepared, and additional information obtained in the future may result in a modification of the findings of this investigation. This report has been prepared in accordance with generally accepted engineering and hydrogeological practices. No warranty, express or implied, is made.

11. References

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Tables

Table 1. Chemical Testing Results - Soil (Weston & Sampson)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Method 1 S-1/GW-2	Method 1 S-1/GW-3	WS-1 12/3/1996 8.5-10.5 W&S	WS-2 12/3/1996 10-12 W&S	WS-3 12/3/1996 15-17 W&S	WS-4 12/3/1996 10-12 W&S	WS-5 12/4/1996 10-12 W&S	WS-6 12/4/1996 10-12 W&S	WS-7 12/4/1996 10-12 W&S	WS-8 12/4/1996 17-17.5 W&S	WS-9 12/5/1996 18.5-19 W&S	WS-10 12/5/1996 17.5-18 W&S	WS-11 12/5/1996 20-22 W&S	WS-12 12/5/1996 11.5-12 W&S	B101-S1 Mar-97 1-2.5 W&S	B101-S2 Mar-97 4.5-6.5 W&S	B101-S3 Mar-97 7-9 W&S	B102-S1 Mar-97 1-3 W&S	B102-S2 Mar-97 4-6 W&S	B102-S3 Mar-97 7-9 W&S	B103-S1 Mar-97 1-3 W&S	B103-S2 Mar-97 4-6 W&S	B103-S3 Mar-97 7-9 W&S
Volatile Organics Compounds (VOCs)	8260C	mg/kg																NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene			2	40	40	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	0.087	< 0.027	< 0.027	<0.034									
Trichloroethene			0.3	0.3	30	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	<0.034									
Xylenes, Total			100	100	500	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.032									
n-Butylbenzene			NS	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.47									
sec-Butylbenzene			NS	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.27									
tert-Butylbenzene			100	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.036									
Isopropylbenzene			1000	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.33									
Naphthalene			4	20	500	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	0.15	< 0.026	0.15	< 0.027	0.16									
n-Propylbenzene			100	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.76									
1,2,4-Trimethylbenzene			1000	NS	NS	<0.025	<0.070	< 0.047	<0.070	<0.027	<0.024	<0.027	< 0.03	< 0.026	< 0.027	< 0.027	0.07									
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
C9-C10 Aromatics			100	100	100																					
C5-C8 Aliphatics, Adjusted			100	100	100																					
C9-C12 Aliphatics, Adjusted			1000	1000	1000																					
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg				NT			NT	NT	NT	NT			NT											
Acenaphthene			4	1000	1000		< 0.057	< 0.025					2	< 0.059		< 0.028	3.4	0.3	0.56	< 0.030	0.8	0.41	0.47	0.2	0.45	< 0.027
Acenaphthylene			1	600	10		< 0.057	< 0.025					12	0.18		< 0.028	0.8	< 0.14	0.22	< 0.030	< 0.28	0.96	0.14	< 0.055	< 0.055	< 0.027
Anthracene			1000	1000	1000		< 0.057	< 0.025					21	0.44		< 0.028	2.7	0.67	1.3	< 0.030	2.1	0.87	1.2	0.4	0.81	0.03
Benzo(a)anthracene			7	7	7		< 0.057	< 0.025					**38**	0.63		< 0.028	1.5	1.8	2.8	< 0.030	4.3	1.9	2.5	1	1.8	0.064
Benzo(a)pyrene			2	2	2		< 0.057	< 0.025					**39**	0.61		< 0.028	1.4	1.8	**2.6**	< 0.030	**4**	1.8	2.3	0.98	1.7	0.046
Benzo(b)fluoranthene			7	7	7		< 0.057	< 0.025					**34**	0.56		< 0.028	1.2	1.3	1.7	< 0.030	2.9	1.2	1.6	0.65	1.2	0.05
Benzo(g,h,i)perylene			1000	1000	1000		< 0.11	< 0.050					13	0.19		< 0.056	< 0.072	1.6	2.2	< 0.030	2.8	1.4	1.4	0.64	0.97	< 0.027
Benzo(k)fluoranthene			70	70	70		< 0.057	< 0.025					35	0.55		< 0.028	1.3	1.5	1.9	< 0.030	2.9	1.3	1.6	0.68	1.3	0.039
Chrysene			70	70	70		< 0.057	< 0.025					44	0.69		< 0.028	1.7	1.9	2.9	< 0.030	4.3	1.9	2.4	1.1	1.8	0.094
Dibenzo(a,h)anthracene			0.7	0.7	0.7		< 0.11	< 0.050					**4.7**	< 0.012		< 0.056	< 0.072	0.48	**0.75**	< 0.030	**1.1**	0.5	0.57	0.25	0.4	< 0.027
Dibenzofuran			100	NS	NS		< 0.057	< 0.025					NT	NT		< 0.028	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Di-n-butylphthalate			50	NS	NS		< 0.057	< 0.025					NT	NT		< 0.028	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene			1000	1000	1000		< 0.057	< 0.025					92	1.6		< 0.028	4.1	3.8	5.7	0.042	9.6	5.6	7.4	2	5.2	0.18
Fluorene			1000	1000	1000		< 0.057	< 0.025					11	0.2		< 0.028	3.9	0.24	0.64	< 0.030	0.82	0.42	0.51	0.16	0.35	< 0.027
Indeno(1,2,3-cd)pyrene			7	7	7		< 0.11	< 0.050					**14**	0.2		< 0.056	< 0.072	1.3	1.8	< 0.030	3.2	1.3	1.4	0.62	0.98	< 0.027
2-Methylnaphthalene			0.7	80	300		< 0.057	< 0.025					4.3	0.06		< 0.028	23	< 0.14	0.32	< 0.030	< 0.28	0.15	0.16	< 0.055	0.12	0.032
Naphthalene			4	20	500		< 0.057	< 0.025					8.2	0.13		< 0.028	1	< 0.14	0.28	< 0.030	0.55	0.28	0.25	0.061	0.19	0.048
Phenanthrene			10	500	500		< 0.057	< 0.025					93	1.5		< 0.028	11.1	3.2	5.4	0.06	7.9	4.6	6	1.8	4.6	0.19
Pyrene			1000	1000	1000		< 0.057	< 0.025					82	1.4		< 0.028	4.1	3.8	5.8	0.038	8.7	4.3	5.8	2.1	4.2	0.16
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
C9-C18 Aliphatics			1000	1000	1000																					
C11-C22 Aromatics, Adjusted			1000	1000	1000																					
C19-C36 Aliphatics			3000	3000	3000																					
Acenaphthene			4	1000	1000																					
Acenaphthylene			1	600	10																					
Anthracene			1000	1000	1000																					
Benzo(a)anthracene			7	7	7																					
Benzo(a)pyrene			2	2	2																					
Benzo(b)fluoranthene			7	7	7																					
Benzo(g,h,i)perylene			1000	1000	1000																					
Benzo(k)fluoranthene			70	70	70																					
Chrysene			70	70	70																					
Dibenzo(a,h)anthracene			0.7	0.7	0.7																					
Fluoranthene			1000	1000	1000																					
Fluorene			1000	1000	1000																					
Indeno(1,2,3-cd)Pyrene			7	7	7																					
2-Methylnaphthalene			0.7	80	300																					
Naphthalene			4	20	500																					
Phenanthrene			10	500	500																					
Pyrene			1000	1000	1000																					
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Organochlorine Pesticides	8081B	mg/kg				NT	NT	NT	NT	NT	NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Endosulfan II			0.5	300	1								NT	NT	NT	NT										
Total Petroleum Hydrocarbons (TPH)		mg/kg																								
TPH			1000	1000	1000	< 52	< 110	< 66	< 110	< 54	< 45	< 51	500	< 56	**1070**	< 47	**8400**	500	350	ND	440	380	560	160	270	120
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg				NT	NT	NT	NT	NT	NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
PCBs, Total			1	1	1								NT	NT	NT	NT										
Total Metals		mg/kg				NT			NT	NT	NT	NT														
Antimony, Total	6010C		20	20	20		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic, Total	6010C		20	20	20		7.1	7.5					7.3	7.8	NT	8.1	4.4	NT	NT	NT	NT	NT	NT	NT	NT	NT
Barium, Total	6010C		1000	1000	1000		62	57					240	160	NT	53	72	NT	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium, Total	6010C		90	90	90		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, Total	6010C		70	70	70		< 5.5	< 4.2					4.5	< 2.7	NT	< 2.4	< 3.3	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, Total	6010C		100	100	100		54	84					23	14	NT	11	27	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		200	200	200		13	9.6					**520**	**980**	NT	51	120	**210**	**360**	46	200	150	200	170	110	57
Mercury, Total	7471B		20	20	20		< 0.033	0.059					3.07	0.204	NT	< 0.015	< 0.022	NT	NT	NT	NT	NT	NT	NT	NT	NT
Nickel, Total	6010C		600	600	600		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Selenium, Total	6010C		400	400	400		< 5.5	< 4.2					< 2.6	< 2.7	NT	< 2.4	< 3.3	NT	NT	NT	NT	NT	NT	NT	NT	NT
Silver, Total	6010C		100	100	100		< 5.2	< 4.1					< 2.8	< 2.6	NT	< 2.4	< 3.3	NT	NT	NT	NT	NT	NT	NT	NT	NT
Thallium, Total	6010C		8	8	8		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium, Total	6010C		400	400	400		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, Total	6010C		1000	1000	1000		NT	NT					NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
6. ND = None detected above laboratory detection limit.
7. mg/kg = milligrams per kilogram.
8. Values in bold exceed Method 1 standards.

Table 1. Chemical Testing Results - Soil (Weston & Sampson)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Method 1 S-1/GW-2	Method 1 S-1/GW-3	B104-S1 Mar-97 1-3 W&S	B104-S2 Mar-97 4-6 W&S	B104-S3 Mar-97 7-9 W&S	B105-S1 Mar-97 1-3 W&S	B105-S2 Mar-97 4-6 W&S	B105-S3 Mar-97 7-9 W&S	B106-S1 Mar-97 1-3 W&S	B106-S2 Mar-97 4-6 W&S	B106-S3 Mar-97 7-9 W&S	B107-S1 Mar-97 1-3 W&S	B107-S2 Mar-97 4-6 W&S	B107-S3 Mar-97 7-9 W&S	B108-S1 Mar-97 1-3 W&S	B108-S2 Mar-97 4-6 W&S	B108-S3 Mar-97 7-9 W&S	B109-S1 Mar-97 1-3 W&S	B109-S2 Mar-97 4-6 W&S	B109-S3 Mar-97 7-9 W&S	B110-S1 Mar-97 1-3 W&S	B110-S2 Mar-97 4-6 W&S	B110-S3 Mar-97 7-9 W&S
Volatile Organics Compounds (VOCs)	8260C	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene			2	40	40																					
Trichloroethene			0.3	0.3	30																					
Xylenes, Total			100	100	500																					
n-Butylbenzene			NS	NS	NS																					
sec-Butylbenzene			NS	NS	NS																					
tert-Butylbenzene			100	NS	NS																					
Isopropylbenzene			1000	NS	NS																					
Naphthalene			4	20	500																					
n-Propylbenzene			100	NS	NS																					
1,2,4-Trimethylbenzene			1000	NS	NS																					
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
C9-C10 Aromatics			100	100	100																					
C5-C8 Aliphatics, Adjusted			100	100	100																					
C9-C12 Aliphatics, Adjusted			1000	1000	1000																					
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg																								
Acenaphthene			4	1000	1000	1	0.14	1.1	1.9	1.3	0.091	0.39	0.91	0.47	0.17	0.41	1	0.22	0.21	0.057	0.48	0.64	0.44	0.29	0.19	0.49
Acenaphthylene			1	600	10	0.24	0.041	0.24	0.35	< 0.28	< 0.055	0.11	0.16	0.11	< 0.058	< 0.11	0.12	< 0.058	0.09	< 0.055	0.088	0.083	0.092	0.04	0.059	< 0.29
Anthracene			1000	1000	1000	2	0.36	2.3	3.9	2.8	0.29	0.96	1.7	0.98	0.39	0.98	4.9	0.43	0.4	0.15	1.1	1.3	1	0.67	0.46	1.2
Benzo(a)anthracene			7	7	7	5.5	0.88	6	**8.1**	4.9	0.67	1.9	3.8	1.9	1.1	2.1	4.5	1.1	1.1	0.35	2	2.7	1.9	1.7	1.1	2.5
Benzo(a)pyrene			2	2	2	**5.6**	0.89	**5.9**	**7.5**	**4.1**	0.64	1.8	**3.6**	1.8	1	1.9	**4.1**	1.1	1.1	0.34	1.9	**2.5**	2	1.7	1.2	**2.5**
Benzo(b)fluoranthene			7	7	7	4.2	0.96	4.2	5.3	3.2	0.45	1.2	2	1.2	0.73	1.4	2.4	0.79	0.8	0.25	1.3	1.9	1.8	1.8	1.2	2.5
Benzo(g,h,i)perylene			1000	1000	1000	1.4	0.19	1.5	5.8	2.8	0.5	0.97	1.5	0.79	0.48	0.73	1.5	0.47	0.14	0.11	0.58	0.8	0.55	0.43	0.27	0.52
Benzo(k)fluoranthene			70	70	70	4.5	1	5	5.5	3.3	0.53	1.3	2.1	1.3	0.74	1.5	2.5	0.78	0.82	0.27	1.5	2.1	1.8	1.7	1.2	2.7
Chrysene			70	70	70	5.7	0.84	6.3	8.7	4.8	0.7	1.9	4	1.9	1.1	2.1	4.7	1.1	1.2	0.37	2	2.7	2	1.8	1.1	2.7
Dibenzo(a,h)anthracene			0.7	0.7	0.7	0.65	0.078	0.67	**2**	**1**	0.014	0.41	0.64	0.34	0.21	0.33	0.66	0.2	0.19	< 0.055	0.29	0.4	0.25	0.21	0.12	< 0.29
Dibenzofuran			100	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Di-n-butylphthalate			50	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Fluoranthene			1000	1000	1000	12	2	13	16	11	1.4	5.8	9.7	5.3	2.1	4.1	11	2.3	3.6	0.67	6	8	5.6	4.5	3.1	5.3
Fluorene			1000	1000	1000	1.1	0.15	1.1	1.9	1.5	0.11	0.41	0.82	0.44	0.14	0.38	0.88	0.18	0.22	< 0.055	0.48	0.64	0.43	0.26	0.2	0.63
Indeno(1,2,3-cd)pyrene			7	7	7	1.5	0.2	1.6	4.8	2.5	0.41	0.98	1.5	0.8	0.51	0.81	1.6	0.51	0.48	0.12	0.67	0.92	0.62	0.47	0.29	0.58
2-Methylnaphthalene			0.7	80	300	0.4	0.033	0.26	0.82	0.51	< 0.055	0.15	0.3	0.15	< 0.058	0.14	0.29	< 0.058	0.096	< 0.055	0.17	0.17	0.15	0.069	0.61	< 0.29
Naphthalene			4	20	500	0.7	0.051	0.61	1.6	1.1	0.071	0.25	0.56	0.27	0.085	0.2	0.4	0.07	0.19	< 0.055	0.28	0.29	0.32	0.11	0.11	< 0.29
Phenanthrene			10	500	500	9.6	1.2	12	15	11	1.2	5.1	6.9	4.6	1.7	4	9.7	1.8	3	0.6	5.4	6.7	4.9	2.4	2.3	5
Pyrene			1000	1000	1000	10	1.9	13	14	9.1	1.3	4.8	7.9	4.6	1.9	3.7	9	2	2.8	0.57	5	6.3	5.4	4.2	2.8	6.6
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
C9-C18 Aliphatics			1000	1000	1000																					
C11-C22 Aromatics, Adjusted			1000	1000	1000																					
C19-C36 Aliphatics			3000	3000	3000																					
Acenaphthene			4	1000	1000																					
Acenaphthylene			1	600	10																					
Anthracene			1000	1000	1000																					
Benzo(a)anthracene			7	7	7																					
Benzo(a)pyrene			2	2	2																					
Benzo(b)fluoranthene			7	7	7																					
Benzo(g,h,i)perylene			1000	1000	1000																					
Benzo(k)fluoranthene			70	70	70																					
Chrysene			70	70	70																					
Dibenzo(a,h)anthracene			0.7	0.7	0.7																					
Fluoranthene			1000	1000	1000																					
Fluorene			1000	1000	1000																					
Indeno(1,2,3-cd)Pyrene			7	7	7																					
2-Methylnaphthalene			0.7	80	300																					
Naphthalene			4	20	500																					
Phenanthrene			10	500	500																					
Pyrene			1000	1000	1000																					
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Organochlorine Pesticides	8081B	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Endosulfan II			0.5	300	1																					
Total Petroleum Hydrocarbons (TPH)		mg/kg																								
TPH			1000	1000	1000	320	240	490	140	230	180	450	700	**6700**	140	**2300**	700	220	**1600**	110	230	330	170	170	140	**1100**
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg																								
PCBs, Total			1	1	1	0.03	< 0.028	< 0.027	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Metals		mg/kg																								
Antimony, Total	6010C		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic, Total	6010C		20	20	20	NT	NT	NT	7.8	6.2	2.6	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Barium, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium, Total	6010C		90	90	90	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, Total	6010C		70	70	70	NT	NT	NT	2.4	< 2.5	< 2.5	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, Total	6010C		100	100	100	NT	NT	NT	38	30	14	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		200	200	200	**270**	**270**	98	**940**	**330**	49	150	**330**	**350**	**280**	**290**	190	**450**	190	110	190	130	**280**	**240**	**220**	**670**
Mercury, Total	7471B		20	20	20	NT	NT	NT	0.321	0.475	0.332	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Nickel, Total	6010C		600	600	600	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Selenium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Silver, Total	6010C		100	100	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Thallium, Total	6010C		8	8	8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
6. ND = None detected above laboratory detection limit.
7. mg/kg = milligrams per kilogram.
8. Values in bold exceed Method 1 standards.

Table 1. Chemical Testing Results - Soil (Weston & Sampson)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Method 1 S-1/GW-2	Method 1 S-1/GW-3	B111-S1 Mar-97 1-3 W&S	B111-S2 Mar-97 4-6 W&S	B111-S3 Mar-97 7-9 W&S	B112-S1 Mar-97 1-3 W&S	B112-S2 Mar-97 4-6 W&S	B112-S3 Mar-97 7-9 W&S	B113-S1 Mar-97 1-3 W&S	B113-S2 Mar-97 4-6 W&S	B113-S3 Mar-97 7-9 W&S	B114-S1 Mar-97 1-3 W&S	B114-S2 Mar-97 4-6 W&S	B114-S3 Mar-97 7-9 W&S	B115-S1 Mar-97 1-3 W&S	B115-S2 Mar-97 4-6 W&S	B115-S3 Mar-97 7-9 W&S	B116-S1 Mar-97 1-3 W&S	B117-S1 Mar-97 1-3 W&S	B201(D) 1/10/2001 10-12 W&S	B201(D) 1/10/2001 10-12 (DUP) W&S	B201(D) 1/10/2001 22-24 W&S	B202(S) 1/10/2001 5-7 W&S
Volatile Organics Compounds (VOCs)	8260C	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene			2	40	40																					
Trichloroethene			0.3	0.3	30																					
Xylenes, Total			100	100	500																					
n-Butylbenzene			NS	NS	NS																					
sec-Butylbenzene			NS	NS	NS																					
tert-Butylbenzene			100	NS	NS																					
Isopropylbenzene			1000	NS	NS																					
Naphthalene			4	20	500																					
n-Propylbenzene			100	NS	NS																					
1,2,4-Trimethylbenzene			1000	NS	NS																					
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
C9-C10 Aromatics			100	100	100																					
C5-C8 Aliphatics, Adjusted			100	100	100																					
C9-C12 Aliphatics, Adjusted			1000	1000	1000																					
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg																					NT	NT	NT	NT
Acenaphthene			4	1000	1000	0.1	0.35	1	0.46	0.16	20	1.1	0.86	2.6	1	9.3	4.4	< 0.56	1.1	0.51	0.79	1.2				
Acenaphthylene			1	600	10	< 0.055	< 0.27	< 0.29	0.082	0.042	0.77	0.29	0.47	0.36	< 0.28	< 1.4	0.7	< 0.56	0.18	0.17	0.17	0.25				
Anthracene			1000	1000	1000	0.29	0.91	1.7	0.89	0.4	0.59	1.9	2.1	4.9	2	13	8.8	0.57	2	1.2	1.5	2.6				
Benzo(a)anthracene			7	7	7	0.94	2	4	2.2	0.84	**39**	6.1	**8.4**	**9.5**	4.2	**26**	**15**	1.5	4.3	2.7	3.3	5.1				
Benzo(a)pyrene			2	2	2	0.94	1.9	**3.7**	**2.2**	0.81	**35**	**5.6**	**7.3**	**8.7**	**3.9**	**25**	**14**	1.3	**4**	**2.6**	**3.1**	**4.5**				
Benzo(b)fluoranthene			7	7	7	0.65	1.5	2.7	2.2	0.83	**29**	4.8	5.6	**7.6**	3.1	**20**	**11**	1.1	3.4	2	2.4	3				
Benzo(g,h,i)perylene			1000	1000	1000	0.73	1.6	3	0.53	0.19	6.4	1.1	1.4	1.8	2.1	16	10	< 0.56	0.84	0.65	0.68	0.91				
Benzo(k)fluoranthene			70	70	70	0.73	1.5	3	2.4	0.88	29	5	6.6	8.5	3.2	21	10	1.1	3.8	2.3	2.7	3.7				
Chrysene			70	70	70	0.96	2.1	4.2	2.3	0.9	40	6.6	8.2	10	4.4	26	15	1.6	4.4	3.1	3.5	5.2				
Dibenzo(a,h)anthracene			0.7	0.7	0.7	0.27	0.41	0.9	0.25	0.081	**3**	0.49	0.7	**0.89**	< 0.57	**5.7**	**3.5**	< 0.56	0.42	0.29	0.34	0.48				
Dibenzofuran			100	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
Di-n-butylphthalate			50	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
Fluoranthene			1000	1000	1000	1.9	4.7	9.3	6.2	2.1	96	13	15	21	9.3	66	36	3	9.9	6.2	7.6	11				
Fluorene			1000	1000	1000	0.086	0.36	0.86	0.45	0.17	17	1	0.82	2.1	0.85	6.4	4.4	< 0.56	0.922	0.54	0.76	1.3				
Indeno(1,2,3-cd)pyrene			7	7	7	0.69	1.3	2.5	0.6	0.21	**7.2**	1.1	1.6	2.1	1.8	**15**	**8.9**	< 0.56	0.94	0.7	0.79	1				
2-Methylnaphthalene			0.7	80	300	< 0.055	< 0.27	< 0.29	0.12	0.05	4.1	0.28	0.22	0.78	< 0.28	< 1.4	1.6	< 0.56	0.27	0.21	0.23	0.34				
Naphthalene			4	20	500	0.055	< 0.27	0.49	0.21	0.077	14	0.36	0.35	1.6	< 0.28	4.3	3	< 0.56	0.43	0.32	0.38	0.42				
Phenanthrene			10	500	500	1.2	3.7	8.1	5.4	1.3	110	12	10	20	9.5	53	36	2.2	8.6	4.8	7.2	11				
Pyrene			1000	1000	1000	1.7	4.1	8.2	5.9	2.2	80	13	15	20	9.6	48	30	2.8	8.6	5.7	7.3	9.9				
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
C9-C18 Aliphatics			1000	1000	1000																		< 53	< 58	< 130	< 53
C11-C22 Aromatics, Adjusted			1000	1000	1000																		290	300	< 130	520
C19-C36 Aliphatics			3000	3000	3000																		< 53	< 58	< 130	< 53
Acenaphthene			4	1000	1000																		6.3	5.1	< 0.65	5
Acenaphthylene			1	600	10																		0.27	0.76	< 0.65	1.3
Anthracene			1000	1000	1000																		8.9	8.6	< 0.65	11
Benzo(a)anthracene			7	7	7																		**17**	**16**	< 0.65	**19**
Benzo(a)pyrene			2	2	2																		**14**	**14**	< 0.65	**15**
Benzo(b)fluoranthene			7	7	7																		**19**	**18**	< 0.65	**17**
Benzo(g,h,i)perylene			1000	1000	1000																		7.8	8.4	< 0.65	8.4
Benzo(k)fluoranthene			70	70	70																		5.5	5.1	< 0.65	5.9
Chrysene			70	70	70																		16	15	< 0.65	18
Dibenzo(a,h)anthracene			0.7	0.7	0.7																		**2.6**	**2.6**	< 0.65	**2.6**
Fluoranthene			1000	1000	1000																		41	41	< 0.65	41
Fluorene			1000	1000	1000																		4.9	4.8	< 0.65	5
Indeno(1,2,3-cd)Pyrene			7	7	7																		**9.5**	**9.7**	< 0.65	**9.2**
2-Methylnaphthalene			0.7	80	300																		0.89	1.3	< 0.65	2.6
Naphthalene			4	20	500																		2.8	3.4	< 0.65	4
Phenanthrene			10	500	500																		37	37	< 0.65	48
Pyrene			1000	1000	1000																		31	32	< 0.65	40
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Organochlorine Pesticides	8081B	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Endosulfan II			0.5	300	1																					
Total Petroleum Hydrocarbons (TPH)		mg/kg																					NT	NT	NT	NT
TPH			1000	1000	1000	190	200	**1300**	500	190	970	290	360	730	480	910	450	140	280	**2400**	110	110				
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg																								
PCBs, Total			1	1	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	< 0.028	< 0.028	0.057	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Metals		mg/kg																								
Antimony, Total	6010C		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic, Total	6010C		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Barium, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Beryllium, Total	6010C		90	90	90	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, Total	6010C		70	70	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, Total	6010C		100	100	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		200	200	200	**200**	**230**	**1400**	150	**970**	**5000**	**300**	**230**	**340**	**390**	**790**	**470**	170	**590**	**1200**	**300**	**270**	**550**	**620**	74	**7000**
Mercury, Total	7471B		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Nickel, Total	6010C		600	600	600	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Selenium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Silver, Total	6010C		100	100	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Thallium, Total	6010C		8	8	8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
6. ND = None detected above laboratory detection limit.
7. mg/kg = milligrams per kilogram.
8. Values in bold exceed Method 1 standards.

Table 1. Chemical Testing Results - Soil (Weston & Sampson)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Method 1 S-1/GW-2	Method 1 S-1/GW-3	B203(S) 1/10/2001 5-7 W&S	B204(S) 1/10/2001 5-7 W&S	B205(S) 1/10/2001 3-5 W&S	B206(S) 1/10/2001 3-5 W&S	B207(S) 1/10/2001 3-5 W&S	SS-1 3/29/2001 0-0.5 W&S	SS-2 3/29/2001 0-0.5 W&S	SS-3 3/29/2001 0-0.5 W&S	SS-4 3/29/2001 0-0.5 W&S	SS-4 3/29/2001 0-0.5 (DUP) W&S	SP-1 3/29/2001 2 W&S	SP-1 3/29/2001 2 (DUP2) W&S	SP-2 3/29/2001 2 W&S	SP-3 3/29/2001 2 W&S	B208 9/5/2001 5-7 W&S	B209 9/5/2001 6-8 W&S	B209 9/5/2001 10-12 W&S	B210 9/5/2001 5-7 W&S	B211 9/5/2001 5-7 W&S	B212 9/5/2001 5-7 W&S
Volatile Organics Compounds (VOCs)	8260C	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Benzene			2	40	40																				
Trichloroethene			0.3	0.3	30																				
Xylenes, Total			100	100	500																				
n-Butylbenzene			NS	NS	NS																				
sec-Butylbenzene			NS	NS	NS																				
tert-Butylbenzene			100	NS	NS																				
Isopropylbenzene			1000	NS	NS																				
Naphthalene			4	20	500																				
n-Propylbenzene			100	NS	NS																				
1,2,4-Trimethylbenzene			1000	NS	NS																				
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT					NT	NT	NT	NT	NT	NT
C9-C10 Aromatics			100	100	100											< 0.69	< 0.69	< 0.73	< 0.67						
C5-C8 Aliphatics, Adjusted			100	100	100											< 2.8	< 2.8	< 2.9	< 2.7						
C9-C12 Aliphatics, Adjusted			1000	1000	1000											< 0.69	< 0.69	< 0.73	< 0.67						
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthene			4	1000	1000																				
Acenaphthylene			1	600	10																				
Anthracene			1000	1000	1000																				
Benzo(a)anthracene			7	7	7																				
Benzo(a)pyrene			2	2	2																				
Benzo(b)fluoranthene			7	7	7																				
Benzo(g,h,i)perylene			1000	1000	1000																				
Benzo(k)fluoranthene			70	70	70																				
Chrysene			70	70	70																				
Dibenzo(a,h)anthracene			0.7	0.7	0.7																				
Dibenzofuran			100	NS	NS																				
Di-n-butylphthalate			50	NS	NS																				
Fluoranthene			1000	1000	1000																				
Fluorene			1000	1000	1000																				
Indeno(1,2,3-cd)pyrene			7	7	7																				
2-Methylnaphthalene			0.7	80	300																				
Naphthalene			4	20	500																				
Phenanthrene			10	500	500																				
Pyrene			1000	1000	1000																				
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg													NT					NT	NT	NT	NT	NT	NT
C9-C18 Aliphatics			1000	1000	1000	< 57	< 61	< 50	< 110	< 56	< 63	< 61	< 59	< 59		< 55	< 57	< 60	< 54						
C11-C22 Aromatics, Adjusted			1000	1000	1000	110	< 61	< 50	< 110	< 56	100	190	170	< 59		73	< 57	66	92						
C19-C36 Aliphatics			3000	3000	3000	< 57	< 61	< 50	< 110	< 56	< 63	< 61	< 59	< 59		< 55	65	< 60	55						
Acenaphthene			4	1000	1000	1.2	< 0.31	< 0.25	< 0.56	< 0.28	0.87	1.6	1.3	0.35		0.89	0.36	0.47	1.2						
Acenaphthylene			1	600	10	< 0.29	< 0.31	< 0.25	< 0.56	< 0.28	0.62	< 0.30	0.67	< 0.30		< 0.28	< 0.29	< 0.30	0.3						
Anthracene			1000	1000	1000	2.1	0.5	< 0.25	< 0.56	0.46	2.2	3.7	3.4	1.1		1.7	0.99	0.95	2.3						
Benzo(a)anthracene			7	7	7	4	1	< 0.25	1.4	1.1	5.2	**9.4**	**7.1**	2.8		3.9	2.3	2.2	4.3						
Benzo(a)pyrene			2	2	2	**3.7**	0.9	< 0.25	1.3	0.94	**5**	**8.7**	**6.8**	**2.5**		**3.7**	2	1.9	**4.2**						
Benzo(b)fluoranthene			7	7	7	4.3	1.1	< 0.25	1.7	1.3	6.4	**12**	**8.3**	3.3		4.9	2.6	2.4	5.1						
Benzo(g,h,i)perylene			1000	1000	1000	2.3	0.55	< 0.25	0.83	0.58	3.1	6.1	4	1.5		2.2	1.2	1.2	2.5						
Benzo(k)fluoranthene			70	70	70	1.5	0.34	< 0.25	< 0.56	0.33	2.2	4.4	3.2	1.1		1.5	0.81	0.64	2						
Chrysene			70	70	70	3.8	0.99	< 0.25	1.4	1	4.8	9.1	6.3	2.6		3.6	2.2	2.3	4.1						
Dibenzo(a,h)anthracene			0.7	0.7	0.7	0.62	< 0.31	< 0.25	< 0.56	< 0.28	**0.83**	**1.6**	**1.1**	0.042		0.55	0.34	0.32	0.6						
Fluoranthene			1000	1000	1000	0.96	2.3	< 0.25	2.7	2.3	11	20	14	5.3		7.9	4.4	3.9	8.6						
Fluorene			1000	1000	1000	1	< 0.31	< 0.25	< 0.56	< 0.28	1	1.4	1.4	0.41		0.73	0.32	0.378	1.3						
Indeno(1,2,3-cd)Pyrene			7	7	7	2.6	0.59	< 0.25	0.97	0.62	3.7	7	4.6	1.8		2.4	1.3	1.2	2.8						
2-Methylnaphthalene			0.7	80	300	0.57	< 0.31	< 0.25	< 0.56	< 0.28	< 0.32	< 0.30	< 0.35	< 0.30		< 0.28	< 0.29	< 0.30	0.31						
Naphthalene			4	20	500	0.74	< 0.31	< 0.25	< 0.56	< 0.28	< 0.32	0.31	0.69	< 0.30		< 0.28	< 0.29	< 0.30	0.29						
Phenanthrene			10	500	500	9.7	2.1	< 0.25	1.6	1.9	9.6	18	12	4.4		7.1	3.8	4.2	8						
Pyrene			1000	1000	1000	8.2	2	< 0.25	2.6	2.1	9	16	11	4.7		6.8	4.1	4.1	7.3						
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Organochlorine Pesticides	8081B	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Endosulfan II			0.5	300	1																				
Total Petroleum Hydrocarbons (TPH)		mg/kg				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
TPH			1000	1000	1000																				
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg																							
PCBs, Total			1	1	1	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.048	< 0.028	0.068	< 0.027	NT	NT	NT	NT	NT	NT
Total Metals		mg/kg																							
Antimony, Total	6010C		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Arsenic, Total	6010C		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	15	11	20	9.1	NT	NT	NT	NT	NT	NT
Barium, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	61	69	54	47	NT	NT	NT	NT	NT	NT
Beryllium, Total	6010C		90	90	90	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, Total	6010C		70	70	70	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	< 0.63	< 0.68	< 0.74	< 0.68	NT	NT	NT	NT	NT	NT
Chromium, Total	6010C		100	100	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	28	23	16	12	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		200	200	200	**460**	**230**	10	98	**220**	200	**300**	**220**	**310**	**340**	85	120	170	160	230	33	55	**250**	**13000**	33
Mercury, Total	7471B		20	20	20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	0.34	0.41	0.45	0.16	NT	NT	NT	NT	NT	NT
Nickel, Total	6010C		600	600	600	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Selenium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	< 10	< 11	< 12	< 11	NT	NT	NT	NT	NT	NT
Silver, Total	6010C		100	100	100	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	< 1.8	< 1.9	< 2.1	< 1.9	NT	NT	NT	NT	NT	NT
Thallium, Total	6010C		8	8	8	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Vanadium, Total	6010C		400	400	400	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, Total	6010C		1000	1000	1000	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
6. ND = None detected above laboratory detection limit.
7. mg/kg = milligrams per kilogram.
8. Values in bold exceed Method 1 standards.

Table 2. Chemical Testing Results - Groundwater (Weston & Sampson and GEI)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

						Well ID:	WS-1	WS-2		WS-3		WS-4	WS-5		WS-6	WS-7		WS-8	WS-9		WS-10	
						Sample ID:	WS-1	WS-2	WS-2	WS-3	WS-3	WS-4	WS-5	WS-5	WS-6	WS-7	WS-7	WS-8	WS-9	WS-9	WS-10	WS-10
						Sample Date:	12/12/1996	12/12/1996	9/10/2001	12/12/1996	2/6/2001	12/12/1996	12/12/1996	2/6/2001	12/12/1996	12/12/1996	2/6/2001	12/12/1996	12/12/1996	2/6/2001	12/12/1996	2/6/2001
						Screen Interval (ft. below ground surface)	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
						Sampled By:	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S	W&S
Analyte	**Method**	**Units**	**MCP RCGW-2**	**Method 1 GW-2**	**Method 1 GW-3**																	
MCP Volatile Organic Compounds (VOCs)	8260C	ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tetrachloroethene			50	50	30000																
Vinyl chloride			2	2	50000																
Trichloroethene			5	5	5000																
cis-1,2-Dichloroethene			20	20	50000																
1,2-Dichloroethene (total)			20	20	50000																
Ethyl ether			10	NS	NS																
1,4-Dioxane			NS	6000	50000																
Volatile Organic Compounds (VOCs) by GC/MS	8260C	ug/l						NT		NT				NT			NT			NT	NT
Chloroform			50	50	20000	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0			9.1	< 2.0		< 2.0	< 2.0		< 5.8	
p-Isopropyltoluene			100	NS	NS	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0			< 2.0	< 2.0		< 2.0	< 2.0		< 2.0	
Tetrachloroethene			50	50	30000	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0			< 2.0	< 2.0		< 2.0	< 2.0		< 2.0	
Trichloroethene			5	5	5000	< 2.0	< 2.0		< 2.0		< 2.0	2.2			< 2.0	< 2.0		< 2.0	< 2.0		< 2.0	
Volatile Organic Compounds (VOCs) by GC/MS-SIM	8260C BY SIM	ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dioxane			NS	6000	50000																	
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	ug/l				NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
C9-C10 Aromatics			4000	4000	50000			< 25		< 25				< 25			< 25			< 25	< 25
C5-C8 Aliphatics, Adjusted			3000	3000	50000			< 100		< 100				< 100			< 100			< 100	< 100
C9-C12 Aliphatics, Adjusted			5000	5000	50000			< 25		< 25				< 25			< 25			< 25	< 25
Semivolatile Organic Compounds (SVOCs) by GC/MS-SIM	8100 or 8270D BY SIM	ug/l				NT		NT	NT	NT	NT	NT		NT	NT	NT	NT			NT	NT	NT
Acenaphthene			6000	NS	10000		ND						ND					ND	ND			
Fluoranthene			200	NS	200		ND						ND					ND	ND			
Anthracene			30	NS	30		ND						ND					ND	ND			
Fluorene			40	NS	40		ND						ND					ND	ND			
Phenanthrene			10000	NS	10000		ND						ND					ND	ND			
Pyrene			20	NS	20		ND						ND					ND	ND			
1-Methylnaphthalene			NS	NS	NS		ND						ND					ND	ND			
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	ug/l				NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
C9-C18 Aliphatics			5000	5000	50000			< 100		< 100				< 100			< 100			< 100	< 100
C19-C36 Aliphatics			50000	NS	50000			140		< 100				< 100			< 100			< 100	< 100
C11-C22 Aromatics, Adjusted			5000	50000	5000			< 100		< 100				< 100			< 100			< 100	< 100
Naphthalene			700	700	20000			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
2-Methylnaphthalene			2000	2000	20000			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Acenaphthene			6000	NS	10000			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Fluorene			40	NS	40			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Phenanthrene			10000	NS	10000			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Anthracene			30	NS	30			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Fluoranthene			200	NS	200			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Pyrene			20	NS	20			< 1.0		< 0.10				< 0.10			< 0.10			< 0.10	< 0.10
Microextractables by GC		ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dibromoethane			2	2	50000																	
Polychlorinated Biphenyls (PCBs) by GC	608	ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total PCBs			5	5	10																	
Total Metals		ug/l				NT		NT	NT			NT			NT	NT					NT	
Antimony, Total	6020A		8000	NS	8000		NT			NT			NT	NT			NT	NT	NT	NT		NT
Arsenic, Total	6020A		900	NS	900		< 0.01			NT			< 0.01	NT			NT	< 0.02	< 0.01	NT		NT
Barium, Total	6020A		50000	NS	50000		< 0.05			NT			0.11	NT			NT	0.15	0.11	NT		NT
Cadmium, Total	6020A		4	NS	4		< 0.005			NT			< 0.005	NT			NT	< 0.005	< 0.005	NT		NT
Chromium, Total	6020A		300	NS	300		< 0.03			NT			< 0.03	NT			NT	< 0.03	< 0.03	NT		NT
Chromium, Hexavalent	6020A		300	NS	300		NT			NT			NT	NT			NT	NT	NT	NT		NT
Copper, Total	6020A		NS	NS	NS		NT			NT			NT	NT			NT	NT	NT	NT		NT
Iron, Total	200.7		NS	NS	NS		NT			NT			NT	NT			NT	NT	NT	NT		NT
Lead, Total	6020A		10	NS	10		< 0.005			< 5.0			< 0.005	< 5.0			< 5.0	< 0.010	< 0.010	< 5.0		< 5.0
Mercury, Total	245.1		20	NS	20		< 0.0002			NT			< 0.0002	NT			NT	< 0.0002	< 0.0002	NT		NT
Nickel, Total	6020A		200	NS	200		NT			NT			NT	NT			NT	NT	NT	NT		NT
Selenium, Total	6020A		100	NS	100		< 0.025			NT			< 0.025	NT			NT	< 0.025	< 0.025	NT		NT
Silver, Total	6020A		7	NS	7		< 0.007			NT			< 0.007	NT			NT	< 0.007	< 0.007	NT		NT
Zinc, Total	6020A		900	NS	900		NT			NT			NT	NT			NT	NT	NT	NT		NT
General Chemistry		ug/l							NT					NT			NT			NT		NT
Solids, Total Suspended	2540D		NS	NS	NS	NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
Cyanide, Total	4500CN-CE		30	NS	30	NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
Chlorine, Total Residual	4500CL-D		NS	NS	NS	NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
TPH	8100M or 1664A		NS	NS	NS	ND	ND		ND			ND	ND		ND	ND		ND	ND		ND	
Phenolics, Total	420.1		NS	NS	NS	NT	NT		NT			NT	NT		NT	NT		NT	NT		NT	
Anions by Ion Chromatography		ug/l																				
Chloride	300.0		NS	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

General Notes:

1. Only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = Analyte not detected at a concentration above the laboratory reporting limit.
3. Method 1 standards are cited from the Massachusetts Contingency Plan 310 CMR 40.0000 (MCP), with revisions effective June 20, 2014.
4. µg/L = micrograms per liter
5. Values in bold exceed Method 1 standards.
6. NS = No Method 1 standard established.
7. µg/L = micrograms per liter
8. ND = Analyte(s) not detected
9. W&S results: VOCs by 8260, PAHs by 8100, TPH by 8100M; GEI results: VOCs by 8260C, PAHs by 8270-SIM, TPH by 1664A

Qualifiers:

F- The result has a low bias due to matrix spike recovery below lower control limits.

Table 2. Chemical Testing Results - Groundwater (Weston & Sampson and GEI)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCGW-2	Method 1 GW-2	Method 1 GW-3	WS-11	WS-12	WS-12	WS-12	WS-13	B205 (OW)	B(MW)301	B(MW)302	B(MW)303	B(MW)305	B(MW)306	B(MW)307	B(MW)308
Well ID:						WS-11	WS-12	WS-12	WS-12	WS-13	B205 (OW)	B(MW)301	B(MW)302	B(MW)303	B(MW)305	B(MW)306	B(MW)307	B(MW)308
Sample ID:						12/12/1996	12/12/1996	12/12/1996	2/6/2001	9/10/2001	3/2/2017	3/5/2017	3/3/2017	3/3/2017	3/3/2017	3/5/2017	3/3/2017	3/3/2017
Sample Date:						Unknown	Unknown	Unknown (DUP)	Unknown	Unknown	28.9 - 38.9	11 - 21	16 - 26	18 - 28	11 - 21	10 - 20	11 - 21	11 - 21
Screen Interval (ft. below ground surface)											GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Sampled By:						W&S	W&S	W&S	W&S	W&S								
MCP Volatile Organic Compounds (VOCs)	8260C	ug/l				NT	NT	NT	NT	NT							NT	
Tetrachloroethene			50	50	30000						< 1	< 1	19	< 1	1.5	3.2		1
Vinyl chloride			2	2	50000						< 1	< 1	< 1	< 1	< 1	**6.3**		< 1
Trichloroethene			5	5	5000						< 1	< 1	**5**	< 1	1.8	**93**		**36**
cis-1,2-Dichloroethene			20	20	50000						< 1	< 1	7.2	< 1	< 1	**64**		6.2
1,2-Dichloroethene (total)			20	20	50000						< 1	< 1	7.2	< 1	< 1	64		6.2
Ethyl ether			10	NS	NS						< 2	< 2	< 2	< 2	< 2	< 2		2.4
1,4-Dioxane			NS	6000	50000						NT	< 250	NT	< 250	NT	< 250		< 250
Volatile Organic Compounds (VOCs) by GC/MS	8260C	ug/l							NT	NT	NT	NT	NT	NT	NT	NT		NT
Chloroform			50	50	20000	< 2.0	< 2.0	< 2.0									< 0.75	
p-Isopropyltoluene			100	NS	NS	< 2.0	2.8	2.6									0.55	
Tetrachloroethene			50	50	30000	< 2.0	< 2.0	< 2.0									0.92	
Trichloroethene			5	5	5000	< 2.0	< 2.0	< 2.0									1.3	
Volatile Organic Compounds (VOCs) by GC/MS-SIM	8260C BY SIM	ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT
1,4-Dioxane			NS	6000	50000												< 3	
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	ug/l				NT	NT	NT		NT								
C9-C10 Aromatics			4000	4000	50000				< 25		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
C5-C8 Aliphatics, Adjusted			3000	3000	50000				< 100		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
C9-C12 Aliphatics, Adjusted			5000	5000	50000				< 25		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Semivolatile Organic Compounds (SVOCs) by GC/MS-SIM	8100 or 8270D BY SIM	ug/l				NT			NT	NT	NT	NT	NT	NT	NT	NT		NT
Acenaphthene			6000	NS	10000		ND	ND									1.6	
Fluoranthene			200	NS	200		ND	ND									1.2	
Anthracene			30	NS	30		ND	ND									0.89	
Fluorene			40	NS	40		ND	ND									1.5	
Phenanthrene			10000	NS	10000		ND	ND									4.3	
Pyrene			20	NS	20		ND	ND									0.76	
1-Methylnaphthalene			NS	NS	NS		ND	ND									0.4	
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	ug/l				NT	NT	NT		NT								
C9-C18 Aliphatics			5000	5000	50000				< 100		< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
C19-C36 Aliphatics			50000	NS	50000				< 100		< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
C11-C22 Aromatics, Adjusted			5000	50000	5000				160		< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Naphthalene			700	700	20000				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	0.708	< 0.417	1.45	0.502
2-Methylnaphthalene			2000	2000	20000				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	0.652	< 0.4
Acenaphthene			6000	NS	10000				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	2.25	< 0.4
Fluorene			40	NS	40				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	2.1	< 0.4
Phenanthrene			10000	NS	10000				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	0.84	< 0.417	5.53	< 0.4
Anthracene			30	NS	30				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	0.994	< 0.4
Fluoranthene			200	NS	200				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	1.57	< 0.4
Pyrene			20	NS	20				< 0.10		< 0.4	< 0.412	< 0.4	< 0.4	< 0.4	< 0.417	0.942	< 0.4
Microextractables by GC		ug/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		NT
1,2-Dibromoethane			2	2	50000												< 0.01	
Polychlorinated Biphenyls (PCBs) by GC	608	ug/l				NT	NT	NT	NT	NT								
Total PCBs			5	5	10												ND	
Total Metals		ug/l						NT			NT	NT	NT	NT	NT	NT		NT
Antimony, Total	6020A		8000	NS	8000	NT	NT		NT	NT							< 4	
Arsenic, Total	6020A		900	NS	900	< 0.01	< 0.01		NT	NT							< 0.5	
Barium, Total	6020A		50000	NS	50000	< 0.05	0.12		NT	NT							NT	
Cadmium, Total	6020A		4	NS	4	< 0.005	< 0.005		NT	NT							0.41	
Chromium, Total	6020A		300	NS	300	< 0.03	< 0.03		NT	NT							< 1	
Chromium, Hexavalent	6020A		300	NS	300	NT	NT		NT	NT							< 10	
Copper, Total	6020A		NS	NS	NS	NT	NT		NT	NT							1.49	
Iron, Total	200.7		NS	NS	NS	NT	NT		NT	NT							< 50	
Lead, Total	6020A		10	NS	10	< 0.010	< 0.005		< 5.0	< 12							< 0.5	
Mercury, Total	245.1		20	NS	20	< 0.0002	< 0.0002		NT	NT							< 0.2	
Nickel, Total	6020A		200	NS	200	NT	NT		NT	NT							2.45	
Selenium, Total	6020A		100	NS	100	< 0.005	< 0.025		NT	NT							< 5	
Silver, Total	6020A		7	NS	7	< 0.007	< 0.007		NT	NT							< 0.4	
Zinc, Total	6020A		900	NS	900	NT	NT		NT	NT							< 10	
General Chemistry		ug/l							NT	NT	NT	NT	NT	NT	NT	NT		NT
Solids, Total Suspended	2540D		NS	NS	NS	NT	NT	NT									< 5000	
Cyanide, Total	4500CN-CE		30	NS	30	NT	NT	NT									< 5 F-	
Chlorine, Total Residual	4500CL-D		NS	NS	NS	NT	NT	NT									< 20	
TPH	8100M or 1664A		NS	NS	NS	ND	ND	ND									< 4000	
Phenolics, Total	420.1		NS	NS	NS	NT	NT	NT									< 30	
Anions by Ion Chromatography		ug/l									NT	NT	NT	NT	NT	NT		NT
Chloride	300.0		NS	NS	NS	NT	NT	NT	NT	NT							1,200,000	

General Notes:

1. Only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = Analyte not detected at a concentration above the laboratory reporting limit.
3. Method 1 standards are cited from the Massachusetts Contingency Plan 310 CMR 40.0000 (MCP), with revisions effective June 20, 2014.
4. µg/L = micrograms per liter
5. Values in bold exceed Method 1 standards.
6. NS = No Method 1 standard established.
7. µg/L = micrograms per liter
8. ND = Analyte(s) not detected
9. W&S results: VOCs by 8260, PAHs by 8100, TPH by 8100M; GEI results: VOCs by 8260C, PAHs by 8270-SIM, TPH by 1664A

Qualifiers:

F- The result has a low bias due to matrix spike recovery below lower control limits.

Table 3. Chemical Testing Results - Soil (GEI, 2017)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

						Sample ID:	TP-101(0-3')	TP-103(0-3')	TP-104(0-3')	TP-105(10')	TP-105(0-10')	TP-106(0-2')	TP-107(0-3')	TP-108(8')	TP-108(0-8')	B301-S7(10-15")	B301-COMP (0-3')	B302-S4 (0-8")	B303-S9 (0-5")
						Sample Date:	2/26/2017	2/26/2017	2/26/2017	2/26/2017	2/26/2017	2/26/2017	2/26/2017	2/26/2017	2/26/2017	3/2/2017	3/2/2017	2/27/2017	2/28/2017
						Sample Depth (ft)	0 - 3	0 - 3	0 - 3	10	0 - 10	0 - 2	0 - 3	8	0 - 8	12.75	0 - 3	6.0	20
						Sampled By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**	**MCP RCS-1**	**Method 1 S-1/GW-2**	**Method 1 S-1/GW-3**														
Volatile Organics Compounds (VOCs)	8260C	mg/kg				NT	NT	NT		NT	NT	NT	NT	NT		NT			
Benzene			2	40	40					< 0.064						< 0.03		< 0.05	< 0.053
Trichloroethene			0.3	0.3	30					< 0.064						< 0.03		< 0.05	< 0.053
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT		NT		NT		
C9-C10 Aromatics			100	100	100									< 2.69		< 2.28		< 2.62	< 2.77
C5-C8 Aliphatics, Adjusted			100	100	100									< 2.69		< 2.28		< 2.62	< 2.77
C9-C12 Aliphatics, Adjusted			1000	1000	1000									< 2.69		< 2.28		< 2.62	< 2.77
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg				NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT
Acenaphthene			4	1000	1000						1.1								
Acenaphthylene			1	600	10						< 0.31								
Anthracene			1000	1000	1000						2.3								
Benzo(a)anthracene			7	7	7						5.5								
Benzo(a)pyrene			2	2	2						**5.1**								
Benzo(b)fluoranthene			7	7	7						6.3								
Benzo(g,h,i)perylene			1000	1000	1000						2.5								
Benzo(k)fluoranthene			70	70	70						2.2								
Chrysene			70	70	70						5								
Dibenzo(a,h)anthracene			0.7	0.7	0.7						0.66								
Dibenzofuran			100	NS	NS						0.74								
Di-n-butylphthalate			50	NS	NS						< 0.38								
Fluoranthene			1000	1000	1000						11								
Fluorene			1000	1000	1000						0.98								
Indeno(1,2,3-cd)pyrene			7	7	7						2.9								
2-Methylnaphthalene			0.7	80	300						< 0.46								
Naphthalene			4	20	500						0.66								
Phenanthrene			10	500	500						9.8								
Pyrene			1000	1000	1000						9.6								
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg				NT	NT	NT	NT	NT	NT	NT	NT		NT		NT		
C9-C18 Aliphatics			1000	1000	1000									< 7.74		< 7.38		< 8.14 G	< 7.81 G
C11-C22 Aromatics, Adjusted			1000	1000	1000									40.8		< 7.38		< 8.14	< 7.81
C19-C36 Aliphatics			3000	3000	3000									20.2		< 7.38		< 8.14 G	< 7.81 G
Anthracene			1000	1000	1000									0.465		< 0.369		< 0.407	< 0.39
Benzo(a)anthracene			7	7	7									1.37		< 0.369		< 0.407	< 0.39
Benzo(a)pyrene			2	2	2									1.41		< 0.369		< 0.407	< 0.39
Benzo(b)fluoranthene			7	7	7									1.11		< 0.369		< 0.407	< 0.39
Benzo(g,h,i)perylene			1000	1000	1000									0.902		< 0.369		< 0.407	< 0.39
Benzo(k)fluoranthene			70	70	70									1.27		< 0.369		< 0.407	< 0.39
Chrysene			70	70	70									1.64		< 0.369		< 0.407	< 0.39
Fluoranthene			1000	1000	1000									3.33		< 0.369		< 0.407	< 0.39
Indeno(1,2,3-cd)Pyrene			7	7	7									1.04		< 0.369		< 0.407	< 0.39
Phenanthrene			10	500	500									2.01		< 0.369		< 0.407	< 0.39
Pyrene			1000	1000	1000									2.79		< 0.369		< 0.407	< 0.39
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	ND	NT	NT	NT	NT	NT	NT	NT	NT	NT
Organochlorine Pesticides	8081B	mg/kg														NT	NT		
Endosulfan II			0.5	300	1					0.0257 G									
Total Petroleum Hydrocarbons (TPH)		mg/kg				NT	NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT
TPH			1000	1000	1000					330									
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg							NT					NT		NT		NT	NT
Aroclor 1254			1	1	1	< 0.0374	< 0.0355	< 0.039		0.0759	< 0.038	< 0.0377			< 0.0383		< 0.038		
PCBs, Total			1	1	1	< 0.0374	< 0.0355	< 0.039		0.0759	< 0.038	< 0.0377			< 0.0383		< 0.038		
Total Metals		mg/kg														NT	NT	NT	NT
Antimony, Total	6010C		20	20	20	< 2.3	NT	NT	NT	< 2.3	NT	< 2.2	NT	NT					
Arsenic, Total	6010C		20	20	20	5.1	5.2	7.1		12	4.3	8.2		5					
Barium, Total	6010C		1000	1000	1000	54	34	47		79	24	98		42					
Beryllium, Total	6010C		90	90	90	0.36	NT	NT		0.33	NT	0.36		NT					
Cadmium, Total	6010C		70	70	70	< 0.46	< 0.43	< 0.47		< 0.45	< 0.45	< 0.45		< 0.46					
Chromium, Total	6010C		100	100	100	11	13	15		12	6.8	17		12					
Lead, Total	6010C		200	200	200	130	38	97		**270**	52	**290**		80					
Mercury, Total	7471B		20	20	20	0.417	0.326	0.42		0.532	0.262	1.25		0.46					
Nickel, Total	6010C		600	600	600	8.3	NT	NT		24	NT	11		NT					
Selenium, Total	6010C		400	400	400	< 2.3	< 2.2	< 2.3		< 2.3	< 2.2	< 2.2		< 2.3					
Silver, Total	6010C		100	100	100	< 0.46	< 0.43	< 0.47		< 0.45	< 0.45	< 0.45		< 0.46					
Thallium, Total	6010C		8	8	8	< 2.3	NT	NT		< 2.3	NT	< 2.2		NT					
Vanadium, Total	6010C		400	400	400	21	NT	NT		23	NT	21		NT					
Zinc, Total	6010C		1000	1000	1000	100	NT	NT		190	NT	110		NT					
TCLP Metals by EPA 1311		mg/L					NT	NT	NT		NT		NT	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		5	NS	NS	< 0.5				< 0.5		< 0.5							
General Chemistry																			
Solids, Total	2540G	%	NS	NS	NS	84.4	91.7	84.7	80	85.3	87.3	86.7	81.8	85.5	89.4	86.2	78.8	80.9	
Specific Conductance (25° C)	9050A	umhos/cm	NS	NS	NS	NT	NT	NT	NT	110	NT	NT	NT	NT	NT	NT	NT	NT	
pH (H)	9045D	SU	NS	NS	NS	NT	NT	NT	NT	8.1	NT	NT	NT	NT	NT	NT	NT	NT	
Cyanide, Reactive	1,7.3	mg/kg	NS	NS	NS	NT	NT	NT	NT	< 10	NT	NT	NT	NT	NT	NT	NT	NT	
Sulfide, Reactive	1,7.3	mg/kg	NS	NS	NS	NT	NT	NT	NT	< 10	NT	NT	NT	NT	NT	NT	NT	NT	
Oxidation/Reduction Potential	1498	mv	NS	NS	NS	NT	NT	NT	NT	190	NT	NT	NT	NT	NT	NT	NT	NT	
Paint Filter Liquid	9095B	NA	NS	NS	NS	NT	NT	NT	NT	Negative	NT	NT	NT	NT	NT	NT	NT	NT	
Ignitability	1030	NA	NS	NS	NS	NT	NT	NT	NT	NI	NT	NT	NT	NT	NT	NT	NT	NT	

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
5. ND = None detected above laboratory detection limit.
6. mg/kg = milligrams per kilogram.
7. Values in bold exceed Method 1 standards.
8. NI = Not Ignitable.
9. TCLP = Total Characteristic Leaching Procedure.

Qualifiers:

G The result is estimated due to duplicate precision outside control limits.

Table 3. Chemical Testing Results - Soil (GEI, 2017)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

						Sample ID:	B305-S7(9-13")	B306-S7(8-14")	B307-S7 (6-18")	B308-S2 (0-18")	B308-S7 (0-10")	B308-COMP (0-8")	B308-COMP (8-22")
						Sample Date:	3/2/2017	3/3/2017	2/27/2017	3/1/2017	3/1/2017	3/1/2017	3/1/2017
						Sample Depth (ft)	13	12-14	12.5	3	12	0 - 8	8 - 22
						Sampled By:	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	**Method**	**Units**	**MCP RCS-1**	**Method 1 S-1/GW-2**	**Method 1 S-1/GW-3**								
Volatile Organics Compounds (VOCs)	8260C	mg/kg										NT	NT
Benzene			2	40	40	< 0.037	<0.049	< 0.053	0.049	< 0.04			
Trichloroethene			0.3	0.3	30	< 0.037	0.063	< 0.053	< 0.048	0.25			
Volatile Petroleum Hydrocarbons (VPH)	VPH-04-1.1	mg/kg							NT	NT	NT	NT	
C9-C10 Aromatics			100	100	100	< 2.06	<2.40	< 2.82					
C5-C8 Aliphatics, Adjusted			100	100	100	< 2.06	<2.40	< 2.82					
C9-C12 Aliphatics, Adjusted			1000	1000	1000	< 2.06	<2.40	< 2.82					
Semivolatile Organic Compounds (SVOCs)	8270D	mg/kg				NT	NT	NT	NT	NT	NT		
Acenaphthene			4	1000	1000							3.9	< 0.15
Acenaphthylene			1	600	10							0.23	< 0.15
Anthracene			1000	1000	1000							11	< 0.11
Benzo(a)anthracene			7	7	7							**16**	0.2
Benzo(a)pyrene			2	2	2							**15**	0.17
Benzo(b)fluoranthene			7	7	7							**19**	0.2
Benzo(g,h,i)perylene			1000	1000	1000							7.6	< 0.15
Benzo(k)fluoranthene			70	70	70							4.1	< 0.11
Chrysene			70	70	70							15	0.18
Dibenzo(a,h)anthracene			0.7	0.7	0.7							**2.0**	< 0.11
Dibenzofuran			100	NS	NS							2.6	< 0.18
Di-n-butylphthalate			50	NS	NS							0.36	0.21
Fluoranthene			1000	1000	1000							40	0.41
Fluorene			1000	1000	1000							5.6	< 0.18
Indeno(1,2,3-cd)pyrene			7	7	7							8.8	< 0.15
2-Methylnaphthalene			0.7	80	300							0.74	< 0.22
Naphthalene			4	20	500							0.55	< 0.18
Phenanthrene			10	500	500							37	0.34
Pyrene			1000	1000	1000							32	0.36
Extractable Petroleum Hydrocarbons (EPH)	EPH-04-1.1	mg/kg							NT	NT	NT	NT	
C9-C18 Aliphatics			1000	1000	1000	< 6.9	<7.28	< 8.21 G					
C11-C22 Aromatics, Adjusted			1000	1000	1000	< 6.9	<7.28	< 8.21					
C19-C36 Aliphatics			3000	3000	3000	< 6.9	<7.28	< 8.21 G					
Anthracene			1000	1000	1000	< 0.345	<0.364	< 0.41					
Benzo(a)anthracene			7	7	7	< 0.345	<0.364	< 0.41					
Benzo(a)pyrene			2	2	2	< 0.345	<0.364	< 0.41					
Benzo(b)fluoranthene			7	7	7	< 0.345	<0.364	< 0.41					
Benzo(g,h,i)perylene			1000	1000	1000	< 0.345	<0.364	< 0.41					
Benzo(k)fluoranthene			70	70	70	< 0.345	<0.364	< 0.41					
Chrysene			70	70	70	< 0.345	<0.364	< 0.41					
Fluoranthene			1000	1000	1000	< 0.345	<0.364	< 0.41					
Indeno(1,2,3-cd)Pyrene			7	7	7	< 0.345	<0.364	< 0.41					
Phenanthrene			10	500	500	< 0.345	<0.364	< 0.41					
Pyrene			1000	1000	1000	< 0.345	<0.364	< 0.41					
Chlorinated Herbicides	8151A	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	ND	ND	
Organochlorine Pesticides	8081B	mg/kg				NT	NT						
Endosulfan II			0.5	300	1							< 0.00921	< 0.00854
Total Petroleum Hydrocarbons (TPH)		mg/kg				NT	NT	NT	NT	NT			
TPH			1000	1000	1000							313	< 36.6
Polychlorinated Biphenyls (PCBs)	8082A	mg/kg				NT	NT	NT	NT	NT			
Aroclor 1254			1	1	1							< 0.0384	< 0.0355
PCBs, Total			1	1	1							< 0.0384	< 0.0355
Total Metals		mg/kg				NT	NT	NT	NT	NT			
Antimony, Total	6010C		20	20	20							< 2.3	< 2.2
Arsenic, Total	6010C		20	20	20							3.3	3
Barium, Total	6010C		1000	1000	1000							48	25
Beryllium, Total	6010C		90	90	90							< 0.23	< 0.22
Cadmium, Total	6010C		70	70	70							< 0.45	< 0.44
Chromium, Total	6010C		100	100	100							9.1	16
Lead, Total	6010C		200	200	200							56	12
Mercury, Total	7471B		20	20	20							0.207	< 0.072
Nickel, Total	6010C		600	600	600							6.3	10
Selenium, Total	6010C		400	400	400							< 2.3	< 2.2
Silver, Total	6010C		100	100	100							< 0.45	< 0.44
Thallium, Total	6010C		8	8	8							< 2.3	< 2.2
Vanadium, Total	6010C		400	400	400							11	19
Zinc, Total	6010C		1000	1000	1000							50	38
TCLP Metals by EPA 1311		mg/L				NT	NT	NT	NT	NT	NT	NT	NT
Lead, Total	6010C		5	NS	NS								
General Chemistry													
Solids, Total	2540G	%	NS	NS	NS	92.3	87.2	80.7	91.7	93.3	85.9	89.7	
Specific Conductance (25° C)	9050A	umhos/cm	NS	NS	NS	NT	NT	NT	NT	NT	300	91	
pH (H)	9045D	SU	NS	NS	NS	NT	NT	NT	NT	NT	8.2	8.4	
Cyanide, Reactive	1,7.3	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	< 10	< 10	
Sulfide, Reactive	1,7.3	mg/kg	NS	NS	NS	NT	NT	NT	NT	NT	< 10	< 10	
Oxidation/Reduction Potential	1498	mv	NS	NS	NS	NT	NT	NT	NT	NT	140	130	
Paint Filter Liquid	9095B	NA	NS	NS	NS	NT	NT	NT	NT	NT	Negative	Negative	
Ignitability	1030	NA	NS	NS	NS	NT	NT	NT	NT	NT	NI	NI	

General Notes:

1. In general, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. < = less than reported detection limits
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective June 20, 2014.
4. Method 1 Standards (e.g., S-1/GW-2) and UCLs, where identified, are cited from the MCP.
5. ND = None detected above laboratory detection limit.
6. mg/kg = milligrams per kilogram.
7. Values in bold exceed Method 1 standards.
8. NI = Not Ignitable.
9. TCLP = Total Characteristic Leaching Procedure.

Qualifiers:

G The result is estimated due to duplicate precision outside control limits.

Table 4. Chemical Testing Results - Soil (GEI, 2021)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

								Sample Location:	**B401**		**B402**		**B403**		**B404**		**B405**		**B406**		**B407**			
								Sample ID:	**B401-(2.5)**	**B401-(0-5)**	**B402-(2.5)**	**B402-(0-5)**	**B403-(2.5)**	**B403-(0-5)**	**B404-(2.5)**	**B404-(0-5)**	**B405-(2.5)**	**B405-(0-5)**	**B406-(2.5)**	**B406-(0-5)**	**B407-S1-(2.5)**	**B407-S1-(0-5)**	**B407-S1-(7.5)**	**B407-S2-(5-10)**
								Sample Date:	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**	**12/9/2021**
								Sample Depth (ft):	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**	**2.5**	**0-5**
								PID Reading (ppmv)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**
								Soil Management Category (Tested):	**B**		**B**		**B**		**B**		**B**		**B**		**A**		**A**	
								Soil Management Category (Assigned):	**B**		**B**		**B**		**B**		**B**		**B**		**B**		**B**	
Analyte	**Method**	**Units**	**MCP RCS-1**	**Category A Route 44 Carver (Typical)**	**Category B Reuse Levels for In-State Unlined Landfill**	**Category C Reuse Levels for In-State Lined Landfill**	**Category D Recycling Limits for Asphalt Batch Plant**	**Category D Recycling Limits for Thermal Treatment**																
Volatile Organic Compounds (VOCs)	8260	mg/kg								NT		NT		NT		NT		NT		NT		NT		NT
Naphthalene			4	0.4	NS	NS	NS	NS	<0.0039		<0.0027		<0.0027		0.0059		<0.0048		0.0125		<0.0045		<0.0029	
Total VOCs			NS	NS	4	10	500	NS	ND		ND		ND		0.0059		ND		0.0125		ND		ND	
Semi-Volatile Organic Compounds (SVOCs)	8270	mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
2-Methylnaphthalene			0.7	0.7	NS	NS	NS	NS		<0.390		<0.194		<0.180		<0.185		<0.380		0.358		<0.182		<0.191
Acenaphthene			4	4	NS	NS	NS	NS		1.19		<0.386		<0.359		0.619		<0.757		0.949		<0.363		<0.380
Acenaphthylene			1	1	NS	NS	NS	NS		<0.778		<0.386		<0.359		<0.369		<0.757		<0.354		<0.363		<0.380
Anthracene			1,000	1,000	NS	NS	NS	NS		2.55		0.902		0.738		1.48		1.24		1.46		0.590		0.573
Benzo(a)anthracene			7	7	NS	NS	NS	NS		6.57		2.62		2.21		4.15		3.78		2.81		1.93		1.18
Benzo(a)pyrene			2	2	NS	NS	NS	NS		**5.30**		**2.11**		1.81		**3.37**		**3.14**		**2.29**		1.61		0.947
Benzo(b)fluoranthene			7	7	NS	NS	NS	NS		4.91		1.86		1.59		3.18		3.18		2.04		1.47		0.904
Benzo(g,h,i)perylene			1,000	1,000	NS	NS	NS	NS		2.85		1.26		1.02		1.91		1.71		1.12		0.851		0.480
Benzo(k)fluoranthene			70	70	NS	NS	NS	NS		4.22		1.72		1.46		2.68		2.45		1.84		1.32		0.716
Bis(2-ethylhexyl)phthalate			90	9	NS	NS	NS	NS		<0.778		<0.386		<0.359		<0.369		<0.757		<0.354		<0.363		<0.380
Chrysene			70	70	NS	NS	NS	NS		6.08		2.44		2.09		3.83		3.56		2.60		1.82		1.10
Dibenzo(a,h)anthracene			0.7	0.7	NS	NS	NS	NS		**0.753**		0.314		0.270		0.496		0.477		0.310		0.234		<0.191
Dibenzofuran			100	10	NS	NS	NS	NS		<0.778		<0.386		<0.359		0.418		<0.757		0.748		<0.363		<0.380
Di-n-butylphthalate			50	5	NS	NS	NS	NS		<0.778		<0.386		<0.359		<0.369		<0.757		<0.354		<0.363		<0.380
Fluoranthene			1,000	1,000	NS	NS	NS	NS		14.5		5.09		4.22		8.44		7.75		5.70		3.74		2.49
Fluorene			1,000	1,000	NS	NS	NS	NS		1.02		<0.386		<0.359		0.547		<0.757		0.879		<0.363		<0.380
Indeno(1,2,3-cd)pyrene			7	7	NS	NS	NS	NS		3.52		1.48		1.21		2.34		2.10		1.39		1.04		0.597
Naphthalene			4	4	NS	NS	NS	NS		<0.778		<0.386		<0.359		0.469		<0.757		0.934		<0.363		<0.380
Phenanthrene			10	10	NS	NS	NS	NS		**10.5**		3.94		3.13		6.41		5.54		5.99		2.74		2.31
Pyrene			1,000	1,000	NS	NS	NS	NS		12.3		5.26		4.84		8.94		8.21		6.00		3.81		2.48
Total SVOCs			NS	NS	100	100	NS	NS		76.3		29.0		24.6		49.3		43.1		37.4		21.5		13.8
Organochlorine Pesticides	8081B	mg/kg							NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
4,4'-DDT [2C]			6	ND	NS	NS	NS	NS				0.0044 G												
Total Organochlorine Pesticides			NS	ND	NS	NS	NS	NS				0.0044												
Chlorinated Herbicides	8151A	mg/kg							NT	NT	NT		NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Chlorinated Herbicides			NS	ND	NS	NS	NS	NS				ND												
Total Petroleum Hydrocarbons (TPH)	8100M	mg/kg	1000	500	2500	5000	60,000	400,000	NT	425	NT	475	NT	510	NT	438	NT	247	NT	128	NT	118	NT	73.2
Polychlorinated Biphenyls (PCBs)	8082	mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
Total PCBs			1	0.1	2	2	2	50		ND		ND		ND		ND		ND		ND		ND		ND
Total Metals		mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
Arsenic	6010		20	20	40	40	30	11		6.84 G		6.86 G		16.70 G		8.70 G		5.75 G		6.36 G		4.33 G		3.92 G
Barium	6010		1000	1,000	NS	NS	NS	1100		118 G		78.1 G		89 G		94.3 G		73.3 G		88.5 G		67.7 G		60 G
Cadmium	6010		70	70	30	80	30	33		0.56 G		<0.45 G		0.49 G		<0.50 G		<0.43 G		<0.42 G		<0.46 G		<0.48 G
Chromium	6010		100 (1,000)	100	1,000	1,000	500	150		18.5 G		30.5 G		26.7 G		25.8 G		12.9 G		19.8 G		17 G		16.6 G
Lead	6010		200	200	1,000	2,000	1,000	1,000		**343 G**		177 G		**232 G**		170 G		**225 G**		**210 G**		133 G		183 G
Mercury	7471		20	20	10	10	10	6		0.668 G		0.388 G		0.646 G		0.605 G		0.443 G		0.462 G		0.267 G		0.454 G
Selenium	6010		400	400	NS	NS	NS	180		<4.54 G		3.00 G		<4.61 G		<4.95 G		<4.27 G		<4.21 G		<4.57 G		<4.82 G
Silver	6010		100	100	NS	NS	NS	89		<0.45 G		<0.45 G		<0.46 G		<0.50 G		<0.43 G		<0.42 G		<0.46 G		<0.48 G
TCLP Metals	1311	mg/L							NT		NT		NT		NT		NT		NT		NT		NT	
Lead			5	5	5	5	5	5		0.938		0.139		0.088		0.068		0.212		0.165		0.142		0.117
Chemistry									NT		NT		NT		NT		NT		NT		NT		NT	
Conductivity	EPA 120.1M	umhos/cm	NS	2,000	4,000	8,000	NS	NS		305		273		218		232		395		209		216		210
pH	9045	S.U.	NS	2 - 12.5	NS	NS	2-12.5	2-12.5		7.54		7.68		7.73		8.36		7.99		7.91		7.93		8.15
Flashpoint	1010	°F	NS	> 140	NS	NS	> 140	> 140		>200		>200		>200		>200		>200		>200		>200		>200
Reactive Cyanide	7.3.3.2	mg/kg	NS	250	NS	NS	Non-Reactive	Non-Reactive		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0
Reactive Sulfide	7.3.4.1	mg/kg	NS	500	NS	NS	Non-Reactive	Non-Reactive		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0
Solids, Percent	2540G	%	NS	NS	NS	NS	NS	NS		90		89		90		87		92		91		92		91

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective December 27, 2019.
4. Reportable Concentrations (e.g., RCS-1) where identified, are cited from the MCP.
5. RCS-1 for total chromium is 100 mg/kg in the absence of hexavalent chromium data and 1,000 mg/kg if hexavalent chromium data show hexavalent chromium is not present.
6. Unlined and lined landfill disposal criteria are from MassDEP Policy #COMM-97-001, dated August 15, 1997.
7. Acceptable limits for asphalt batch recycling are for Ondricks, Chicopee, Massachusetts. Other facilities may have different acceptable limits.
8. Acceptable limits for thermal desorption are for ESMI, Loudon, New Hampshire. Other facilities may have different acceptable limits.
9. NT = The sample was not tested for this analyte.
10. ND = The analyte was not detected above the laboratory reporting limit. See the laboratory data sheets for the laboratory reporting limit.
11 NS = No MCP standard or disposal facility criteria has been established for this analyte.
12. mg/kg = milligrams per kilogram
13. umhos/cm = micromhos per centimeter.
14. S.U. = standard units.
15. mv = millivolts.
16. deg F = degrees Fahrenheit.
17. Soil samples for VOC analysis were preserved in the field with methanol.
18. Values in bold exceed RCS-1 standards.

Soil Management Categories:
A = Category A: Restricted Reuse (<RCS-1 Material).
B = Category B: Reuse as unlined landfill cover in Massachusetts.
C = Category C: Reuse as lined landfill cover in Massachusetts.
D = Category D: Recycling at asphalt batch plant.
E = Category E: Disposal in out-of-state landfill as non-hazardous.
F-1 = Category F-1: On-site treatment of hazardous waste and disposal in out-of-state landfill as non-hazardous waste.
F-2 = Category F-2: Disposal in out-of-state landfill as hazardous waste.

Qualifying Notes:
C- The result has a low bias due to surrogate recovery below lower control limits.
G This result is estimated due to duplicate precision outside control limits.

Table 4. Chemical Testing Results - Soil (GEI, 2021)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Category A Route 44 Carver (Typical)	Category B Reuse Levels for In-State Unlined Landfill	Category C Reuse Levels for In-State Lined Landfill	Category D Recycling Limits for Asphalt Batch Plant	Category D Recycling Limits for Thermal Treatment	B408		B409		B410				B411				B412			
Sample Location:									B408		B409		B410				B411				B412			
Sample ID:									B408-(2.5)	B408-(0-5)	B409-S1-(2.5)	B409-S1-(0-5)	B410-S1-(2.5)	B410-S1-(0-5)	B410-S1-(7.5)	B410-S2-(5-10)	B411-S1-(2.5)	B411-S1-(0-5)	B411-S1-(7.5)	B411-S2-(5-10)	B412-S1-(2.5)	B412-S1-(0-5)	B412-S2-(7.5)	B412-S2-(5-10)
Sample Date:									12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021
Sample Depth (ft):									2.5	0-5	2.5	0-5	2.5	0-5	7.5	5-10	2.5	0-5	7.5	5-10	2.5	0-5	7.5	5-10
PID Reading (ppmv):									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Soil Management Category (Tested):									B		B		B		D		B		D		B		B	
Soil Management Category (Assigned):									B		B		B		D		D		D		D		B	
Volatile Organic Compounds (VOCs)	8260	mg/kg								NT		NT		NT		NT		NT		NT		NT		NT
Naphthalene			4	0.4	NS	NS	NS	NS	<0.0057		0.0051		<0.0041		<0.0038		0.0036		<0.0055		0.0035		<0.0026	
Total VOCs			NS	NS	4	10	500	NS	ND		0.0051		ND		ND		0.0036		ND		0.0035		ND	
Semi-Volatile Organic Compounds (SVOCs)	8270	mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
2-Methylnaphthalene			0.7	0.7	NS	NS	NS	NS		<0.175		0.407		<0.184		0.440		<0.186		**0.92**		<0.192		<0.195
Acenaphthene			4	4	NS	NS	NS	NS		0.396		1.37		0.512		2.47		<0.371		2.37		<0.382		0.491
Acenaphthylene			1	1	NS	NS	NS	NS		<0.348		<0.715		<0.366		<0.771		<0.371		<0.830		<0.382		<0.389
Anthracene			1,000	1,000	NS	NS	NS	NS		1.18		3.10		1.58		6.04		0.875		4.31		0.661		1.47
Benzo(a)anthracene			7	7	NS	NS	NS	NS		3.99		7.10		5.12		**10.4**		2.41		**9.30**		2.19		4.02
Benzo(a)pyrene			2	2	NS	NS	NS	NS		**3.27**		**5.33**		**4.22**		**8.62**		1.96		**7.13**		1.94		**3.34**
Benzo(b)fluoranthene			7	7	NS	NS	NS	NS		2.88		5.03		4.26		**9.08**		1.91		6.90		1.73		2.99
Benzo(g,h,i)perylene			1,000	1,000	NS	NS	NS	NS		1.51		2.45		2.52		5.29		1.15		3.88		1.17		1.92
Benzo(k)fluoranthene			70	70	NS	NS	NS	NS		2.72		4.34		2.58		5.66		1.45		5.14		1.56		2.66
Bis(2-ethylhexyl)phthalate			90	9	NS	NS	NS	NS		<0.348		<0.715		<0.366		<0.771		<0.371		6.30		<0.382		<0.389
Chrysene			70	70	NS	NS	NS	NS		3.61		6.34		5.08		9.40		2.25		8.99		2.02		3.64
Dibenzo(a,h)anthracene			0.7	0.7	NS	NS	NS	NS		0.456		**0.729**		**0.727**		**1.37**		0.357		**1.25**		0.318		0.526
Dibenzofuran			100	10	NS	NS	NS	NS		<0.348		0.985		<0.366		1.81		<0.371		1.79		<0.382		<0.389
Di-n-butylphthalate			50	5	NS	NS	NS	NS		<0.348		<0.715		<0.366		<0.771		<0.371		<0.830		<0.382		<0.389
Fluoranthene			1,000	1,000	NS	NS	NS	NS		6.56		14.1		8.42		23.3		4.97		18.1		4.05		7.97
Fluorene			1,000	1,000	NS	NS	NS	NS		0.385		1.41		0.473		2.78		<0.371		2.35		<0.382		0.558
Indeno(1,2,3-cd)pyrene			7	7	NS	NS	NS	NS		1.93		3.12		2.88		6.55		1.47		4.97		1.33		2.24
Naphthalene			4	4	NS	NS	NS	NS		<0.348		0.766		<0.366		1.51		<0.371		1.63		<0.382		<0.389
Phenanthrene			10	10	NS	NS	NS	NS		4.57		**13.1**		5.75		**19.7**		3.63		**19.4**		2.77		6.09
Pyrene			1,000	1,000	NS	NS	NS	NS		7.52		15.1		7.05		17.4		3.78		18.0		3.96		7.52
Total SVOCs			NS	NS	100	100	NS	NS		41.0		84.8		51.2		131.8		26.2		122.7		23.7		45.4
Organochlorine Pesticides	8081B	mg/kg							NT		NT	NT	NT		NT	NT	NT	NT	NT		NT	NT	NT	NT
4,4'-DDT [2C]			6	ND	NS	NS	NS	NS		0.0143				0.0073						0.0081				
Total Organochlorine Pesticides			NS	ND	NS	NS	NS	NS		0.0143				0.0073						0.0081				
Chlorinated Herbicides	8151A	mg/kg							NT		NT		NT		NT	NT	NT	NT	NT		NT	NT	NT	NT
Total Chlorinated Herbicides			NS	ND	NS	NS	NS	NS		ND				ND						ND				
Total Petroleum Hydrocarbons (TPH)	8100M	mg/kg	1000	500	2500	5000	60,000	400,000	NT	260	NT	351	NT	218	NT	648	NT	217	NT	278	NT	173	NT	215
Polychlorinated Biphenyls (PCBs)	8082	mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
Total PCBs			1	0.1	2	2	2	50		ND		ND		ND		ND		ND		ND		ND		ND
Total Metals		mg/kg							NT		NT		NT		NT		NT		NT		NT		NT	
Arsenic	6010		20	20	40	40	30	11		6.83 G		6.18 G		4.71 G		6.98 G		6.88 G		6.65 G		5.29 G		5.66 G
Barium	6010		1000	1,000	NS	NS	NS	1100		86.9 G		107 G		83.8 G		728 G		109 G		89.6 G		101 G		111 G
Cadmium	6010		70	70	30	80	30	33		<0.45 G		0.54 G		<0.44 G		2.81 G		0.57 G		<0.47 G		<0.48 G		1.16 G
Chromium	6010		100 (1,000)	100	1,000	1,000	500	150		21 G		18.6 G		23.2 G		17 G		19.9 G		24.8 G		19.1 G		20.1 G
Lead	6010		200	200	1,000	2,000	1,000	1,000		170 G		**350 G**		161 G		**461 G**		**313 G**		168 G		197 G		**287 G**
Mercury	7471		20	20	10	10	10	6		0.393 G		0.669 G		0.455 G		0.756 G		0.414 G		0.189 G		0.536 G		0.558 G
Selenium	6010		400	400	NS	NS	NS	180		<4.50 G		<4.91 G		<4.41 G		<4.76 G		<4.87 G		<4.71 G		<4.79 G		<4.65 G
Silver	6010		100	100	NS	NS	NS	89		<0.45 G		<0.49 G		<0.44 G		<0.48 G		<0.49 G		<0.47 G		<0.48 G		<0.47 G
TCLP Metals	1311	mg/L							NT		NT		NT		NT		NT		NT		NT		NT	
Lead			5	5	5	5	5	5		0.153		0.252		0.106		0.051		0.377		0.183		0.079		0.179
Chemistry									NT		NT		NT		NT		NT		NT		NT		NT	
Conductivity	EPA 120.1M	umhos/cm	NS	2,000	4,000	8,000	NS	NS		225		200		228		204		237		247		338		244
pH	9045	S.U.	NS	2 - 12.5	NS	NS	2-12.5	2-12.5		8.05		8.31		7.54		7.98		8.08		7.96		7.91		8.12
Flashpoint	1010	°F	NS	> 140	NS	NS	> 140	> 140		>200		>200		>200		>200		>200		>200		>200		>200
Reactive Cyanide	7.3.3.2	mg/kg	NS	250	NS	NS	Non-Reactive	Non-Reactive		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0
Reactive Sulfide	7.3.4.1	mg/kg	NS	500	NS	NS	Non-Reactive	Non-Reactive		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0
Solids, Percent	2540G	%	NS	NS	NS	NS	NS	NS		93		90		91		86		88		84		89		88

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective December 27, 2019.
4. Reportable Concentrations (e.g., RCS-1) where identified, are cited from the MCP.
5. RCS-1 for total chromium is 100 mg/kg in the absence of hexavalent chromium data and 1,000 mg/kg if hexavalent chromium data show hexavalent chromium is not present.
6. Unlined and lined landfill disposal criteria are from MassDEP Policy #COMM-97-001, dated August 15, 1997.
7. Acceptable limits for asphalt batch recycling are for Ondricks, Chicopee, Massachusetts. Other facilities may have different acceptable limits.
8. Acceptable limits for thermal desorption are for ESMI, Loudon, New Hampshire. Other facilities may have different acceptable limits.
9. NT = The sample was not tested for this analyte.
10. ND = The analyte was not detected above the laboratory reporting limit. See the laboratory data sheets for the laboratory reporting limit.
11 NS = No MCP standard or disposal facility criteria has been established for this analyte.
12. mg/kg = milligrams per kilogram
13. umhos/cm = micromhos per centimeter.
14. S.U. = standard units.
15. mv = millivolts.
16. deg F = degrees Fahrenheit.
17. Soil samples for VOC analysis were preserved in the field with methanol.
18. Values in bold exceed RCS-1 standards.

Soil Management Categories:
A = Category A: Restricted Reuse (<RCS-1 Material).
B = Category B: Reuse as unlined landfill cover in Massachusetts.
C = Category C: Reuse as lined landfill cover in Massachusetts.
D = Category D: Recycling at asphalt batch plant.
E = Category E: Disposal in out-of-state landfill as non-hazardous.
F-1 = Category F-1: On-site treatment of hazardous waste and disposal in out-of-state landfill as non-hazardous waste.
F-2 = Category F-2: Disposal in out-of-state landfill as hazardous waste.

Qualifying Notes:
C- The result has a low bias due to surrogate recovery below lower control limits.
G This result is estimated due to duplicate precision outside control limits.

Table 4. Chemical Testing Results - Soil (GEI, 2021)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Analyte	Method	Units	MCP RCS-1	Category A Route 44 Carver (Typical)	Category B Reuse Levels for In-State Unlined Landfill	Category C Reuse Levels for In-State Lined Landfill	Category D Recycling Limits for Asphalt Batch Plant	Category D Recycling Limits for Thermal Treatment	Sample Location:	B413			B414				B415		B416		B417		B418	
									Sample ID:	B413-S1-(2.5)	B413-S1-(0-5)	B413-S2-(7.5)	B413-S2-(5-10)	B414-S1-(2.5)	B414-S1-(0-5)	B414-S2-(7.5)	B414-S2-(5-10)	B415-S1-(2.5)	B415-S1-(0-5)	B416-S2-(7.5)	B416-S2-(5-10)	B417-(5.5)	B417-(3-8)	B418-S1-(0-5)	B418-S2-(5-10)
									Sample Date:	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/9/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
									Sample Depth (ft):	2.5	0-5	7.5	5-10	2.5	0-5	7.5	5-10	2.5	0-5	7.5	5-10	5.5	3-8	0-5	5-10
									PID Reading (ppmv)	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.0	0.1
									Soil Management Category (Tested):	A		A		D		B		D		A		D		NA	
									Soil Management Category (Assigned):	B		B		D		B		F-1		F-1		F-1		NA	
Volatile Organic Compounds (VOCs)	8260	mg/kg									NT		NT		NT		NT	NT		NT		NT	NT	NT
Naphthalene			4	0.4	NS	NS	NS	NS		<0.0031		<0.0036		<0.0034		<0.0031 C-		<0.0038		<0.0052		0.111			
Total VOCs			NS	NS	4	10	500	NS		ND		ND		ND		ND		ND		ND		0.111			
Semi-Volatile Organic Compounds (SVOCs)	8270	mg/kg								NT		NT		NT		NT		NT		NT		NT		NT	NT
2-Methylnaphthalene			0.7	0.7	NS	NS	NS	NS			<0.193		<0.180		0.472		0.424		0.488		<0.171		**1.17**		
Acenaphthene			4	4	NS	NS	NS	NS			<0.384		<0.359		1.83		0.412		1.19		<0.341		**4.97**		
Acenaphthylene			1	1	NS	NS	NS	NS			<0.384		<0.359		<0.770		<0.381		<0.737		<0.341		**1.08**		
Anthracene			1,000	1,000	NS	NS	NS	NS			0.640		0.605		6.05		1.03		2.27		<0.341		9.52		
Benzo(a)anthracene			7	7	NS	NS	NS	NS			1.77		1.74		**18.6**		3.07		6.22		<0.341		**18.5**		
Benzo(a)pyrene			2	2	NS	NS	NS	NS			1.57		1.53		**16.5**		**2.76**		**4.65**		<0.171		**14.6**		
Benzo(b)fluoranthene			7	7	NS	NS	NS	NS			1.46		1.37		**15.5**		2.51		4.31		<0.341		**12.4**		
Benzo(g,h,i)perylene			1,000	1,000	NS	NS	NS	NS			0.945		0.937		9.05		1.75		2.59		<0.341		7.18		
Benzo(k)fluoranthene			70	70	NS	NS	NS	NS			1.19		1.21		9.83		2.11		3.50		<0.341		10.4		
Bis(2-ethylhexyl)phthalate			90	9	NS	NS	NS	NS			<0.384		<0.359		<0.770		<0.381		<0.737		<0.341		<0.739		
Chrysene			70	70	NS	NS	NS	NS			1.58		1.60		18.4		2.96		5.92		<0.171		17.5		
Dibenzo(a,h)anthracene			0.7	0.7	NS	NS	NS	NS			0.254		0.265		**2.16**		0.436		**0.700**		<0.171		**1.84**		
Dibenzofuran			100	10	NS	NS	NS	NS			<0.384		<0.359		<0.770		0.393		<0.737		<0.341		2.63		
Di-n-butylphthalate			50	5	NS	NS	NS	NS			<0.384		<0.359		0.864		<0.381		<0.737		<0.341		<0.739		
Fluoranthene			1,000	1,000	NS	NS	NS	NS			3.63		3.32		33.8		6.15		12.8		<0.341		34.3		
Fluorene			1,000	1,000	NS	NS	NS	NS			<0.384		<0.359		1.89		<0.381		0.971		<0.341		4.50		
Indeno(1,2,3-cd)pyrene			7	7	NS	NS	NS	NS			1.09		1.08		**10.1**		1.97		3.07		<0.341		**8.54**		
Naphthalene			4	4	NS	NS	NS	NS			<0.384		<0.359		<0.770		0.425		0.907		<0.341		1.36		
Phenanthrene			10	10	NS	NS	NS	NS			2.55		2.52		**22.0**		4.67		**11.1**		<0.341		**41.5**		
Pyrene			1,000	1,000	NS	NS	NS	NS			3.37		3.26		41.9		5.99		11.8		<0.341		41.9		
Total SVOCs			NS	NS	100	100	NS	NS			20.0		19.4		208.9		37.1		72.5		ND		233.9		
Organochlorine Pesticides	8081B	mg/kg								NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT
4,4'-DDT [2C]			6	ND	NS	NS	NS	NS											<0.0029						
Total Organochlorine Pesticides			NS	ND	NS	NS	NS	NS											ND						
Chlorinated Herbicides	8151A	mg/kg								NT	NT	NT	NT	NT	NT	NT	NT	NT		NT	NT	NT	NT	NT	NT
Total Chlorinated Herbicides			NS	ND	NS	NS	NS	NS											ND						
Total Petroleum Hydrocarbons (TPH)	8100M	mg/kg	1000	500	2500	5000	60,000	400,000		NT	147	NT	199	NT	839	NT	244	NT	444	NT	<10.5	NT	857	NT	NT
Polychlorinated Biphenyls (PCBs)	8082	mg/kg								NT		NT		NT		NT		NT		NT		NT		NT	NT
Total PCBs			1	0.1	2	2	2	50			ND		ND		ND		ND		ND		ND		ND		
Total Metals		mg/kg								NT		NT		NT		NT		NT		NT		NT		NT	NT
Arsenic	6010		20	20	40	40	30	11			5.12 G		5.38 G		6.06 G		11.0 G		9.62		<2.36		3.47		
Barium	6010		1000	1,000	NS	NS	NS	1100			78.1 G		103 G		87.6 G		74.4 G		466		24.8		51.9		
Cadmium	6010		70	70	30	80	30	33			<0.46 G		<0.47 G		<0.44 G		<0.48 G		0.60		<0.47		<0.53		
Chromium	6010		100 (1,000)	100	1,000	1,000	500	150			19.5 G		17.4 G		16.6 G		13.4 G		13.3		10.2		15.2		
Lead	6010		200	200	1,000	2,000	1,000	1,000			179 G		194 G		**305 G**		**303 G**		**2020**		8.90		**337**		
Mercury	7471		20	20	10	10	10	6			0.444 G		1.12 G		0.574 G		0.282 G		0.996		<0.033		0.709		
Selenium	6010		400	400	NS	NS	NS	180			<4.62 G		<4.69 G		<4.35 G		<4.75 G		<5.33		<4.71		<5.34		
Silver	6010		100	100	NS	NS	NS	89			<0.46 G		<0.47 G		<0.44 G		1.49 G		<0.53		<0.47		<0.53		
TCLP Metals	1311	mg/L								NT		NT		NT		NT		NT		NT	NT	NT			
Lead			5	5	5	5	5	5			0.235		<0.050		0.122		0.287		1.20				3.80	0.733	<0.050
Chemistry										NT		NT		NT		NT		NT		NT		NT		NT	NT
Conductivity	EPA 120.1M	umhos/cm	NS	2,000	4,000	8,000	NS	NS			260		289		261		346		WL 260		WL 124		WL 276		
pH	9045	S.U.	NS	2 - 12.5	NS	NS	2-12.5	2-12.5			8.12		8.17		8.28		8.04		6.94		7.33		7.48		
Flashpoint	1010	°F	NS	> 140	NS	NS	> 140	> 140			>200		>200		>200		>200		> 200		> 200		>200		
Reactive Cyanide	7.3.3.2	mg/kg	NS	250	NS	NS	Non-Reactive	Non-Reactive			<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		
Reactive Sulfide	7.3.4.1	mg/kg	NS	500	NS	NS	Non-Reactive	Non-Reactive			<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		<2.0		
Solids, Percent	2540G	%	NS	NS	NS	NS	NS	NS			90		90		89		86		88		95		91		

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective December 27, 2019.
4. Reportable Concentrations (e.g., RCS-1) where identified, are cited from the MCP.
5. RCS-1 for total chromium is 100 mg/kg in the absence of hexavalent chromium data and 1,000 mg/kg if hexavalent chromium data show hexavalent chromium is not present.
6. Unlined and lined landfill disposal criteria are from MassDEP Policy #COMM-97-001, dated August 15, 1997.
7. Acceptable limits for asphalt batch recycling are for Ondricks, Chicopee, Massachusetts. Other facilities may have different acceptable limits.
8. Acceptable limits for thermal desorption are for ESMI, Loudon, New Hampshire. Other facilities may have different acceptable limits.
9. NT = The sample was not tested for this analyte.
10. ND = The analyte was not detected above the laboratory reporting limit. See the laboratory data sheets for the laboratory reporting limit.
11 NS = No MCP standard or disposal facility criteria has been established for this analyte.
12. mg/kg = milligrams per kilogram
13. umhos/cm = micromhos per centimeter.
14. S.U. = standard units.
15. mv = millivolts.
16. deg F = degrees Fahrenheit.
17. Soil samples for VOC analysis were preserved in the field with methanol.
18. Values in bold exceed RCS-1 standards.

Soil Management Categories:
A = Category A: Restricted Reuse (<RCS-1 Material).
B = Category B: Reuse as unlined landfill cover in Massachusetts.
C = Category C: Reuse as lined landfill cover in Massachusetts.
D = Category D: Recycling at asphalt batch plant.
E = Category E: Disposal in out-of-state landfill as non-hazardous.
F-1 = Category F-1: On-site treatment of hazardous waste and disposal in out-of-state landfill as non-hazardous waste.
F-2 = Category F-2: Disposal in out-of-state landfill as hazardous waste.

Qualifying Notes:
C- The result has a low bias due to surrogate recovery below lower control limits.
G This result is estimated due to duplicate precision outside control limits.

Table 4. Chemical Testing Results - Soil (GEI, 2021)
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

									B419		B420		B421	
								Sample ID:	B419-S1-(0-5)	B419-S2-(5-10)	B420-S1-(0-5)	B420-S2-(5-10)	B421-S1-(0-5)	B421-S2-(5-10)
								Sample Date:	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021	12/10/2021
								Sample Depth (ft):	0-5	5-10	0-5	5-10	0-5	5-10
								PID Reading (ppmv)	0.2	0.0	0.0	0.0	0.0	0.0
								Soil Management Category (Tested):	NA		NA		NA	
								Soil Management Category (Assigned):	NA		NA		NA	
Analyte	**Method**	**Units**	**MCP RCS-1**	**Category A Route 44 Carver (Typical)**	**Category B Reuse Levels for In-State Unlined Landfill**	**Category C Reuse Levels for In-State Lined Landfill**	**Category D Recycling Limits for Asphalt Batch Plant**	**Category D Recycling Limits for Thermal Treatment**						
Volatile Organic Compounds (VOCs)	8260	mg/kg							NT	NT	NT	NT	NT	NT
Naphthalene			4	0.4	NS	NS	NS	NS						
Total VOCs			NS	NS	4	10	500	NS						
Semi-Volatile Organic Compounds (SVOCs)	8270	mg/kg							NT	NT	NT	NT	NT	NT
2-Methylnaphthalene			0.7	0.7	NS	NS	NS	NS						
Acenaphthene			4	4	NS	NS	NS	NS						
Acenaphthylene			1	1	NS	NS	NS	NS						
Anthracene			1,000	1,000	NS	NS	NS	NS						
Benzo(a)anthracene			7	7	NS	NS	NS	NS						
Benzo(a)pyrene			2	2	NS	NS	NS	NS						
Benzo(b)fluoranthene			7	7	NS	NS	NS	NS						
Benzo(g,h,i)perylene			1,000	1,000	NS	NS	NS	NS						
Benzo(k)fluoranthene			70	70	NS	NS	NS	NS						
Bis(2-ethylhexyl)phthalate			90	9	NS	NS	NS	NS						
Chrysene			70	70	NS	NS	NS	NS						
Dibenzo(a,h)anthracene			0.7	0.7	NS	NS	NS	NS						
Dibenzofuran			100	10	NS	NS	NS	NS						
Di-n-butylphthalate			50	5	NS	NS	NS	NS						
Fluoranthene			1,000	1,000	NS	NS	NS	NS						
Fluorene			1,000	1,000	NS	NS	NS	NS						
Indeno(1,2,3-cd)pyrene			7	7	NS	NS	NS	NS						
Naphthalene			4	4	NS	NS	NS	NS						
Phenanthrene			10	10	NS	NS	NS	NS						
Pyrene			1,000	1,000	NS	NS	NS	NS						
Total SVOCs			NS	NS	100	100	NS	NS						
Organochlorine Pesticides	8081B	mg/kg							NT	NT	NT	NT	NT	NT
4,4'-DDT [2C]			6	ND	NS	NS	NS	NS						
Total Organochlorine Pesticides			NS	ND	NS	NS	NS	NS						
Chlorinated Herbicides	8151A	mg/kg							NT	NT	NT	NT	NT	NT
Total Chlorinated Herbicides			NS	ND	NS	NS	NS	NS						
Total Petroleum Hydrocarbons (TPH)	8100M	mg/kg	1000	500	2500	5000	60,000	400,000	NT	NT	NT	NT	NT	NT
Polychlorinated Biphenyls (PCBs)	8082	mg/kg							NT	NT	NT	NT	NT	NT
Total PCBs			1	0.1	2	2	2	50						
Total Metals		mg/kg							NT	NT	NT	NT	NT	NT
Arsenic	6010		20	20	40	40	30	11						
Barium	6010		1000	1,000	NS	NS	NS	1100						
Cadmium	6010		70	70	30	80	30	33						
Chromium	6010		100 (1,000)	100	1,000	1,000	500	150						
Lead	6010		200	200	1,000	2,000	1,000	1,000						
Mercury	7471		20	20	10	10	10	6						
Selenium	6010		400	400	NS	NS	NS	180						
Silver	6010		100	100	NS	NS	NS	89						
TCLP Metals	1311	mg/L												
Lead			5	5	5	5	5	5	0.129	<0.050	0.833	<0.050	0.200	0.295
Chemistry									NT	NT	NT	NT	NT	NT
Conductivity	EPA 120.1M	umhos/cm	NS	2,000	4,000	8,000	NS	NS						
pH	9045	S.U.	NS	2 - 12.5	NS	NS	2-12.5	2-12.5						
Flashpoint	1010	°F	NS	> 140	NS	NS	> 140	> 140						
Reactive Cyanide	7.3.3.2	mg/kg	NS	250	NS	NS	Non-Reactive	Non-Reactive						
Reactive Sulfide	7.3.4.1	mg/kg	NS	500	NS	NS	Non-Reactive	Non-Reactive						
Solids, Percent	2540G	%	NS	NS	NS	NS	NS	NS						

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective December 27, 2019.
4. Reportable Concentrations (e.g., RCS-1) where identified, are cited from the MCP.
5. RCS-1 for total chromium is 100 mg/kg in the absence of hexavalent chromium data and 1,000 mg/kg if hexavalent chromium data show hexavalent chromium is not present.
6. Unlined and lined landfill disposal criteria are from MassDEP Policy #COMM-97-001, dated August 15, 1997.
7. Acceptable limits for asphalt batch recycling are for Ondricks, Chicopee, Massachusetts. Other facilities may have different acceptable limits.
8. Acceptable limits for thermal desorption are for ESMI, Loudon, New Hampshire. Other facilities may have different acceptable limits.
9. NT = The sample was not tested for this analyte.
10. ND = The analyte was not detected above the laboratory reporting limit. See the laboratory data sheets for the laboratory reporting limit.
11. NS = No MCP standard or disposal facility criteria has been established for this analyte.
12. mg/kg = milligrams per kilogram
13. umhos/cm = micromhos per centimeter.
14. S.U. = standard units.
15. mv = millivolts.
16. deg F = degrees Fahrenheit.
17. Soil samples for VOC analysis were preserved in the field with methanol.
18. Values in bold exceed RCS-1 standards.

Soil Management Categories:
A = Category A: Restricted Reuse (<RCS-1 Material).
B = Category B: Reuse as unlined landfill cover in Massachusetts.
C = Category C: Reuse as lined landfill cover in Massachusetts.
D = Category D: Recycling at asphalt batch plant.
E = Category E: Disposal in out-of-state landfill as non-hazardous.
F-1 = Category F-1: On-site treatment of hazardous waste and disposal in out-of-state landfill as non-hazardous waste.
F-2 = Category F-2: Disposal in out-of-state landfill as hazardous waste.

Qualifying Notes:
C- The result has a low bias due to surrogate recovery below lower control limits.
G This result is estimated due to duplicate precision outside control limits.

Table 5. Soil Management Categories
Release Abatement Measure Plan
Parcel P-3, Tremont Street & Whittier Streets
Boston, Massachusetts

Construction/Demolition Debris Disposal:
Construction/Demolition Debris is excavated or otherwise generated material that is suitable for disposal at a state-regulated facility. Construction/Demolition Debris may include asphalt, brick, concrete, rock, steel, unpreserved wood, etc.

Category A: Restricted Reuse (<RCS-1 Material):
Category A materials are excavated materials with concentrations of oil or hazardous materials (OHM) below the reportable concentrations for soil category S-1 (RCS-1) as identified in the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000), and not containing visual evidence of contamination such as coal or wood ash. Category A materials may be reused on site or off site at a location subject to the soil reuse provisions identified in 310 CMR 40.0032(3) and MassDEP Similar Soils Provision Guidance WSC#13-500.

Category B: Reuse as Unlined Landfill Cover in Massachusetts:
Category B materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at an unlined landfill in Massachusetts.

Category C: Reuse as Lined Landfill Cover in Massachusetts:
Category C materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at a lined landfill in Massachusetts.

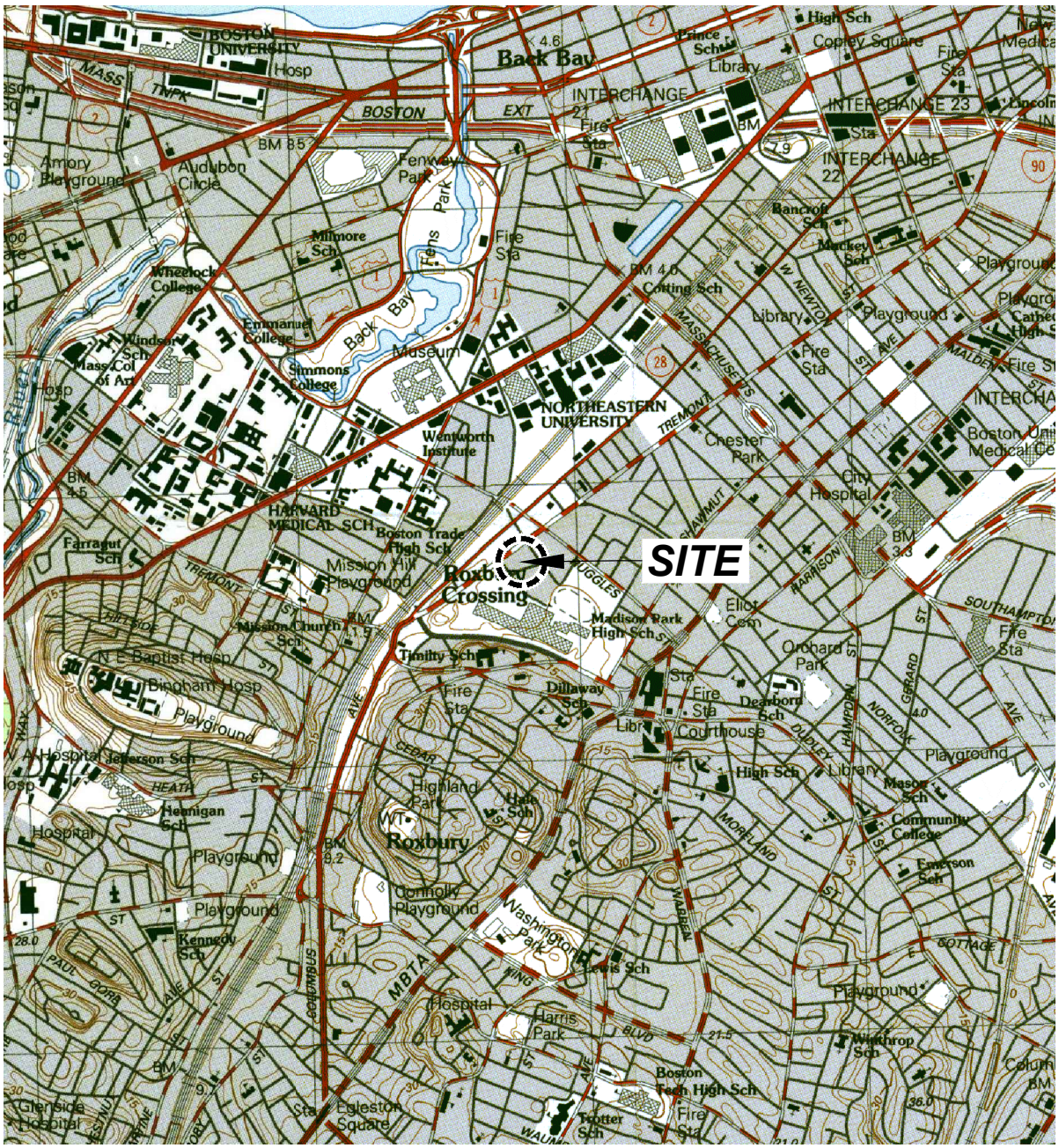
Category D: Recycling at an Asphalt Batch Recycling Plant:
Category D materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for recycling by asphalt batching.

Category E: Disposal in Out-of-State Landfill as Non-Hazardous Waste:
Category E materials are excavated materials with concentrations of OHM and physical characteristics that do not meet the acceptance criteria for Massachusetts landfill cover. This category includes material that has been treated to reduce toxicity characteristic leachate procedure (TCLP) concentrations to below regulatory limits.

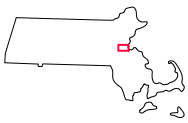
Category F-1: On-site Treatment of Hazardous Waste and Disposal in Out-of-State Landfill as Non-Hazardous Waste:
Category F-1 materials are excavated materials that are considered a listed or characteristic hazardous waste and that can feasibly be treated on site prior to disposal. This category includes material with TCLP concentrations greater than those acceptable for disposal as non-hazardous waste. The material will be re-classified and disposed of as Category E.

Category F-2: Disposal in Out-of-State Landfill as Hazardous Waste:
Category F-2 materials are excavated materials that are considered a listed or characteristic hazardous waste and that cannot feasibly be treated on site prior to disposal.

Figures



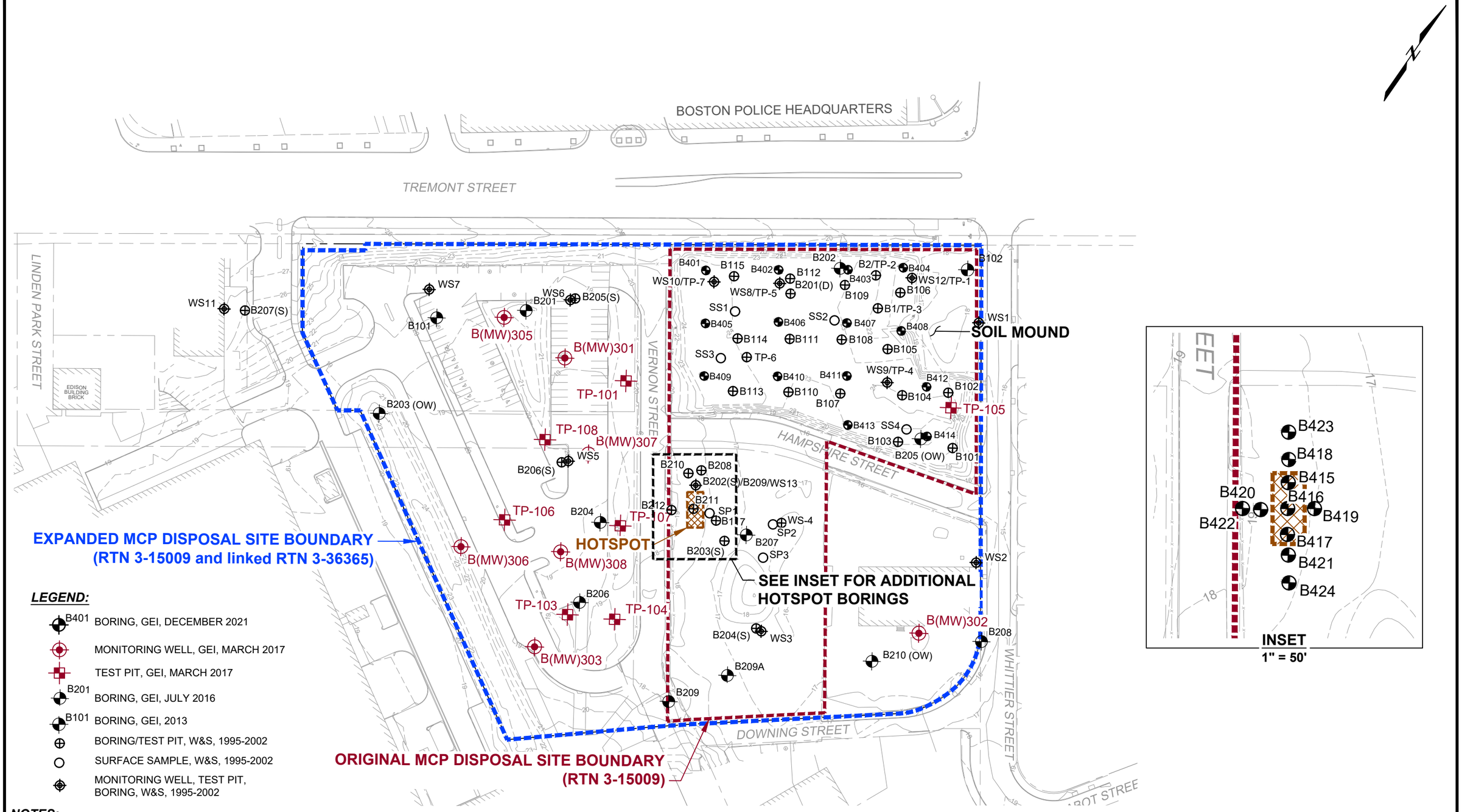
This Image provided by MassGIS is from U.S.G.S. Topographic
7.5 X 15 Minute Series
Boston South, MA Quadrangle, 1987.
Datum is National Geodetic Vertical Datum of 1929 (NGVD29).
Contour Interval is 3 Meters.



MASSACHUSETTS
QUADRANGLE LOCATION

Release Abatement Measure Plan Parcel P-3, Tremont & Whittier Streets Boston (Roxbury), Massachusetts	GEI Consultants	SITE LOCATION MAP
Boston Planning & Redevelopment Agency Boston, Massachusetts	Project 2103938	March 2023 Fig. 1

B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\RAM Plan\2103938-01



LEGEND:

- B401 — BORING, GEI, DECEMBER 2021
- MONITORING WELL, GEI, MARCH 2017
- TEST PIT, GEI, MARCH 2017
- B201 — BORING, GEI, JULY 2016
- B101 — BORING, GEI, 2013
- BORING/TEST PIT, W&S, 1995-2002
- SURFACE SAMPLE, W&S, 1995-2002
- MONITORING WELL, TEST PIT, BORING, W&S, 1995-2002

NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929.

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

0 100 200

SCALE: 1" = 100'

Release Abatement Measure Plan
Parcel P-3, Tremont & Whittier Streets
Boston (Roxbury), Massachusetts

Boston Planning & Redevelopment Agency
Boston, Massachusetts

GEI Consultants

PROPERTY PLAN

Project 2103938 | March 2023 | Fig. 2

SMALLEY, JEREMY B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\RAM Plan\2103938-02.dwg - 2/9/2022

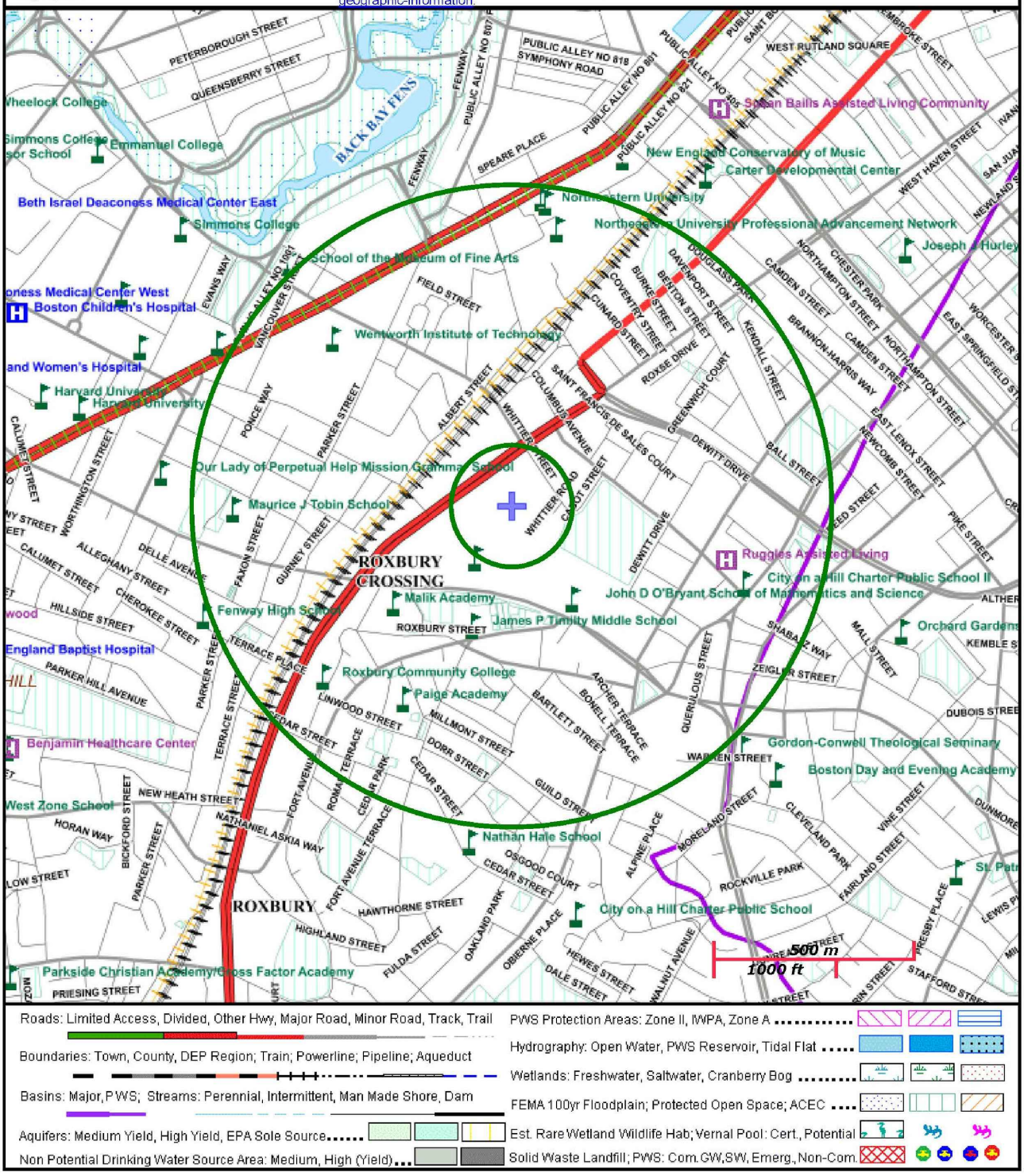
MassDEP - Bureau of Waste Site Cleanup

Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
PARCEL P-3
TREMONT AND WHITTIER STREETS BOSTON, MA
3-000015009
NAD83 UTM Meters:
4688877mN , 327828mE (Zone: 19)
July 20, 2020

The information shown is the best available at the date of printing. However, it may be incomplete. The responsible party and LSP are ultimately responsible for ascertaining the true conditions surrounding the site. Metadata for data layers shown on this map can be found at: https://www.mass.gov/orgs/massgis-bureau-of-geographic-information

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Release Abatement Measure Plan Parcel P-3, Tremont & Whittier Streets Boston (Roxbury), Massachusetts	GEI Consultants	MASSGIS SITE SCORING MAP
Boston Planning & Redevelopment Agency Boston, Massachusetts	Project 2103938	March 2023 Fig. 3

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NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929.

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

LEGEND:

BORING, GEI, DECEMBER 2021

0 40 80

SCALE: 1" = 40'

Release Abatement Measure Plan
Parcel P-3, Tremont & Whittier Streets
Boston (Roxbury), Massachusetts

Boston Planning & Redevelopment Agency
Boston, Massachusetts

GEI Consultants

BORING LOCATION PLAN

Project 2103938 | March 2023 | Fig. 4

SMALLEY, JEREMY B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\RAM Plan\2103938-04.dwg - 2/9/2022

B401 B402 B403 B404 B405 B406 B407 B408 B409 B410 B411 B412 B413 B414 B415 B416 B417 B418 B419 B420 B421 B422 B423 B424

SOIL MOUNDS

HOTSPOT

VERNON STREET

HAMPSHIRE STREET

N

SOIL MANAGEMENT LEGEND:

- SOIL CATEGORY BOUNDARY
- CATEGORY A: < RCS - 1
- CATEGORY B: IN-STATE UNLINED LANDFILL
- CATEGORY C: IN-STATE LINED LANDFILL
- CATEGORY D: ASPHALT BATCH PLANT
- CATEGORY F-1: ON-SITE TREATMENT OF HAZARDOUS WASTE AND DISPOSAL IN OUT-OF-STATE LANDFILL AS NON-HAZARDOUS WASTE

NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929.

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

LEGEND:

BORING, GEI, DECEMBER 2021

0 40 80

SCALE: 1" = 40'

Release Abatement Measure Plan
Parcel P-3, Tremont & Whittier Streets
Boston (Roxbury), Massachusetts

Boston Planning & Redevelopment Agency
Boston, Massachusetts

GEI Consultants

Project 2103938

SOIL MANAGEMENT PLAN
0 TO 5 FEET

March 2023 Fig. 5

SMALLEY, JEREMY B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\RAM Plan\2103938-05.dwg - 2/9/2022

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B424

SOIL MOUNDS

HOTSPOT

VERNON STREET

HAMPSHIRE STREET

N

SOIL MANAGEMENT LEGEND:

- SOIL CATEGORY BOUNDARY
- CATEGORY A: < RCS - 1
- CATEGORY B: IN-STATE UNLINED LANDFILL
- CATEGORY C: IN-STATE LINED LANDFILL
- CATEGORY D: ASPHALT BATCH PLANT
- CATEGORY F-1: ON-SITE TREATMENT OF HAZARDOUS WASTE AND DISPOSAL IN OUT-OF-STATE LANDFILL AS NON-HAZARDOUS WASTE

NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929.

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

LEGEND:

BORING, GEI, DECEMBER 2021

0 40 80

SCALE: 1" = 40'

Release Abatement Measure Plan
Parcel P-3, Tremont & Whittier Streets
Boston (Roxbury), Massachusetts

Boston Planning & Redevelopment Agency
Boston, Massachusetts

GEI Consultants

Project 2103938

SOIL MANAGEMENT PLAN
5 TO 10 FEET

March 2023 Fig. 6

SMALLEY, JEREMY B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\SMP\2103938-06.dwg - 2/9/2022

Appendix A

MassDEP Transmittal Forms (BWSC106)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM
Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

BWSC 106 12

Release Tracking Number
3 - 15009

A. SITE LOCATION:

1. Site Name/Location Aid: UTMS 4688700MN 327800 ME
2. Street Address: PARCEL P-3 TREMONT & WHITTIER STS
3. City/Town: ROXBURY 4. Zip Code: 021190000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.

☐ a. Tier I ☐ b. Tier ID ☑ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Plan (if previously submitted): _____ (mm/dd/yyyy)

☑ 2. Submit an **Initial Release Abatement Measure (RAM) Plan**.

☐ a. Check here if the RAM is being conducted as part of the construction of a permanent structure. If checked, you must specify what type of permanent structure is to be erected in or in the immediate vicinity of the area where the RAM is to be conducted.

b. Specify type of permanent structure: (check all that apply) ☐ i. School ☐ ii. Residential ☐ iii. Commercial ☐ iv. Industrial ☐ v. Other Specify: _____

☐ 3. Submit a **Modified RAM Plan** of a previously submitted RAM Plan.

☐ 4. Submit a **RAM Status Report**.

☐ 5. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP, concurrent with a RAM Status Report.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal:

☐ i. A Remedial Monitoring Report(s) submitted every six months, concurrent with a RAM Status Report.
☐ ii. A Remedial Monitoring Report(s) submitted annually, concurrent with a RAM Status Report.

c. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC106A, RAM Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 6. Submit a **RAM Completion Statement**.

☐ 7. Submit a **Revised RAM Completion Statement**.

8. Provide Additional RTNs:

☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.

b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal. ☐ - ☐ ☐ - ☐

☐ 9. Include in the **RAM Plan** or **Modified RAM Plan** a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Media Impacted and Receptors Affected: (check all that apply)

☐ a. Paved Surface ☐ b. Basement ☐ c. School
☐ d. Public Water Supply ☐ e. Surface Water ☐ f. Zone 2 ☐ g. Private Well ☐ h. Residence ☑ i. Soil
☐ j. Ground Water ☐ k. Sediments ☐ l. Wetland ☐ m. Storm Drain ☐ n. Indoor Air ☐ o. Air
☐ p. Soil Gas ☐ q. Sub-Slab Soil Gas ☐ r. Critical Exposure Pathway ☐ s. NAPL ☐ t. Unknown
☐ u. Others Specify: _____

2. Sources of the Release or TOR: (check all that apply)

☐ a. Transformer ☐ b. Fuel Tank ☐ c. Pipe
☐ d. OHM Delivery ☐ e. AST ☐ f. Drums ☐ g. Tanker Truck ☐ h. Hose ☐ i. Line
☐ j. UST Describe: _____ ☐ k. Vehicle ☐ l. Boat/Vessel
☑ m. Unknown ☑ n. Other: URBAN FILL

3. Type of Release or TOR: (check all that apply)

☑ a. Dumping ☐ b. Fire ☐ c. AST Removal ☐ d. Overfill
☐ e. Rupture ☐ f. Vehicle Accident ☐ g. Leak ☐ h. Spill ☐ i. Test Failure ☐ j. TOR Only
☐ k. UST Removal Describe: _____
☐ l. Unknown ☑ m. Other: URBAN FILL

4. Identify Oils and Hazardous Materials Released: (check all that apply)

☑ a. Oils ☑ b. Chlorinated Solvents
☑ c. Heavy Metals ☐ d. Others Specify:

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☐ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System/HVAC Modification System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☐ 10. Soil Vapor Extraction
☐ 11. Remedial Additives
☐ 12. Air Sparging
☐ 13. Active Exposure Pathway Mitigation System
☐ 14. Passive Exposure Pathway Mitigation System
☐ 15. Monitored Natural Attenuation
☐ 16. In-Situ Chemical Oxidation

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☑ 17. Excavation of Contaminated Soils

☑ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards

☑ ii. Off Site Estimated volume in cubic yards 1000

iia. Receiving Facility: TBD Town: TBD State: MA

iib. Receiving Facility: Town: State:

iii. Describe: TBD

☐ b. Store ☐ i. On Site Estimated volume in cubic yards

☐ ii. Off Site Estimated volume in cubic yards

iia. Receiving Facility: Town: State:

iib. Receiving Facility: Town: State:

☐ c. Landfill ☐ i. Cover Estimated volume in cubic yards

Receiving Facility: Town: State:

☐ ii. Disposal Estimated volume in cubic yards

Receiving Facility: Town: State:

☐ 18. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount:

b. Receiving Facility: Town: State:

c. Receiving Facility: Town: State:

☐ 19. Removal of Other Contaminated Media:

a. Specify Type and Volume:

b. Receiving Facility: Town: State:

c. Receiving Facility: Town: State:

☐ 20. Other Response Actions:

Describe:

☐ 21. Use of Innovative Technologies:

Describe:

E. 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 of this form indicates that a **Release Abatement Measure 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 of this form indicates that a **Release Abatement Measure Status Report** and/or **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;

> if Section B of this form indicates that a **Release Abatement Measure 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:

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 #:	9719				
2. First Name:	ILEEN S	3. Last Name:	GLADSTONE		
4. Telephone:	7817214012	5. Ext.:		6. Email:	igladstone@geiconsultan
7. Signature:					
8. Date:	(mm/dd/yyyy)	9. LSP Stamp:			

F. PERSON UNDERTAKING RAM:

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: BOSTON PLANNING & DEVELOPMENT AGENCY

3. Contact First Name: WILLIAM 4. Last Name: EPPERSON

5. Street: 22 DRYDOCK AVENUE 6. Title: DEPUTY DIR. CAPITAL CONSTRUCTION

7. City/Town: BOSTON 8. State: MA 9. ZIP Code: 022100000

10. Telephone: 6179186202 11. Ext.: 12. Email: william.j.epperson@bost

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

☑ Check here to change relationship

☑ 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 RAM Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC108).

☑ 2. 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.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to bwsc.edep@state.ma.us.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

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: _____ (Signature)

3. Title: DEPUTY DIR. CAPITAL CONSTRUCTIO

4. For: BOSTON PLANNING & DEVELOPMENT AGENCY (Name of person or entity recorded in Section F)

5. Date: _____ (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

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:)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM
Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

BWSC 106 12

Release Tracking Number
3 - 36365

A. SITE LOCATION:

1. Site Name/Location Aid: PARCEL P-3
2. Street Address: TREMONT STREET
3. City/Town: BOSTON 4. Zip Code: 021200000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category.

☐ a. Tier I ☐ b. Tier ID ☑ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

1. List Submittal Date of Initial RAM Plan (if previously submitted): _____ (mm/dd/yyyy)

☑ 2. Submit an **Initial Release Abatement Measure (RAM) Plan**.

☐ a. Check here if the RAM is being conducted as part of the construction of a permanent structure. If checked, you must specify what type of permanent structure is to be erected in or in the immediate vicinity of the area where the RAM is to be conducted.

b. Specify type of permanent structure: (check all that apply) ☐ i. School ☐ ii. Residential ☐ iii. Commercial

☐ iv. Industrial ☐ v. Other Specify: _____

☐ 3. Submit a **Modified RAM Plan** of a previously submitted RAM Plan.

☐ 4. Submit a **RAM Status Report**.

☐ 5. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP, concurrent with a RAM Status Report.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal:

☐ i. A Remedial Monitoring Report(s) submitted every six months, concurrent with a RAM Status Report.
☐ ii. A Remedial Monitoring Report(s) submitted annually, concurrent with a RAM Status Report.

c. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC106A, RAM Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 6. Submit a **RAM Completion Statement**.

☐ 7. Submit a **Revised RAM Completion Statement**.

8. Provide Additional RTNs:

☐ a. Check here if this RAM Submittal covers additional Release Tracking Numbers (RTNs). RTNs that have been previously linked to a Primary Tier Classified RTN do not need to be listed here. This section is intended to allow a RAM to cover more than one unclassified RTN and not show permanent linkage to a Primary Tier Classified RTN.

b. Provide the additional Release Tracking Number(s) covered by this RAM Submittal. ☐ - ☐ ☐ - ☐

☐ 9. Include in the **RAM Plan** or **Modified RAM Plan** a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

(All sections of this transmittal form must be filled out unless otherwise noted above)

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT RAM:

1. Media Impacted and Receptors Affected: (check all that apply)

☐ a. Paved Surface ☐ b. Basement ☐ c. School
☐ d. Public Water Supply ☐ e. Surface Water ☐ f. Zone 2 ☐ g. Private Well ☐ h. Residence ☑ i. Soil
☐ j. Ground Water ☐ k. Sediments ☐ l. Wetland ☐ m. Storm Drain ☐ n. Indoor Air ☐ o. Air
☐ p. Soil Gas ☐ q. Sub-Slab Soil Gas ☐ r. Critical Exposure Pathway ☐ s. NAPL ☐ t. Unknown
☐ u. Others Specify: _____

2. Sources of the Release or TOR: (check all that apply)

☐ a. Transformer ☐ b. Fuel Tank ☐ c. Pipe
☐ d. OHM Delivery ☐ e. AST ☐ f. Drums ☐ g. Tanker Truck ☐ h. Hose ☐ i. Line
☐ j. UST Describe: _____ ☐ k. Vehicle ☐ l. Boat/Vessel
☑ m. Unknown ☑ n. Other: URBAN FILL

3. Type of Release or TOR: (check all that apply)

☑ a. Dumping ☐ b. Fire ☐ c. AST Removal ☐ d. Overfill
☐ e. Rupture ☐ f. Vehicle Accident ☐ g. Leak ☐ h. Spill ☐ i. Test Failure ☐ j. TOR Only
☐ k. UST Removal Describe: _____
☐ l. Unknown ☑ m. Other: URBAN FILL

4. Identify Oils and Hazardous Materials Released: (check all that apply)

☑ a. Oils ☑ b. Chlorinated Solvents
☑ c. Heavy Metals ☐ d. Others Specify:

D. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply, for volumes list cumulative amounts)

☐ 1. Assessment and/or Monitoring Only
☐ 2. Temporary Covers or Caps
☐ 3. Deployment of Absorbent or Containment Materials
☐ 4. Temporary Water Supplies
☐ 5. Structure Venting System/HVAC Modification System
☐ 6. Temporary Evacuation or Relocation of Residents
☐ 7. Product or NAPL Recovery
☐ 8. Fencing and Sign Posting
☐ 9. Groundwater Treatment Systems
☐ 10. Soil Vapor Extraction
☐ 11. Remedial Additives
☐ 12. Air Sparging
☐ 13. Active Exposure Pathway Mitigation System
☐ 14. Passive Exposure Pathway Mitigation System
☐ 15. Monitored Natural Attenuation
☐ 16. In-Situ Chemical Oxidation

D. DESCRIPTION OF RESPONSE ACTIONS (cont.): (check all that apply, for volumes list cumulative amounts)

☑ 17. Excavation of Contaminated Soils

☑ a. Re-use, Recycling or Treatment ☐ i. On Site Estimated volume in cubic yards

☑ ii. Off Site Estimated volume in cubic yards 1000

iia. Receiving Facility: TBD Town: TBD State: MA

iib. Receiving Facility: Town: State:

iii. Describe: TBD

☐ b. Store ☐ i. On Site Estimated volume in cubic yards

☐ ii. Off Site Estimated volume in cubic yards

iia. Receiving Facility: Town: State:

iib. Receiving Facility: Town: State:

☐ c. Landfill ☐ i. Cover Estimated volume in cubic yards

Receiving Facility: Town: State:

☐ ii. Disposal Estimated volume in cubic yards

Receiving Facility: Town: State:

☐ 18. Removal of Drums, Tanks or Containers:

a. Describe Quantity and Amount:

b. Receiving Facility: Town: State:

c. Receiving Facility: Town: State:

☐ 19. Removal of Other Contaminated Media:

a. Specify Type and Volume:

b. Receiving Facility: Town: State:

c. Receiving Facility: Town: State:

☐ 20. Other Response Actions:

Describe:

☐ 21. Use of Innovative Technologies:

Describe:

E. 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 of this form indicates that a **Release Abatement Measure 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 of this form indicates that a **Release Abatement Measure Status Report** and/or **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;

> if Section B of this form indicates that a **Release Abatement Measure 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:

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 #:	9719				
2. First Name:	ILEEN S	3. Last Name:	GLADSTONE		
4. Telephone:	7817214012	5. Ext.:		6. Email:	igladstone@geiconsultan
7. Signature:					
8. Date:	(mm/dd/yyyy)	9. LSP Stamp:			

F. PERSON UNDERTAKING RAM:

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: BOSTON PLANNING AND DEVELOPMENT AGENCY

3. Contact First Name: WILLIAM 4. Last Name: EPPERSON

5. Street: 22 DRYDOCK AVENUE STE 201 6. Title: DEPUTY DIR. CAPITAL CONSTRUCTION

7. City/Town: BOSTON 8. State: MA 9. ZIP Code: 022102386

10. Telephone: 6179186202 11. Ext.: 12. Email: william.j.epperson@bost

G. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING RAM:

☑ Check here to change relationship

☑ 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 RAM Specify Relationship:

H. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if any Remediation Waste, generated as a result of this RAM, will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement. You must submit a Phase IV Remedy Implementation Plan along with the appropriate transmittal form (BWSC108).

☑ 2. 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.

☑ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the implementation of a Release Abatement Measure.

☐ 4. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to bwsc.edep@state.ma.us.

☐ 5. If a RAM Compliance Fee is required for this RAM, check here to certify that a RAM Compliance Fee was submitted to DEP, P. O. Box 4062, Boston, MA 02211.

☑ 6. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

RELEASE ABATEMENT MEASURE (RAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 (Subpart D)

I. CERTIFICATION OF PERSON UNDERTAKING RAM:

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: _____ (Signature)

3. Title: DEPUTY DIR. CAPITAL CONSTRUCTIO

4. For: BOSTON PLANNING AND DEVELOPMENT AGENCY (Name of person or entity recorded in Section F)

5. Date: _____ (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section F.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

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:)

Release Abatement Measure Plan
Parcel P-3
Boston (Roxbury), Massachusetts
MassDEP RTNs 3-15009 and 3-36365

Attachment to Release Abatement Measure Transmittal Form BWSC106

Section H, Question 2. Required Attachment and Submittals

The response actions described in this Release Abatement Measure Plan are subject to the provisions of Notice of Non-Compliance (NON-NE-07-3A146) issued by MassDEP to the Boston Redevelopment Authority (now BPDA) on October 22, 2007.

Appendix B

Public Notice Letters

GEI Consultants

Consulting Engineers and Scientists

March 30, 2023
Project 2103938

Mayor Michelle Wu
Mayor's Office
Boston City Hall
One City Hall Plaza
Boston, MA 02201

Dear Mayor Wu:

Re: Release Abatement Measure Plan
Parcel P-3: Whittier and Tremont Street
Boston (Roxbury), Massachusetts
MassDEP RTNs 3-15009 and 3-36365

GEI Consultants, Inc. is hereby notifying your office that a Release Abatement Measure (RAM) Plan is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the above-referenced site.

The work includes management and disposal of contaminated soil at the property. The work associated with the RAM is expected to begin in Spring 2023.

The RAM Plan is on file with the MassDEP Northeast Regional Office (NERO) in Wilmington, Massachusetts concurrently with this letter and is available for review online at https://eeaonline.eea.state.ma.us/portal#!/search/wastesite, searchable under RTNs 3-0015009 and 3-0036365. This notification is made in fulfillment of the public notice requirements of the MCP (310 CMR 40.1403).

Please contact me at 781-721-4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

Ryan S. Hoffman, P.G., LSP
Vice President

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

RSH:jam
c: Bureau of Waste Site Cleanup, MassDEP-NERO

B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\01_ADMIN\RAM Plan\App B - Public Notice and Response to Comments\RAM Plan pub not ltrs.doc

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

GEI Consultants

Consulting Engineers and Scientists

March 30, 2023
Project 2103938

Dr. Bisola Ojikutu, MD, MPH
Executive Director
Boston Public Health Commission
1010 Massachusetts Avenue,6th Floor
Boston, MA 02118

Dear Dr. Ojikutu:

Re: Release Abatement Measure Plan
Parcel P-3: Whittier and Tremont Street
Boston (Roxbury), Massachusetts
MassDEP RTNs 3-15009 and 3-36365

GEI Consultants, Inc. is hereby notifying your office that a Release Abatement Measure (RAM) Plan is being submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the above-referenced site.

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Please contact me at 781-721-4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

Ryan S. Hoffman, P.G., LSP
Vice President

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

RSH:jam
c: Bureau of Waste Site Cleanup, MassDEP-NERO

B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\01_ADMIN\RAM Plan\App B - Public Notice and Response to Comments\RAM Plan pub not ltrs.doc

GEI Consultants, Inc.
400 Unicorn Park Drive, Woburn, MA 01801
781.721.4000

Public Comments and Responses to "Draft Supplemental Phase II Comprehensive Site Assessment, Phase III Remedial Action Plan Addendum, and Temporary Solution Statement", dated January 11, 2021 and "Draft Release Abatement Measure Plan", dated January 11, 2021

Comments received by email from Alison Pultinas on January 18, 2021.

Can you confirm that a 20-day comment period has begun for the draft remediation Plans and when is the deadline?

> BPDA Response: The comment period for the environmental conditions of P-3 has been extended to February 26th, providing additional time for public feedback after the February 8th meeting. If you or someone you know has any additional comments, please feel free to send a note to me (kelly.sherman@boston.gov) or Ileen Gladstone (IGladstone@geiconsultants.com).

Was there a legal notice advertising January 11 as the public involvement meeting? I didn't see anything in the Banner newspaper.

> BPDA Response: As you know, we regularly provide public notice in the Bay State Banner, The Sun, and the South End News and apologize for the oversight in this posting. GEI included a public notice in the Boston Herald, but moving forward, we will make sure they publish in several local publications as well.

Comments received by email from Norm Stembridge on January 26, 2021.

I'm a member of the Roxbury Strategic Master Plan Oversight Committee. I sat in last week on your presentation for the soil remediation work to be done on Parcel 3 across the street from the Boston Police Headquarters. I appreciated the presentation. I do have some follow up questions though on the proposed work to be done.

To what extent will the remediation work be suitable for future use? After the proposed work is done will the land be suitable for people to live on or nearby? What if future use called for an underground parking garage of four to five levels? Will the proposed remediation work clearly state and layout what may or may not be located on Parcel 3 afterwards?

The Oversight Committee and the Boston Planning Development Agency (BPDA) work together on certain proposed projects within Roxbury. In the past we've seen remediation work done, a proposal comes along and then to find out that the level of remediation work done is inadequate for the proposed usage. Certain types of housing may not be suitable or putting a garage of some type can't be done.

I'm sure that you can see how such information would be useful. Funding for proposed projects may be much more than originally anticipated. I think you would agree it would be better to avoid such surprises.

So yes, I'd like your feedback on what I've asked. I'm also requesting that my questions be entered, by the BPDA, into any relevant comment sections for the proposed work. If you have

anything to say directly to me then please feel free to do so. I'm sure that we'd all like to see this work out well so that the community move on from there.

BPDA Response: William Epperson, Deputy Director for Capital Construction, BPDA, spoke with Mr. Stembridge and addressed his concerns.

Comments received by email from Connie Forbes on February 1, 2021.

We've just been informed that residents are unable to access the BPDA website for information to make any comments, and the comment deadline for this particular project is today. Please request an extension of the deadline due to issues with the BPDA website. We need to ensure resident feedback is captured.

BPDA Response: The comment period for the Environmental conditions of P3 will be extended to Feb 26th, 2021. If you have feedback or comments please email me (kelly.sherman@boston.gov) or leave a comment on the P3 website (which will automatically get sent to me). You can also email IGladstone@geiconsultants.com

Comments received during Parcel P3 Workshop on February 22, 2021.

What is the remediation timeline and plan?

BPDA Response: We are still working on finalizing the timeline, but we expect the first phase of remediation to occur in late summer or early fall (work on site will be 2 weeks long)
www.bostonplans.org/getattachment/62a0dd74-2822-40b9-b4fd-2e6e578b6b61

What will be the level of community involvement in remediation efforts?

BPDA Response: Once the environmental consultant is awarded, we will begin a competitive bidding process for a site work contractor. We are working with our DEI team to expand outreach to MBEs for this work.

More specifically, we can make our work transparent by publishing the plans and specifications that will be the basis of the work done by the future site contractor who performs the remediation. Because these tend to be long and technical, we can also publish a more reader-friendly guide of both the site conditions, as well as the work to be included in the contract with the contractor. Most importantly, we can publish the requirements of the contractor that will be enforced to ensure neighbors are not impacted.

Prior to on-site remediation work, we will notify adjacent residents of the projected timeline of remediation activities, expected to be conducted over a two-week period.

During the active construction period, we can publish a live phone number for concerned neighbors to call and report concerns directly to us, our engineer, and our contractor (via collaborative Google Voice line)

Appendix C

Boring Logs

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 24' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B401

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/17	PUSH	PID: S1(0-17") = 0.0 ppm	FILL	S1 (0-17") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subrounded gravel up to 1.5", ~5% non-plastic fines, moist, brown. Contains brick and glass.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 24' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B402
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/34	PUSH	PID: S1(0-34") = 0.0 ppm	FILL	S1 (0-34") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subrounded gravel up to 1.5", ~5% non-plastic fines, moist, brown. Contains brick and cobble.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B403

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/41	PUSH	PID: S1(0-41") = 0.0 ppm	FILL	S1 (0-41") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subrounded gravel up to 1", ~5% non-plastic fines, moist, brown. Contains brick, cobble, and ash.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 21' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B404
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/40	PUSH	PID: S1(0-40") = 0.0 ppm	FILL	S1 (0-40") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subrounded gravel up to 1.5", ~5% non-plastic fines, moist, brown. Contains brick, cobble and concrete.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 24' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B405
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/47	PUSH	PID: S1(0-47") = 0.0 ppm	FILL	S1 (0-47") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subrounded gravel up to 1.5", ~5% non-plastic fines, moist, brown. Contains brick, ash, and cobble.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 24' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B406
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/43	PUSH	PID: S1(0-43") = 0.0 ppm	FILL	S1 (0-43") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.75", ~5% non-plastic fines, moist, brown. Contains brick, and glass.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B407
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
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SC = Sonic Core
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HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/31	PUSH	PID: S1(0-31") = 0.0 ppm	FILL	S1 (0-31") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.75", ~5% non-plastic fines, moist, brown. Contains brick, cobble, and glass.
	5	S2	5 to 10	60/21	PUSH	PID: S2(0-21") = 0.0 ppm		S2 (0-21") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(0-31").
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 22' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B408
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/41	PUSH	PID: S1(0-19") = 0.0 ppm, S1(19-25") = 0.0 ppm, S1(25-41") = 0.0 ppm	FILL	S1 (0-19") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.5", ~5% non-plastic fines, moist, brown. Contains brick, and glass. S1 (19-25") LOW PLASTICITY SANDY CLAY (CLS): ~90% non-plastic fines, ~10% fine sand, moist, grey. S1 (25-41") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(0-19").
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 24' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 5.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B409
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/15	PUSH	S1(0-15") = 0.0 ppm	FILL	S1 (0-15") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.75", ~5% non-plastic fines, moist, brown. Contains brick, and concrete.
	5							End of boring, 5'.
	10							

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B410

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/38	PUSH	S1(0-12") = 0.0 ppm, S1(12-17") = 0.0 ppm, S1(17-38") = 0.0 ppm	FILL	S1 (0-12") NARROWLY GRADED SAND WITH GRAVEL AND SILT (SW-SM): ~75% fine to medium sand, ~15% subangular gravel up to 0.5", ~10% non-plastic fines, moist, brown. Contains brick, and glass. S1 (12-17") CONCRETE/CEMENT FRAGMENTS S1 (17-38") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.5", ~5% non-plastic fines, moist, brown. Contains brick, and cobble.
	5	S2	5 to 10	60/37	PUSH	S2(0-32") = 0.0 ppm, S2(32-37") = 0.0 ppm		S2 (0-32") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(17-38"). S2 (32-37") WIDELY GRADED SAND WITH GRAVEL (SW): ~90% fine to coarse sand, ~5% subangular gravel up to 0.25", ~5% non-plastic fines, moist, brown. Contains ash, coal, brick, and glass.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B411
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/32	PUSH	S1(0-32") = 0.0 ppm	FILL	S1 (0-32") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains cobble, brick, and glass.
	5	S2	5 to 10	60/36	PUSH	S2(0-36") = 0.0 ppm		S2 (0-36") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(0-32").
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B412

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/33	PUSH	S1(0-33") = 0.0 ppm	FILL	S1 (0-33") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains concrete, brick, and glass.
	5	S2	5 to 10	60/23	PUSH	S2(0-23") = 0.0 ppm		S2 (0-23") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(0-33").
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B413

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
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PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/33	PUSH	S1(0-33") = 0.0 ppm	FILL	S1 (0-33") WIDELY GRADED SAND WITH GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains coal, brick, and glass.
	5	S2	5 to 10	60/56	PUSH	S2(0-56") = 0.1 ppm		S2 (0-56") WIDELY GRADED SAND WITH GRAVEL (SW): Similar to S1(0-33").
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 23' | **DATE START/END:** 12/9/2021 - 12/9/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B414

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/40	PUSH	S1(0-40") = 0.0 ppm	FILL	S1 (0-40") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~10% subangular gravel up to 1", ~10% non-plastic fines, moist, brown. Contains concrete, brick, and glass.
	5	S2	5 to 10	60/37	PUSH	S2(0-37") = 0.0 ppm	FILL	S2 (0-37") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~75% fine to medium sand, ~15% subangular gravel up to 0.25", ~10% non-plastic fines, moist, brown. Contains coal, ash, brick, and cobbles.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B415
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/32	PUSH	S1(0-2") = 0.0 ppm, S1(2-15") = 0.0 ppm, S1(15-22") = 0.0 ppm, S1(22-32") = 0.0 ppm	FILL	S1 (0-2") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains brick, and glass. S1 (2-15") WIDELY GRADED SAND WITH SILT (SW-SM): ~90% fine to coarse sand, ~10% non-plastic fines, moist, light brown. S1 (15-22") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.5", ~10% non-plastic fines, moist, brown. Contains coal, brick, and glass. S1 (22-32") WIDELY GRADED SAND (SW): ~60% fine to coarse sand, ~40% coal/ash debris, moist, black/brown.
	5	S2	5 to 10	60/43	PUSH	S2(0-19") = 0.0 ppm, S2(19-28") = 0.0 ppm, S2(28-43") = 0.0 ppm		S2 (0-19") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains glass, and brick. S2 (19-28") WIDELY GRADED SAND WITH SILT (SW-SM): ~90% non-plastic fines, ~10% fine sand, moist, light brown. S2 (28-43") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~85% fine to coarse sand, ~10% non-plastic fines, ~5% subangular gravel up to 0.5", moist, brown.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B416
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/20	PUSH	S1(0-20") = 0.1 ppm	FILL	S1 (0-20") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.75", ~5% non-plastic fines, moist, brown. Contains coal, brick, and glass.
	5	S2	5 to 10	60/23	PUSH	S2(0-23") = 0.1 ppm		S2 (0-23") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): Similar to S1(0-20")
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B417
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/37	PUSH	S1(0-7") = 0.0 ppm, S1(7-22") = 0.1 ppm, S1(22-29") = 0.0 ppm, S1(29-37") = 0.1 ppm	FILL	S1 (0-7") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~15% subangular gravel up to 0.5", ~5% non-plastic fines, moist, brown. Contains brick. S1 (7-22") WIDELY GRADED SAND WITH SILT (SW-SM): ~90% fine to coarse sand, ~10% non-plastic fines, moist, light brown. S1 (22-29") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.5", ~10% non-plastic fines, moist, brown. Contains coal, brick, and glass. S1 (29-37") WIDELY GRADED SAND (SW): ~60% fine to coarse sand, ~40% coal/ash debris, moist, black/brown.
	5	S2	5 to 10	60/42	PUSH	S2(0-31") = 0.0 ppm, S2(31-16") = 0.0 ppm, S2(36-42") = 0.0 ppm	FILL	S2 (0-31") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains ash, glass, and brick.
							SILT	S2 (31-36") WIDELY GRADED SILT WITH SAND (MLS): ~90% non-plastic fines, ~10% fine sand, moist, light brown.
							SAND	S2 (36-42") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~85% fine to coarse sand, ~10% subangular gravel up to 1", ~5% non-plastic fines, moist, brown.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B418
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/29	PUSH	S1(0-20") = 0.0 ppm, S1(20-29") = 0.0 ppm	FILL	S1 (0-20") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~85% fine to coarse sand, ~10% non-plastic fines, ~5% subangular gravel up to 1", moist, brown. Contains coal, brick, and glass. S1 (20-29") NARROWLY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to medium sand, ~10% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains ash, brick, and glass.
	5	S2	5 to 10	60/31	PUSH	S2(0-31") = 0.0 ppm		S2 (0-31") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): Similar to S1(20-29")
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B419

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/41	PUSH	S1(0-18") = 0.2 ppm, S1(18-23") = 0.0 ppm, S1(23-41") = 0.0 ppm	FILL	S1 (0-18") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 0.5", ~5% non-plastic fines, moist, brown. Contains brick and glass. S1 (18-23") WIDELY GRADED SAND WITH SILT (SW-SM): ~90% fine to coarse sand, ~10% non-plastic fines, moist, light brown. S1 (23-41") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): Similar to S1(0-18")
	5	S2	5 to 10	60/44	PUSH	S2(0-6") = 0.0 ppm, S2(6-17") = 0.0 ppm, S2(17-44") = 0.0 ppm		S2 (0-6") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): Similar to S1(0-18") S2 (6-17") NARROWLY GRADED SILTY SAND (SM): ~70% fine sand, ~30% non-plastic fines, moist, light brown. S2 (17-44) WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.25", ~10% non-plastic fines, moist, brown. Contains ash, brick and cobble.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B420
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/25	PUSH	S1(0-25") = 0.0 ppm	FILL	S1 (0-25") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% subangular gravel up to 1", ~5% non-plastic fines, moist, brown. Contains ash, brick, cobble and glass.
	5	S2	5 to 10	60/39	PUSH	S2(0-20") = 0.0 ppm, S2(20-32") = 0.0 ppm, S2(32-39") = 0.0 ppm	FILL	S2 (0-20") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): Similar to S1(0-25")
							SILT	S2 (20-32") SANDY SILT (CLS): ~90% non-plastic fines, ~10% fine sand, moist, light brown.
							SAND	S2 (32-39) WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.25", ~10% non-plastic fines, moist, brown.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B421

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Depth (ft)	Pen./ Rec. (in)	Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/26	PUSH	S1(0-6") = 0.0 ppm, S1(6-13") = 0.0 ppm, S1(13-26") = 0.0 ppm	FILL	S1 (0-6") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~10% subangular gravel up to 0.25", ~10% non-plastic fines, moist, brown. Contains brick and glass. S1 (6-13") WIDELY GRADED SAND WITH SILT (SW-SM): ~90% fine to coarse sand, ~10% non-plastic fines, moist, light brown. S1 (13-26") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.25", ~10% non-plastic fines, moist, white/brown. Contains ash.
	5	S2	5 to 10	60/31	PUSH	S2(0-31") = 0.0 ppm		S2 (0-31") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel up to 0.25", ~10% non-plastic fines, moist, brown. Contains brick.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B422

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/29	PUSH	S1(0-29") = 0.0 ppm	FILL	S1 (0-29") NARROWLY GRADED SILTY SAND (SM): ~70% fine to medium sand, ~20% non-plastic fines, ~10% subangular gravel to 0.25", moist, dark brown. Contains brick, and roots.
	5	S2	5 to 10	60/27	PUSH	S2(0-27") = 0.0 ppm		S2 (0-27") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW): ~80% fine to coarse sand, ~15% gravel to 1", ~5% non-plastic fines, moist, light brown. Contains brick, and glass.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING
B423
PAGE 1 of 1

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/42	PUSH	S1(0-28") = 0.2 ppm, S1(28-42") = 0.0 ppm	FILL	S1 (0-28") WIDELY GRADED SAND WITH GRAVEL AND SILT (SW): ~80% fine to coarse sand, ~15% subangular gravel to 1", ~5% non-plastic fines, moist, dark brown. Contains brick, coal and glass.
								S1 (28-42") NARROWLY GRADED SILTY SAND (SM): ~70% fine sand, ~20% non-plastic fines, ~10% subangular gravel to 0.5", moist, light brown. Contains brick.
	5	S2	5 to 10	60/15	PUSH	S2(0-15") = 0.0 ppm		S2 (0-15") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): ~80% fine to medium sand, ~10% gravel to 0.5", ~10% non-plastic fines, moist, light brown. Contains brick.
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

GEI WOBURN STD 5-NORTH-EAST-LAYER NAME BORING LOGS.GPJ 1/27/22

BORING INFORMATION

NORTHING (ft): | **EASTING (ft):**
GROUND SURFACE EL. (ft): ~El. 19' | **DATE START/END:** 12/10/2021 - 12/10/2021
VERT./HORIZ. DATUMS: Boston City Base/ | **DRILLING COMPANY:** Northern Drill Service, Inc.
TOTAL DEPTH (ft): 10.0 | **DRILLER NAME:** J. Raymond
LOGGED BY: J. Smalley | **RIG TYPE:** Geoprobe 6620DT

BORING

B424

DRILLING INFORMATION

HAMMER TYPE: Automatic | **CASING I.D./O.D.:** NA/ 3.5 inch | **CORE BARREL TYPE:** Macrocore
AUGER I.D./O.D.: NA / NA | **DRILL ROD O.D.:** NM | **CORE BARREL I.D./O.D.:** NA / NA
DRILLING METHOD: Direct Push
WATER LEVEL DEPTHS (ft): Not measured

ABBREVIATIONS:
Pen. = Penetration Length
Rec. = Recovery Length
RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen.,%
WOR = Weight of Rods
WOH = Weight of Hammer
S = Split Spoon Sample
C = Core Sample
U = Undisturbed Sample
SC = Sonic Core
DP = Direct Push Sample
HSA = Hollow-Stem Auger
Qp = Pocket Penetrometer Strength
Sv = Pocket Torvane Shear Strength
LL = Liquid Limit
PI = Plasticity Index
PID = Photoionization Detector
I.D./O.D.= Inside Diameter/Outside Diameter
NA, NM = Not Applicable, Not Measured
Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.

Elev. (ft)	Depth (ft)	Sample Information: Sample No.	Sample Information: Depth (ft)	Sample Information: Pen./ Rec. (in)	Sample Information: Blows per 6 in. or RQD	Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description
		S1	0 to 5	60/31	PUSH	S1(0-7") = 0.2 ppm, S1(7-20") = 0.0 ppm, S1(20-31") = 0.0 ppm	FILL	S1 (0-7") NARROWLY GRADED SAND WITH GRAVEL AND SILT (SP-SM): ~80% fine to medium sand, ~10% subangular gravel to 0.75", ~10% non-plastic fines, moist, black. Contains brick, and coal. S1 (7-20) WIDELY GRADED SILTY SAND (SW): ~90% fine sand, ~10% non-plastic fines, moist, light brown. S1 (20-31") WIDELY GRADED SAND WITH GRAVEL AND SILT (SW-SM): ~80% fine to coarse sand, ~10% subangular gravel to 1", ~10% non-plastic fines, moist, dark brown. Contains wood, and brick.
	5	S2	5 to 10	60/25	PUSH	S2(0-25") = 0.0 ppm		S2 (0-25") WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM): Similar to S1(20-31")
	10							End of boring, 10'.

NOTES:

PROJECT NAME: Parcel P3 Environmental Remediation
CITY/STATE: Boston, Massachusetts
GEI PROJECT NUMBER: 2103938

GEI Consultants

Appendix D

Laboratory Data Reports

CERTIFICATE OF ANALYSIS

Ryan Hoffman
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801

RE: Parcel P3 Environmental Remediation (2103938)
ESS Laboratory Work Order Number: 21L0419

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 1:50 pm, Dec 22, 2021

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0419

SAMPLE RECEIPT

The following samples were received on December 10, 2021 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Low Level VOA vials were frozen by ESS Laboratory on December 10, 2021 at 19:28.

Question I: Samples 21L0419-02, 21L0419-04, and 21L0419-06 for EPH and Metals were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
21L0419-01	2101938-B415-S1-2.5	Soil	8260B Low
21L0419-02	2101938-B415-S1-0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270D, 9045, 9050A
21L0419-03	2101938-B416-S2-7.5	Soil	8260B Low
21L0419-04	2101938-B416-S2-5-10	Soil	1010A, 1311, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0419-05	2101938-B417-5.5	Soil	8260B Low
21L0419-06	2101938-B417-3-8	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0419-07	2101938-B418-S1-0-5	Soil	1311, 1311/6010C
21L0419-08	2101938-B418-S2-5-10	Soil	1311, 1311/6010C
21L0419-09	2101938-B419-S1-0-5	Soil	1311, 1311/6010C
21L0419-10	2101938-B419-S2-5-10	Soil	1311, 1311/6010C
21L0419-11	2101938-B420-S1-0-5	Soil	1311, 1311/6010C
21L0419-12	2101938-B420-S2-5-10	Soil	1311, 1311/6010C
21L0419-13	2101938-B421-S1-0-5	Soil	1311, 1311/6010C
21L0419-14	2101938-B421-S2-5-10	Soil	1311, 1311/6010C

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

D1L0282-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
Acetone (21% @ 20%), Dichlorodifluoromethane (22% @ 20%), Tetrachloroethene (27% @ 20%)

D1L0282-CCV1 **Continuing Calibration %Diff/Drift is below control limit (CD-).**
Naphthalene (24% @ 20%), Tertiary-amyl methyl ether (22% @ 20%)

DL11447-BS1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (159% @ 70-130%), Tetrachloroethene (135% @ 70-130%)

DL11447-BS1 **Blank Spike recovery is below lower control limit (B-).**
1,2-Dibromo-3-Chloropropane (66% @ 70-130%)

DL11447-BSD1 **Blank Spike recovery is above upper control limit (B+).**
Acetone (174% @ 70-130%), Tetrachloroethene (149% @ 70-130%)

8082A Polychlorinated Biphenyls (PCB)

21L0419-06 **Surrogate recovery(ies) below lower control limit (S-).**
Tetrachloro-m-xylene (18% @ 30-150%)

8270D Semi-Volatile Organic Compounds

21L0419-02 **Elevated Method Reporting Limits due to sample matrix (EL).**

21L0419-06 **Elevated Method Reporting Limits due to sample matrix (EL).**

D1L0238-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (145% @ 80-120%), Pentachlorophenol (93% @ 80-120%)

D1L0238-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (45% @ 20%), bis(2-Chloroethyl)ether (25% @ 20%)

D1L0238-TUN1 **Pentachlorophenol tailing factor > 2.**

D1L0307-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (123% @ 80-120%), Pentachlorophenol (118% @ 80-120%)

D1L0307-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (23% @ 20%), Pyridine (21% @ 20%)

D1L0307-CCV1 **Initial Calibration Verification recovery is below lower control limit (ICV-).**
Aniline

D1L0324-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (91% @ 80-120%), Pentachlorophenol (98% @ 80-120%)

D1L0324-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
bis(2-Ethylhexyl)phthalate (25% @ 20%), Butylbenzylphthalate (21% @ 20%), Di-n-octylphthalate (30% @ 20%)

D1L0324-CCV1 **Initial Calibration Verification recovery is above upper control limit (ICV+).**
2,4-Dinitrophenol

No other observations noted.

End of Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0419

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **21L0419-01 through 21L0419-14**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

CAM Protocol (check all that apply below):

(x) 8260 VOC CAM II A	(x) 7470/7471 Hg CAM III B	( ) MassDEP VPH (GC/PID/FID) CAM IV A	(x) 8082 PCB CAM V A	( ) 9014 Total Cyanide/PAC CAM VI A	( ) 6860 Perchlorate CAM VIII B
(x) 8270 SVOC CAM II B	( ) 7010 Metals CAM III C	( ) MassDEP VPH (GC/MS) CAM IV C	(x) 8081 Pesticides CAM V B	( ) 7196 Hex Cr CAM VI B	( ) MassDEP APH CAM IX A
(x) 6010 Metals CAM III A	( ) 6020 Metals CAM III D	(x) MassDEP EPH CAM IV B	(x) 8151 Herbicides CAM V C	( ) Explosives CAM VIII A	( ) TO-15 VOC CAM IX 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 (x) No ( )
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (x) 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 (x) No ( )
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (x) No ( )
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	Yes (x) 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 (x) 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 protocols(s)?	Yes ( ) No (x)*
	***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 (x)*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ( ) No (x)*

All negative responses must be addressed in an attached laboratory narrative.

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.

Signature: Laurel Stoddard Date: December 21, 2021

Printed Name: Laurel Stoddard Position: Laboratory Director

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-2.5
Date Sampled: 12/10/21 08:00
Percent Solids: 88
Initial Volume: 7.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1,1-Trichloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1,2,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1,2-Trichloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1-Dichloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,1-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2,3-Trichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2,3-Trichloropropane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2,4-Trichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2,4-Trimethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2-Dibromo-3-Chloropropane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2-Dibromoethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2-Dichloroethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,2-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,3,5-Trimethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,3-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,3-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,4-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
1,4-Dioxane	ND (0.0606)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
2,2-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
2-Butanone	ND (0.0379)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
2-Chlorotoluene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
2-Hexanone	ND (0.0379)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
4-Chlorotoluene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
4-Isopropyltoluene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
4-Methyl-2-Pentanone	ND (0.0379)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Acetone	ND (0.0379)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Benzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Bromobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Bromochloromethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-2.5
Date Sampled: 12/10/21 08:00
Percent Solids: 88
Initial Volume: 7.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Bromoform	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Bromomethane	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Carbon Disulfide	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Carbon Tetrachloride	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Chlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Chloroethane	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Chloroform	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Chloromethane	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
cis-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
cis-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Dibromochloromethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Dibromomethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Dichlorodifluoromethane	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Diethyl Ether	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Di-isopropyl ether	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Ethyl tertiary-butyl ether	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Ethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Hexachlorobutadiene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Isopropylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Methyl tert-Butyl Ether	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Methylene Chloride	ND (0.0189)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Naphthalene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
n-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
n-Propylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
sec-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Styrene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
tert-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Tertiary-amyl methyl ether	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Tetrachloroethene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Tetrahydrofuran	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Toluene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-2.5
Date Sampled: 12/10/21 08:00
Percent Solids: 88
Initial Volume: 7.5
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
trans-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Trichloroethene	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Trichlorofluoromethane	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Vinyl Chloride	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Xylene O	ND (0.0038)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Xylene P,M	ND (0.0076)		8260B Low		1	12/14/21 15:02	D1L0282	DL11447
Xylenes (Total)	ND (0.00757)		8260B Low		1	12/14/21 15:02		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*91 %*		*70-130*
Surrogate: Toluene-d8	*99 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**9.62** (2.67)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Barium	**466** (2.67)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Cadmium	**0.60** (0.53)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Chromium	**13.3** (1.07)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Lead	**2020** (5.33)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Mercury	**0.996** (0.170)		7471B		5	JRB	12/15/21 17:37	0.66	40	DL11365
Selenium	ND (5.33)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358
Silver	ND (0.53)		6010C		1	KJK	12/14/21 14:55	2.13	100	DL11358

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**1.20** (0.050)		1311/6010C		1	KJK	12/14/21 22:29	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 19.8
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/15/21 19:40

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
4,4´-DDE	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
4,4´-DDT	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Alachlor	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Aldrin	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
alpha-BHC	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
alpha-Chlordane	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
beta-BHC	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Chlordane (Total)	ND (0.0229)		8081B		1	12/16/21 20:21	D1L0309	DL11506
delta-BHC	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Dieldrin	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Endosulfan I [2C]	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Endosulfan II	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Endosulfan Sulfate	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Endrin	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Endrin Ketone	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
gamma-BHC (Lindane)	ND (0.0017)		8081B		1	12/16/21 20:21	D1L0309	DL11506
gamma-Chlordane	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Heptachlor	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Heptachlor Epoxide	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Hexachlorobenzene	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506
Methoxychlor	ND (0.0029)		8081B		1	12/16/21 20:21	D1L0309	DL11506

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*82 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*86 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*76 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 5:26		DL11008
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 5:26		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*73 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*57 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*90 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 19.7
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**444** (11.5)		8100M		1	12/14/21 18:35	D1L0277	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*77 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 10.5
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/13/21 16:00

8151A Chlorinated Herbicides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2,4,5-T	ND (0.010)		8151A		1	12/15/21 22:36	D1L0297	DL11350
2,4,5-TP (Silvex)	ND (0.010)		8151A		1	12/15/21 22:36	D1L0297	DL11350
2,4-D	ND (0.051)		8151A		1	12/15/21 22:36	D1L0297	DL11350
2,4-DB	ND (0.051)		8151A		1	12/15/21 22:36	D1L0297	DL11350
Dalapon	ND (0.049)		8151A		1	12/15/21 22:36	D1L0297	DL11350
Dicamba	ND (0.010)		8151A		1	12/15/21 22:36	D1L0297	DL11350
Dichlorprop	ND (0.051)		8151A		1	12/15/21 22:36	D1L0297	DL11350
Dinoseb	ND (0.051)		8151A		1	12/15/21 22:36	D1L0297	DL11350
MCPA	ND (2.52)		8151A		1	12/15/21 22:36	D1L0297	DL11350
MCPP	ND (2.54)		8151A		1	12/15/21 22:36	D1L0297	DL11350

	%Recovery	Qualifier	Limits
Surrogate: DCAA	*88 %*		*30-150*
Surrogate: DCAA [2C]	*76 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
1,2-Dichlorobenzene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
1,3-Dichlorobenzene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
1,4-Dichlorobenzene	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4,5-Trichlorophenol	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4,6-Trichlorophenol	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4-Dichlorophenol	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4-Dimethylphenol	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4-Dinitrophenol	ND (1.48)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,4-Dinitrotoluene	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2,6-Dinitrotoluene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2-Chloronaphthalene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2-Chlorophenol	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2-Methylnaphthalene	**0.488** (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2-Methylphenol	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
2-Nitrophenol	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
3,3´-Dichlorobenzidine	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
3+4-Methylphenol	ND (1.48)		8270D		2	12/16/21 15:49	D1L0307	DL11022
4-Bromophenyl-phenylether	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
4-Chloroaniline	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
4-Nitrophenol	ND (3.70)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Acenaphthene	**1.19** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Acenaphthylene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Acetophenone	ND (1.48)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Aniline	ND (3.70)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Anthracene	**2.27** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Azobenzene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Benzo(a)anthracene	**6.22** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Benzo(a)pyrene	**4.65** (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Benzo(b)fluoranthene	**4.31** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Benzo(g,h,i)perylene	**2.59** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Benzo(k)fluoranthene	**3.50** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
bis(2-Chloroethyl)ether	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
bis(2-chloroisopropyl)Ether	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Butylbenzylphthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Chrysene	**5.92** (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Dibenzo(a,h)Anthracene	**0.700** (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Dibenzofuran	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Diethylphthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Dimethylphthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Di-n-butylphthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Di-n-octylphthalate	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Fluoranthene	**12.8** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Fluorene	**0.971** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Hexachlorobenzene	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Hexachlorobutadiene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Hexachloroethane	ND (0.370)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Indeno(1,2,3-cd)Pyrene	**3.07** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Isophorone	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Naphthalene	**0.907** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Nitrobenzene	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
N-Nitrosodimethylamine	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Pentachlorophenol	ND (1.48)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Phenanthrene	**11.1** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Phenol	ND (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022
Pyrene	**11.8** (0.737)		8270D		2	12/16/21 15:49	D1L0307	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*58 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*58 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*60 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*64 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*59 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*60 %*		*30-130*				
Surrogate: Phenol-d6		*60 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*69 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**WL 260** (5)		9050A		1	CCP	12/13/21 15:30	umhos/cm	DL11342
Corrosivity (pH)	**6.94** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.6 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/13/21 16:00	°F	DL11345
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B415-S1-0-5
Date Sampled: 12/10/21 08:01
Percent Solids: 88
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-02
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-7.5
Date Sampled: 12/10/21 08:30
Percent Solids: 95
Initial Volume: 5.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1,1-Trichloroethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1,2,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1,2-Trichloroethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1-Dichloroethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1-Dichloroethene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,1-Dichloropropene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2,3-Trichlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2,3-Trichloropropane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2,4-Trichlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2,4-Trimethylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2-Dibromo-3-Chloropropane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2-Dibromoethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2-Dichlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2-Dichloroethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,2-Dichloropropane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,3,5-Trimethylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,3-Dichlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,3-Dichloropropane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,4-Dichlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
1,4-Dioxane	ND (0.0824)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
2,2-Dichloropropane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
2-Butanone	ND (0.0515)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
2-Chlorotoluene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
2-Hexanone	ND (0.0515)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
4-Chlorotoluene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
4-Isopropyltoluene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
4-Methyl-2-Pentanone	ND (0.0515)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Acetone	ND (0.0515)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Benzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Bromobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Bromochloromethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-7.5
Date Sampled: 12/10/21 08:30
Percent Solids: 95
Initial Volume: 5.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Bromoform	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Bromomethane	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Carbon Disulfide	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Carbon Tetrachloride	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Chlorobenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Chloroethane	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Chloroform	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Chloromethane	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
cis-1,2-Dichloroethene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
cis-1,3-Dichloropropene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Dibromochloromethane	ND (0.0031)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Dibromomethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Dichlorodifluoromethane	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Diethyl Ether	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Di-isopropyl ether	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Ethyl tertiary-butyl ether	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Ethylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Hexachlorobutadiene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Isopropylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Methyl tert-Butyl Ether	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Methylene Chloride	ND (0.0258)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Naphthalene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
n-Butylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
n-Propylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
sec-Butylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Styrene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
tert-Butylbenzene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Tertiary-amyl methyl ether	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Tetrachloroethene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Tetrahydrofuran	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Toluene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-7.5
Date Sampled: 12/10/21 08:30
Percent Solids: 95
Initial Volume: 5.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
trans-1,3-Dichloropropene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Trichloroethene	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Trichlorofluoromethane	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Vinyl Chloride	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Xylene O	ND (0.0052)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Xylene P,M	ND (0.0103)		8260B Low		1	12/14/21 15:27	D1L0282	DL11447
Xylenes (Total)	ND (0.0103)		8260B Low		1	12/14/21 15:27		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*100 %*		*70-130*
Surrogate: Dibromofluoromethane	*92 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	ND (2.36)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Barium	**24.8** (2.36)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Cadmium	ND (0.47)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Chromium	**10.2** (0.94)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Lead	**8.90** (4.71)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Mercury	ND (0.033)		7471B		1	JRB	12/15/21 15:46	0.64	40	DL11365
Selenium	ND (4.71)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358
Silver	ND (0.47)		6010C		1	KJK	12/14/21 14:57	2.23	100	DL11358

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 20.1
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1221	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1232	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1242	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1248	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1254	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1260	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1262	ND (0.05)		8082A		1	12/14/21 5:46		DL11008
Aroclor 1268	ND (0.05)		8082A		1	12/14/21 5:46		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*88 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*91 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*96 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	ND (10.5)		8100M		1	12/14/21 19:08	D1L0277	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*74 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
1,2-Dichlorobenzene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
1,3-Dichlorobenzene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
1,4-Dichlorobenzene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4,5-Trichlorophenol	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4,6-Trichlorophenol	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4-Dichlorophenol	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4-Dimethylphenol	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4-Dinitrophenol	ND (0.683)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,4-Dinitrotoluene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2,6-Dinitrotoluene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2-Chloronaphthalene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2-Chlorophenol	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2-Methylnaphthalene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2-Methylphenol	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
2-Nitrophenol	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
3,3´-Dichlorobenzidine	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
3+4-Methylphenol	ND (0.683)		8270D		1	12/16/21 16:53	D1L0307	DL11022
4-Bromophenyl-phenylether	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
4-Chloroaniline	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
4-Nitrophenol	ND (1.71)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Acenaphthene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Acenaphthylene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Acetophenone	ND (0.683)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Aniline	ND (1.71)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Anthracene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Azobenzene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Benzo(a)anthracene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Benzo(a)pyrene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Benzo(b)fluoranthene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Benzo(g,h,i)perylene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Benzo(k)fluoranthene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
bis(2-Chloroethyl)ether	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
bis(2-chloroisopropyl)Ether	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Butylbenzylphthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Chrysene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Dibenzo(a,h)Anthracene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Dibenzofuran	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Diethylphthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Dimethylphthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Di-n-butylphthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Di-n-octylphthalate	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Fluoranthene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Fluorene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Hexachlorobenzene	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Hexachlorobutadiene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Hexachloroethane	ND (0.171)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Indeno(1,2,3-cd)Pyrene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Isophorone	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Naphthalene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Nitrobenzene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
N-Nitrosodimethylamine	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Pentachlorophenol	ND (0.683)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Phenanthrene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Phenol	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022
Pyrene	ND (0.341)		8270D		1	12/16/21 16:53	D1L0307	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*67 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*61 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*71 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*66 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*70 %*		*30-130*				
Surrogate: Phenol-d6		*67 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*86 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**WL 124** (5)		9050A		1	CCP	12/13/21 15:30	umhos/cm	DL11342
Corrosivity (pH)	**7.33** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/13/21 16:00	°F	DL11345
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B416-S2-5-10
Date Sampled: 12/10/21 08:31
Percent Solids: 95
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-04
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-5.5
Date Sampled: 12/10/21 09:30
Percent Solids: 91
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1,1-Trichloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1,2,2-Tetrachloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1,2-Trichloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1-Dichloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1-Dichloroethene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,1-Dichloropropene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2,3-Trichlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2,3-Trichloropropane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2,4-Trichlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2,4-Trimethylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2-Dibromo-3-Chloropropane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2-Dibromoethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2-Dichlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2-Dichloroethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,2-Dichloropropane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,3,5-Trimethylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,3-Dichlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,3-Dichloropropane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,4-Dichlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
1,4-Dioxane	ND (0.0684)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
2,2-Dichloropropane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
2-Butanone	ND (0.0427)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
2-Chlorotoluene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
2-Hexanone	ND (0.0427)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
4-Chlorotoluene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
4-Isopropyltoluene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
4-Methyl-2-Pentanone	ND (0.0427)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Acetone	ND (0.0427)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Benzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Bromobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Bromochloromethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-5.5
Date Sampled: 12/10/21 09:30
Percent Solids: 91
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Bromoform	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Bromomethane	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Carbon Disulfide	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Carbon Tetrachloride	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Chlorobenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Chloroethane	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Chloroform	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Chloromethane	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
cis-1,2-Dichloroethene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
cis-1,3-Dichloropropene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Dibromochloromethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Dibromomethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Dichlorodifluoromethane	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Diethyl Ether	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Di-isopropyl ether	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Ethyl tertiary-butyl ether	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Ethylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Hexachlorobutadiene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Isopropylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Methyl tert-Butyl Ether	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Methylene Chloride	ND (0.0214)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Naphthalene	**0.111** (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
n-Butylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
n-Propylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
sec-Butylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Styrene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
tert-Butylbenzene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Tertiary-amyl methyl ether	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Tetrachloroethene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Tetrahydrofuran	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Toluene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-5.5
Date Sampled: 12/10/21 09:30
Percent Solids: 91
Initial Volume: 6.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
trans-1,3-Dichloropropene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Trichloroethene	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Trichlorofluoromethane	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Vinyl Chloride	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Xylene O	ND (0.0043)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Xylene P,M	ND (0.0085)		8260B Low		1	12/14/21 15:52	D1L0282	DL11447
Xylenes (Total)	ND (0.00855)		8260B Low		1	12/14/21 15:52		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*99 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*98 %*		*70-130*
Surrogate: Dibromofluoromethane	*92 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**3.47** (2.67)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Barium	**51.9** (2.67)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Cadmium	ND (0.53)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Chromium	**15.2** (1.07)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Lead	**337** (5.34)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Mercury	**0.709** (0.064)		7471B		2	JRB	12/15/21 17:39	0.68	40	DL11365
Selenium	ND (5.34)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358
Silver	ND (0.53)		6010C		1	KJK	12/14/21 14:58	2.05	100	DL11358

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**3.80** (0.050)		1311/6010C		1	KJK	12/14/21 22:33	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 20.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1221	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1232	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1242	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1248	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1254	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1260	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1262	ND (0.05)		8082A		1	12/14/21 6:06		DL11008
Aroclor 1268	ND (0.05)		8082A		1	12/14/21 6:06		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*36 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*32 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*18 %*	*S-*	*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*36 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**857** (21.4)		8100M		2	12/14/21 19:43	D1L0277	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*76 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 14.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
1,2-Dichlorobenzene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
1,3-Dichlorobenzene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
1,4-Dichlorobenzene	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4,5-Trichlorophenol	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4,6-Trichlorophenol	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4-Dichlorophenol	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4-Dimethylphenol	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4-Dinitrophenol	ND (1.48)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,4-Dinitrotoluene	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2,6-Dinitrotoluene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2-Chloronaphthalene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2-Chlorophenol	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2-Methylnaphthalene	**1.17** (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2-Methylphenol	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
2-Nitrophenol	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
3,3´-Dichlorobenzidine	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
3+4-Methylphenol	ND (1.48)		8270D		2	12/16/21 17:25	D1L0307	DL11022
4-Bromophenyl-phenylether	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
4-Chloroaniline	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
4-Nitrophenol	ND (3.70)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Acenaphthene	**4.97** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Acenaphthylene	**1.08** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Acetophenone	ND (1.48)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Aniline	ND (3.70)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Anthracene	**9.52** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Azobenzene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Benzo(a)anthracene	**18.5** (7.39)		8270D		20	12/17/21 4:26	D1L0307	DL11022
Benzo(a)pyrene	**14.6** (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Benzo(b)fluoranthene	**12.4** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Benzo(g,h,i)perylene	**7.18** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Benzo(k)fluoranthene	**10.4** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 14.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
bis(2-Chloroethyl)ether	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
bis(2-chloroisopropyl)Ether	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Butylbenzylphthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Chrysene	**17.5** (3.70)		8270D		20	12/17/21 4:26	D1L0307	DL11022
Dibenzo(a,h)Anthracene	**1.84** (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Dibenzofuran	**2.63** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Diethylphthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Dimethylphthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Di-n-butylphthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Di-n-octylphthalate	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Fluoranthene	**34.3** (7.39)		8270D		20	12/17/21 4:26	D1L0307	DL11022
Fluorene	**4.50** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Hexachlorobenzene	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Hexachlorobutadiene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Hexachloroethane	ND (0.370)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Indeno(1,2,3-cd)Pyrene	**8.54** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Isophorone	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Naphthalene	**1.36** (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Nitrobenzene	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
N-Nitrosodimethylamine	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Pentachlorophenol	ND (1.48)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Phenanthrene	**41.5** (7.39)		8270D		20	12/17/21 4:26	D1L0307	DL11022
Phenol	ND (0.739)		8270D		2	12/16/21 17:25	D1L0307	DL11022
Pyrene	**41.9** (7.39)		8270D		20	12/17/21 4:26	D1L0307	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*48 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*57 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*53 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*57 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 14.8
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*52 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*51 %*		*30-130*				
Surrogate: Phenol-d6		*55 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*70 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**WL 276** (5)		9050A		1	CCP	12/13/21 15:30	umhos/cm	DL11342
Corrosivity (pH)	**7.48** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/13/21 16:00	°F	DL11345
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B417-3-8
Date Sampled: 12/10/21 09:31
Percent Solids: 91
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-06
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B418-S1-0-5
Date Sampled: 12/10/21 10:15
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-07
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.733** (0.050)		1311/6010C		1	KJK	12/14/21 22:35	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B418-S1-0-5
Date Sampled: 12/10/21 10:15
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-07
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B418-S2-5-10
Date Sampled: 12/10/21 10:30
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-08
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	ND (0.050)		1311/6010C		1	KJK	12/14/21 22:38	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B418-S2-5-10
Date Sampled: 12/10/21 10:30
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-08
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B419-S1-0-5
Date Sampled: 12/10/21 10:45
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-09
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.129** (0.050)		1311/6010C		1	KJK	12/14/21 22:40	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B419-S1-0-5
Date Sampled: 12/10/21 10:45
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-09
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B419-S2-5-10
Date Sampled: 12/10/21 11:00
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-10
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	ND (0.050)		1311/6010C		1	KJK	12/14/21 22:42	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B419-S2-5-10
Date Sampled: 12/10/21 11:00
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-10
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B420-S1-0-5
Date Sampled: 12/10/21 11:15
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-11
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.833** (0.050)		1311/6010C		1	KJK	12/14/21 22:44	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B420-S1-0-5
Date Sampled: 12/10/21 11:15
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-11
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B420-S2-5-10
Date Sampled: 12/10/21 11:30
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-12
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	ND (0.050)		1311/6010C		1	KJK	12/14/21 22:47	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B420-S2-5-10
Date Sampled: 12/10/21 11:30
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-12
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B421-S1-0-5
Date Sampled: 12/10/21 11:45
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-13
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.200** (0.050)		1311/6010C		1	KJK	12/14/21 22:55	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B421-S1-0-5
Date Sampled: 12/10/21 11:45
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-13
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B421-S2-5-10
Date Sampled: 12/10/21 12:00
Percent Solids: N/A

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-14
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.295** (0.050)		1311/6010C		1	KJK	12/14/21 23:07	50	50	DL11423

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B421-S2-5-10
Date Sampled: 12/10/21 12:00
Percent Solids: N/A
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0419
ESS Laboratory Sample ID: 21L0419-14
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11064
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL11358 - 3050B										
Blank										
Arsenic	ND	8.33	mg/kg wet							
Barium	ND	8.33	mg/kg wet							
Cadmium	ND	1.67	mg/kg wet							
Chromium	ND	3.33	mg/kg wet							
Lead	ND	16.7	mg/kg wet							
Selenium	ND	16.7	mg/kg wet							
Silver	ND	1.67	mg/kg wet							
LCS										
Arsenic	84.4	8.20	mg/kg wet	93.10		91	70-130			
Barium	549	8.20	mg/kg wet	690.0		80	80-120			
Cadmium	262	1.64	mg/kg wet	301.0		87	75-125			
Chromium	288	3.28	mg/kg wet	326.0		88	70-130			
Lead	177	16.4	mg/kg wet	192.0		92	80-120			
Selenium	238	16.4	mg/kg wet	270.0		88	70-131			
Silver	57.6	1.64	mg/kg wet	63.70		90	80-120			
LCS Dup										
Arsenic	73.3	7.81	mg/kg wet	93.10		79	70-130	14	20	
Barium	578	7.81	mg/kg wet	690.0		84	80-120	5	20	
Cadmium	233	1.56	mg/kg wet	301.0		77	75-125	12	20	
Chromium	258	3.12	mg/kg wet	326.0		79	70-130	11	20	
Lead	155	15.6	mg/kg wet	192.0		81	80-120	13	20	
Selenium	208	15.6	mg/kg wet	270.0		77	70-131	13	20	
Silver	51.0	1.56	mg/kg wet	63.70		80	80-120	12	20	
Batch DL11365 - 3050B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	15.7	2.91	mg/kg wet	15.40		102	80-120			
LCS Dup										
Mercury	14.7	3.25	mg/kg wet	15.40		96	80-120	7	20	
1311 TCLP Metals										
Batch DL11423 - 3005A_TCLP										
Blank										
Lead	ND	0.050	mg/L							
LCS										
Lead	0.453	0.050	mg/L	0.5000		91	80-120			
LCS Dup										
Lead	0.481	0.050	mg/L	0.5000		96	80-120	6	20	
5035/8260B Volatile Organic Compounds / Low Level										

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.0800	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0573*		mg/kg wet	*0.05000*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0481*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0521*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: Toluene-d8	*0.0493*		mg/kg wet	*0.05000*		*99*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,1-Trichloroethane	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,2,2-Tetrachloroethane	0.0453	0.0050	mg/kg wet	0.05000		91	70-130			
1,1,2-Trichloroethane	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
1,1-Dichloroethane	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
1,1-Dichloroethene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
1,1-Dichloropropene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
1,2,3-Trichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			
1,2,3-Trichloropropane	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
1,2,4-Trichlorobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130			
1,2,4-Trimethylbenzene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dibromo-3-Chloropropane	0.0332	0.0050	mg/kg wet	0.05000		66	70-130			B-
1,2-Dibromoethane	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
1,2-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,2-Dichloroethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichloropropane	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
1,3,5-Trimethylbenzene	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,3-Dichlorobenzene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
1,3-Dichloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
1,4-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,4-Dioxane	0.833	0.0800	mg/kg wet	1.000		83	70-130			
2,2-Dichloropropane	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			
2-Butanone	0.291	0.0500	mg/kg wet	0.2500		116	70-130			
2-Chlorotoluene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
2-Hexanone	0.247	0.0500	mg/kg wet	0.2500		99	70-130			
4-Chlorotoluene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
4-Isopropyltoluene	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
4-Methyl-2-Pentanone	0.234	0.0500	mg/kg wet	0.2500		94	70-130			
Acetone	0.398	0.0500	mg/kg wet	0.2500		159	70-130			B+
Benzene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
Bromobenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Bromochloromethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Bromodichloromethane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
Bromoform	0.0403	0.0050	mg/kg wet	0.05000		81	70-130			
Bromomethane	0.0411	0.0100	mg/kg wet	0.05000		82	70-130			
Carbon Disulfide	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Carbon Tetrachloride	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
Chlorobenzene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
Chloroethane	0.0532	0.0100	mg/kg wet	0.05000		106	70-130			
Chloroform	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Chloromethane	0.0431	0.0100	mg/kg wet	0.05000		86	70-130			
cis-1,2-Dichloroethene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
cis-1,3-Dichloropropene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
Dibromochloromethane	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
Dibromomethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
Dichlorodifluoromethane	0.0536	0.0100	mg/kg wet	0.05000		107	70-130			
Diethyl Ether	0.0520	0.0050	mg/kg wet	0.05000		104	70-130			
Di-isopropyl ether	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
Ethyl tertiary-butyl ether	0.0438	0.0050	mg/kg wet	0.05000		88	70-130			
Ethylbenzene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Hexachlorobutadiene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Isopropylbenzene	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
Methyl tert-Butyl Ether	0.0416	0.0050	mg/kg wet	0.05000		83	70-130			
Methylene Chloride	0.0547	0.0250	mg/kg wet	0.05000		109	70-130			
Naphthalene	0.0360	0.0050	mg/kg wet	0.05000		72	70-130			
n-Butylbenzene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
n-Propylbenzene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130			
sec-Butylbenzene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Styrene	0.0481	0.0050	mg/kg wet	0.05000		96	70-130			
tert-Butylbenzene	0.0492	0.0050	mg/kg wet	0.05000		98	70-130			
Tertiary-amyl methyl ether	0.0394	0.0050	mg/kg wet	0.05000		79	70-130			
Tetrachloroethene	0.0677	0.0050	mg/kg wet	0.05000		135	70-130			B+
Tetrahydrofuran	0.0360	0.0050	mg/kg wet	0.05000		72	70-130			
Toluene	0.0510	0.0050	mg/kg wet	0.05000		102	70-130			
trans-1,2-Dichloroethene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130			
trans-1,3-Dichloropropene	0.0429	0.0050	mg/kg wet	0.05000		86	70-130			
Trichloroethene	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Trichlorofluoromethane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Vinyl Chloride	0.0489	0.0100	mg/kg wet	0.05000		98	70-130			
Xylene O	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
Xylene P,M	0.102	0.0100	mg/kg wet	0.1000		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0522*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0492*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0524*		mg/kg wet	*0.05000*		*105*	*70-130*			
Surrogate: Toluene-d8	*0.0498*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	3	20	
1,1,1-Trichloroethane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	7	20	
1,1,2,2-Tetrachloroethane	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	7	20	
1,1,2-Trichloroethane	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,1-Dichloroethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
1,1-Dichloroethene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	7	20	
1,1-Dichloropropene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	10	20	
1,2,3-Trichlorobenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	6	20	
1,2,3-Trichloropropane	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	8	20	
1,2,4-Trichlorobenzene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130	5	20	
1,2,4-Trimethylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dibromo-3-Chloropropane	0.0378	0.0050	mg/kg wet	0.05000		76	70-130	13	20	
1,2-Dibromoethane	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	6	20	
1,2-Dichlorobenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	4	20	
1,2-Dichloroethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dichloropropane	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	4	20	
1,3,5-Trimethylbenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
1,3-Dichlorobenzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
1,3-Dichloropropane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	5	20	
1,4-Dichlorobenzene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
1,4-Dioxane	0.971	0.0800	mg/kg wet	1.000		97	70-130	15	20	
2,2-Dichloropropane	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	6	20	
2-Butanone	0.310	0.0500	mg/kg wet	0.2500		124	70-130	7	20	
2-Chlorotoluene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	4	20	
2-Hexanone	0.269	0.0500	mg/kg wet	0.2500		108	70-130	9	20	
4-Chlorotoluene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
4-Isopropyltoluene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	5	20	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
4-Methyl-2-Pentanone	0.253	0.0500	mg/kg wet	0.2500		101	70-130	8	20	
Acetone	0.436	0.0500	mg/kg wet	0.2500		174	70-130	9	20	B+
Benzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	5	20	
Bromobenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	3	20	
Bromochloromethane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	4	20	
Bromodichloromethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	4	20	
Bromoform	0.0428	0.0050	mg/kg wet	0.05000		86	70-130	6	20	
Bromomethane	0.0426	0.0100	mg/kg wet	0.05000		85	70-130	4	20	
Carbon Disulfide	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	7	20	
Carbon Tetrachloride	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	6	20	
Chlorobenzene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
Chloroethane	0.0560	0.0100	mg/kg wet	0.05000		112	70-130	5	20	
Chloroform	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	5	20	
Chloromethane	0.0451	0.0100	mg/kg wet	0.05000		90	70-130	5	20	
cis-1,2-Dichloroethene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	5	20	
cis-1,3-Dichloropropene	0.0484	0.0050	mg/kg wet	0.05000		97	70-130	4	20	
Dibromochloromethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
Dibromomethane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	5	20	
Dichlorodifluoromethane	0.0567	0.0100	mg/kg wet	0.05000		113	70-130	6	20	
Diethyl Ether	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	6	20	
Di-isopropyl ether	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	4	20	
Ethyl tertiary-butyl ether	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	4	20	
Ethylbenzene	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	5	20	
Hexachlorobutadiene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130	5	20	
Isopropylbenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	6	20	
Methyl tert-Butyl Ether	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	6	20	
Methylene Chloride	0.0570	0.0250	mg/kg wet	0.05000		114	70-130	4	20	
Naphthalene	0.0394	0.0050	mg/kg wet	0.05000		79	70-130	9	20	
n-Butylbenzene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	6	20	
n-Propylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
sec-Butylbenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130	6	20	
Styrene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	4	20	
tert-Butylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	5	20	
Tertiary-amyl methyl ether	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	5	20	
Tetrachloroethene	0.0744	0.0050	mg/kg wet	0.05000		149	70-130	9	20	B+
Tetrahydrofuran	0.0415	0.0050	mg/kg wet	0.05000		83	70-130	14	20	
Toluene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	4	20	
trans-1,2-Dichloroethene	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	6	20	
trans-1,3-Dichloropropene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	4	20	
Trichloroethene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	6	20	
Trichlorofluoromethane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	6	20	
Vinyl Chloride	0.0521	0.0100	mg/kg wet	0.05000		104	70-130	6	20	
Xylene O	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	4	20	
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130	5	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0521*		mg/kg wet	*0.05000*		*104*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Surrogate: 4-Bromofluorobenzene	*0.0493*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0517*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
Blank										
4,4´-DDD	ND	0.0025	mg/kg wet							
4,4´-DDD [2C]	ND	0.0025	mg/kg wet							
4,4´-DDE	ND	0.0025	mg/kg wet							
4,4´-DDE [2C]	ND	0.0025	mg/kg wet							
4,4´-DDT	ND	0.0025	mg/kg wet							
4,4´-DDT [2C]	ND	0.0025	mg/kg wet							
Alachlor	ND	0.0025	mg/kg wet							
Alachlor [2C]	ND	0.0025	mg/kg wet							
Aldrin	ND	0.0025	mg/kg wet							
Aldrin [2C]	ND	0.0025	mg/kg wet							
alpha-BHC	ND	0.0025	mg/kg wet							
alpha-BHC [2C]	ND	0.0025	mg/kg wet							
alpha-Chlordane	ND	0.0025	mg/kg wet							
alpha-Chlordane [2C]	ND	0.0025	mg/kg wet							
beta-BHC	ND	0.0025	mg/kg wet							
beta-BHC [2C]	ND	0.0025	mg/kg wet							
Chlordane (Total)	ND	0.0200	mg/kg wet							
Chlordane (Total) [2C]	ND	0.0200	mg/kg wet							
delta-BHC	ND	0.0025	mg/kg wet							
delta-BHC [2C]	ND	0.0025	mg/kg wet							
Dieldrin	ND	0.0025	mg/kg wet							
Dieldrin [2C]	ND	0.0025	mg/kg wet							
Endosulfan I	ND	0.0025	mg/kg wet							
Endosulfan I [2C]	ND	0.0025	mg/kg wet							
Endosulfan II	ND	0.0025	mg/kg wet							
Endosulfan II [2C]	ND	0.0025	mg/kg wet							
Endosulfan Sulfate	ND	0.0025	mg/kg wet							
Endosulfan Sulfate [2C]	ND	0.0025	mg/kg wet							
Endrin	ND	0.0025	mg/kg wet							
Endrin [2C]	ND	0.0025	mg/kg wet							
Endrin Ketone	ND	0.0025	mg/kg wet							
Endrin Ketone [2C]	ND	0.0025	mg/kg wet							
gamma-BHC (Lindane)	ND	0.0015	mg/kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0015	mg/kg wet							
gamma-Chlordane	ND	0.0025	mg/kg wet							
gamma-Chlordane [2C]	ND	0.0025	mg/kg wet							
Heptachlor	ND	0.0025	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
Heptachlor [2C]	ND	0.0025	mg/kg wet							
Heptachlor Epoxide	ND	0.0025	mg/kg wet							
Heptachlor Epoxide [2C]	ND	0.0025	mg/kg wet							
Hexachlorobenzene	ND	0.0025	mg/kg wet							
Hexachlorobenzene [2C]	ND	0.0025	mg/kg wet							
Methoxychlor	ND	0.0025	mg/kg wet							
Methoxychlor [2C]	ND	0.0025	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0124*		mg/kg wet	*0.01250*		*100*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0122*		mg/kg wet	*0.01250*		*97*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0118*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0119*		mg/kg wet	*0.01250*		*95*	*30-150*			
LCS										
4,4´-DDD	0.0141	0.0025	mg/kg wet	0.01250		113	40-140			
4,4´-DDD [2C]	0.0137	0.0025	mg/kg wet	0.01250		110	40-140			
4,4´-DDE	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
4,4´-DDE [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
4,4´-DDT	0.0156	0.0025	mg/kg wet	0.01250		125	40-140			
4,4´-DDT [2C]	0.0149	0.0025	mg/kg wet	0.01250		120	40-140			
Alachlor	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Alachlor [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Aldrin	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Aldrin [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
alpha-BHC	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
alpha-BHC [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
alpha-Chlordane	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
alpha-Chlordane [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
beta-BHC	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
beta-BHC [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
delta-BHC	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
delta-BHC [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			
Dieldrin	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
Dieldrin [2C]	0.0141	0.0025	mg/kg wet	0.01250		112	40-140			
Endosulfan I	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Endosulfan I [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
Endosulfan II	0.0139	0.0025	mg/kg wet	0.01250		112	40-140			
Endosulfan II [2C]	0.0138	0.0025	mg/kg wet	0.01250		110	40-140			
Endosulfan Sulfate	0.0145	0.0025	mg/kg wet	0.01250		116	40-140			
Endosulfan Sulfate [2C]	0.0143	0.0025	mg/kg wet	0.01250		115	40-140			
Endrin	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			
Endrin [2C]	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
Endrin Ketone	0.0149	0.0025	mg/kg wet	0.01250		120	40-140			
Endrin Ketone [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
gamma-BHC (Lindane)	0.0126	0.0015	mg/kg wet	0.01250		101	40-140			
gamma-BHC (Lindane) [2C]	0.0130	0.0015	mg/kg wet	0.01250		104	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
gamma-Chlordane	0.0141	0.0025	mg/kg wet	0.01250		113	40-140			
gamma-Chlordane [2C]	0.0145	0.0025	mg/kg wet	0.01250		116	40-140			
Heptachlor	0.0127	0.0025	mg/kg wet	0.01250		101	40-140			
Heptachlor [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
Heptachlor Epoxide	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Heptachlor Epoxide [2C]	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Hexachlorobenzene	0.0115	0.0025	mg/kg wet	0.01250		92	40-140			
Hexachlorobenzene [2C]	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Methoxychlor	0.0146	0.0025	mg/kg wet	0.01250		117	40-140			
Methoxychlor [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140			
Surrogate: Decachlorobiphenyl	*0.0132*		mg/kg wet	*0.01250*		*106*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0130*		mg/kg wet	*0.01250*		*104*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0126*		mg/kg wet	*0.01250*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0127*		mg/kg wet	*0.01250*		*102*	*30-150*			
LCS Dup										
4,4´-DDD	0.0138	0.0025	mg/kg wet	0.01250		110	40-140	2	30	
4,4´-DDD [2C]	0.0138	0.0025	mg/kg wet	0.01250		110	40-140	0.2	30	
4,4´-DDE	0.0131	0.0025	mg/kg wet	0.01250		105	40-140	0.8	30	
4,4´-DDE [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140	0.2	30	
4,4´-DDT	0.0157	0.0025	mg/kg wet	0.01250		125	40-140	0.09	30	
4,4´-DDT [2C]	0.0148	0.0025	mg/kg wet	0.01250		119	40-140	0.7	30	
Alachlor	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	0.5	30	
Alachlor [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	0.1	30	
Aldrin	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	0.7	30	
Aldrin [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
alpha-BHC	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	1	30	
alpha-BHC [2C]	0.0131	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
alpha-Chlordane	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	0.06	30	
alpha-Chlordane [2C]	0.0124	0.0025	mg/kg wet	0.01250		100	40-140	0.4	30	
beta-BHC	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	2	30	
beta-BHC [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	0.9	30	
delta-BHC	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	4	30	
delta-BHC [2C]	0.0132	0.0025	mg/kg wet	0.01250		105	40-140	2	30	
Dieldrin	0.0135	0.0025	mg/kg wet	0.01250		108	40-140	0.6	30	
Dieldrin [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	0.2	30	
Endosulfan I	0.0124	0.0025	mg/kg wet	0.01250		100	40-140	0.7	30	
Endosulfan I [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	0.3	30	
Endosulfan II	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	0.3	30	
Endosulfan II [2C]	0.0138	0.0025	mg/kg wet	0.01250		111	40-140	0.5	30	
Endosulfan Sulfate	0.0146	0.0025	mg/kg wet	0.01250		117	40-140	0.6	30	
Endosulfan Sulfate [2C]	0.0143	0.0025	mg/kg wet	0.01250		115	40-140	0.05	30	
Endrin	0.0134	0.0025	mg/kg wet	0.01250		107	40-140	0.3	30	
Endrin [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140	0.3	30	
Endrin Ketone	0.0150	0.0025	mg/kg wet	0.01250		120	40-140	0.2	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
Endrin Ketone [2C]	0.0133	0.0025	mg/kg wet	0.01250		107	40-140	0.6	30	
gamma-BHC (Lindane)	0.0125	0.0015	mg/kg wet	0.01250		100	40-140	1	30	
gamma-BHC (Lindane) [2C]	0.0128	0.0015	mg/kg wet	0.01250		103	40-140	2	30	
gamma-Chlordane	0.0141	0.0025	mg/kg wet	0.01250		113	40-140	0.3	30	
gamma-Chlordane [2C]	0.0144	0.0025	mg/kg wet	0.01250		115	40-140	0.3	30	
Heptachlor	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	1	30	
Heptachlor [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
Heptachlor Epoxide	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	0.2	30	
Heptachlor Epoxide [2C]	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	0.7	30	
Hexachlorobenzene	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	5	30	
Hexachlorobenzene [2C]	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	2	30	
Methoxychlor	0.0146	0.0025	mg/kg wet	0.01250		117	40-140	0.5	30	
Methoxychlor [2C]	0.0141	0.0025	mg/kg wet	0.01250		113	40-140	1	30	
Surrogate: Decachlorobiphenyl	*0.0129*		mg/kg wet	*0.01250*		*103*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0127*		mg/kg wet	*0.01250*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0118*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0120*		mg/kg wet	*0.01250*		*96*	*30-150*			
8082A Polychlorinated Biphenyls (PCB)										
Batch DL11008 - 3540C										
Blank										
Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0205*		mg/kg wet	*0.02500*		*82*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0223*		mg/kg wet	*0.02500*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0182*		mg/kg wet	*0.02500*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0206*		mg/kg wet	*0.02500*		*82*	*30-150*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL11008 - 3540C										
LCS										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		85	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140			
Surrogate: Decachlorobiphenyl	*0.0212*		mg/kg wet	*0.02500*		*85*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0225*		mg/kg wet	*0.02500*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0196*		mg/kg wet	*0.02500*		*78*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0215*		mg/kg wet	*0.02500*		*86*	*30-150*			
LCS Dup										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		86	40-140	5	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		88	40-140	4	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	3	30	
Surrogate: Decachlorobiphenyl	*0.0218*		mg/kg wet	*0.02500*		*87*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0228*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0194*		mg/kg wet	*0.02500*		*78*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0216*		mg/kg wet	*0.02500*		*86*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch DL11021 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Hexatriacontane (C36)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	10.0	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.52*		mg/kg wet	*5.000*		*90*	*40-140*			
LCS										
Decane (C10)	1.6	0.2	mg/kg wet	2.500		66	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		94	40-140			
Dodecane (C12)	1.7	0.2	mg/kg wet	2.500		67	40-140			

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Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL11021 - 3546										
Eicosane (C20)	2.3	0.2	mg/kg wet	2.500		90	40-140			
Hexacosane (C26)	2.4	0.2	mg/kg wet	2.500		95	40-140			
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Hexatriacontane (C36)	2.3	0.2	mg/kg wet	2.500		94	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Nonane (C9)	1.3	0.2	mg/kg wet	2.500		52	30-140			
Octacosane (C28)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Total Petroleum Hydrocarbons	33.2	10.0	mg/kg wet	35.00		95	40-140			
Triacontane (C30)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Surrogate: O-Terphenyl	*4.84*		mg/kg wet	*5.000*		*97*	*40-140*			
LCS Dup										
Decane (C10)	1.5	0.2	mg/kg wet	2.500		62	40-140	7	25	
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		89	40-140	5	25	
Dodecane (C12)	1.6	0.2	mg/kg wet	2.500		62	40-140	8	25	
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		86	40-140	5	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		90	40-140	5	25	
Hexadecane (C16)	1.9	0.2	mg/kg wet	2.500		77	40-140	4	25	
Hexatriacontane (C36)	2.2	0.2	mg/kg wet	2.500		89	40-140	5	25	
Nonadecane (C19)	2.0	0.2	mg/kg wet	2.500		81	40-140	9	25	
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		55	30-140	5	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		88	40-140	5	25	
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		83	40-140	5	25	
Tetracosane (C24)	2.0	0.2	mg/kg wet	2.500		81	40-140	5	25	
Tetradecane (C14)	1.8	0.2	mg/kg wet	2.500		73	40-140	6	25	
Total Petroleum Hydrocarbons	27.0	10.0	mg/kg wet	35.00		77	40-140	21	25	
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140	5	25	
Surrogate: O-Terphenyl	*4.56*		mg/kg wet	*5.000*		*91*	*40-140*			
8151A Chlorinated Herbicides										
Batch DL11350 - 3546										
Blank										
2,4,5-T	ND	0.010	mg/kg wet							
2,4,5-T [2C]	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex)	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	0.010	mg/kg wet							
2,4-D	ND	0.047	mg/kg wet							
2,4-D [2C]	ND	0.047	mg/kg wet							
2,4-DB	ND	0.048	mg/kg wet							
2,4-DB [2C]	ND	0.048	mg/kg wet							
Dalapon	ND	0.046	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8151A Chlorinated Herbicides										
Batch DL11350 - 3546										
Dalapon [2C]	ND	0.046	mg/kg wet							
Dicamba	ND	0.009	mg/kg wet							
Dicamba [2C]	ND	0.009	mg/kg wet							
Dichlorprop	ND	0.047	mg/kg wet							
Dichlorprop [2C]	ND	0.047	mg/kg wet							
Dinoseb	ND	0.048	mg/kg wet							
Dinoseb [2C]	ND	0.048	mg/kg wet							
MCPA	ND	2.32	mg/kg wet							
MCPA [2C]	ND	2.32	mg/kg wet							
MCPP	ND	2.35	mg/kg wet							
MCPP [2C]	ND	2.35	mg/kg wet							
Surrogate: DCAA	*0.194*		mg/kg wet	*0.2000*		*97*	*30-150*			
Surrogate: DCAA [2C]	*0.181*		mg/kg wet	*0.2000*		*90*	*30-150*			
LCS										
2,4,5-T	0.014	0.010	mg/kg wet	0.01900		72	40-140			
2,4,5-T [2C]	0.014	0.010	mg/kg wet	0.01900		76	40-140			
2,4,5-TP (Silvex)	0.014	0.010	mg/kg wet	0.01900		76	40-140			
2,4,5-TP (Silvex) [2C]	0.015	0.010	mg/kg wet	0.01900		78	40-140			
2,4-D	0.160	0.047	mg/kg wet	0.1880		85	40-140			
2,4-D [2C]	0.132	0.047	mg/kg wet	0.1880		70	40-140			
2,4-DB	0.174	0.048	mg/kg wet	0.1900		92	40-140			
2,4-DB [2C]	0.159	0.048	mg/kg wet	0.1900		84	40-140			
Dalapon	0.344	0.046	mg/kg wet	0.4550		76	40-140			
Dalapon [2C]	0.363	0.046	mg/kg wet	0.4550		80	40-140			
Dicamba	0.013	0.009	mg/kg wet	0.01880		70	40-140			
Dicamba [2C]	0.015	0.009	mg/kg wet	0.01880		78	40-140			
Dichlorprop	0.185	0.047	mg/kg wet	0.1880		99	40-140			
Dichlorprop [2C]	0.156	0.047	mg/kg wet	0.1880		83	40-140			
Dinoseb	0.011	0.048	mg/kg wet	0.09500		11	10-100			
Dinoseb [2C]	0.014	0.048	mg/kg wet	0.09500		15	10-100			
MCPA	16.5	2.32	mg/kg wet	18.60		89	40-140			
MCPA [2C]	15.8	2.32	mg/kg wet	18.60		85	40-140			
MCPP	15.5	2.35	mg/kg wet	18.80		82	40-140			
MCPP [2C]	16.9	2.35	mg/kg wet	18.80		90	40-140			
Surrogate: DCAA	*0.198*		mg/kg wet	*0.2000*		*99*	*30-150*			
Surrogate: DCAA [2C]	*0.182*		mg/kg wet	*0.2000*		*91*	*30-150*			
LCS Dup										
2,4,5-T	0.013	0.010	mg/kg wet	0.01900		68	40-140	6	30	
2,4,5-T [2C]	0.013	0.010	mg/kg wet	0.01900		70	40-140	8	30	
2,4,5-TP (Silvex)	0.013	0.010	mg/kg wet	0.01900		70	40-140	8	30	
2,4,5-TP (Silvex) [2C]	0.014	0.010	mg/kg wet	0.01900		74	40-140	5	30	
2,4-D	0.148	0.047	mg/kg wet	0.1880		79	40-140	8	30	
2,4-D [2C]	0.123	0.047	mg/kg wet	0.1880		65	40-140	7	30	
2,4-DB	0.164	0.048	mg/kg wet	0.1900		86	40-140	6	30	

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8151A Chlorinated Herbicides										
Batch DL11350 - 3546										
2,4-DB [2C]	0.149	0.048	mg/kg wet	0.1900		78	40-140	6	30	
Dalapon	0.320	0.046	mg/kg wet	0.4550		70	40-140	7	30	
Dalapon [2C]	0.340	0.046	mg/kg wet	0.4550		75	40-140	7	30	
Dicamba	0.012	0.009	mg/kg wet	0.01880		66	40-140	6	30	
Dicamba [2C]	0.014	0.009	mg/kg wet	0.01880		72	40-140	8	30	
Dichlorprop	0.176	0.047	mg/kg wet	0.1880		94	40-140	5	30	
Dichlorprop [2C]	0.148	0.047	mg/kg wet	0.1880		79	40-140	5	30	
Dinoseb	0.011	0.048	mg/kg wet	0.09500		12	10-100	7	30	
Dinoseb [2C]	0.015	0.048	mg/kg wet	0.09500		16	10-100	5	30	
MCPA	15.4	2.32	mg/kg wet	18.60		83	40-140	7	30	
MCPA [2C]	15.2	2.32	mg/kg wet	18.60		82	40-140	3	30	
MCPP	14.8	2.35	mg/kg wet	18.80		79	40-140	5	30	
MCPP [2C]	15.8	2.35	mg/kg wet	18.80		84	40-140	7	30	
Surrogate: DCAA	*0.184*		mg/kg wet	*0.2000*		*92*	*30-150*			
Surrogate: DCAA [2C]	*0.168*		mg/kg wet	*0.2000*		*84*	*30-150*			
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Blank										
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.167	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.167	mg/kg wet							
2,4-Dichlorophenol	ND	0.167	mg/kg wet							
2,4-Dimethylphenol	ND	0.167	mg/kg wet							
2,4-Dinitrophenol	ND	0.667	mg/kg wet							
2,4-Dinitrotoluene	ND	0.167	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.167	mg/kg wet							
2-Methylnaphthalene	ND	0.167	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.333	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	1.67	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.167	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.167	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachloroethane	ND	0.167	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	0.667	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.52*		mg/kg wet	*3.333*		*75*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.31*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.73*		mg/kg wet	*5.000*		*75*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.41*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2-Fluorophenol	*3.29*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.70*		mg/kg wet	*3.333*		*81*	*30-130*			
Surrogate: Phenol-d6	*3.80*		mg/kg wet	*5.000*		*76*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.90*		mg/kg wet	*3.333*		*87*	*30-130*			
LCS										
1,2,4-Trichlorobenzene	2.28	0.333	mg/kg wet	3.333		68	40-140			
1,2-Dichlorobenzene	2.20	0.333	mg/kg wet	3.333		66	40-140			
1,3-Dichlorobenzene	2.05	0.333	mg/kg wet	3.333		61	40-140			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
1,4-Dichlorobenzene	2.23	0.167	mg/kg wet	3.333		67	40-140			
2,4,5-Trichlorophenol	2.19	0.333	mg/kg wet	3.333		66	30-130			
2,4,6-Trichlorophenol	2.13	0.167	mg/kg wet	3.333		64	30-130			
2,4-Dichlorophenol	2.22	0.167	mg/kg wet	3.333		67	30-130			
2,4-Dimethylphenol	2.64	0.167	mg/kg wet	3.333		79	30-130			
2,4-Dinitrophenol	2.64	0.667	mg/kg wet	3.333		79	30-130			
2,4-Dinitrotoluene	2.42	0.167	mg/kg wet	3.333		73	40-140			
2,6-Dinitrotoluene	2.34	0.333	mg/kg wet	3.333		70	40-140			
2-Chloronaphthalene	2.26	0.333	mg/kg wet	3.333		68	40-140			
2-Chlorophenol	2.48	0.167	mg/kg wet	3.333		74	30-130			
2-Methylnaphthalene	2.39	0.167	mg/kg wet	3.333		72	40-140			
2-Methylphenol	2.43	0.333	mg/kg wet	3.333		73	30-130			
2-Nitrophenol	2.25	0.333	mg/kg wet	3.333		68	30-130			
3,3´-Dichlorobenzidine	1.65	0.333	mg/kg wet	3.333		49	40-140			
3+4-Methylphenol	4.73	0.667	mg/kg wet	6.667		71	30-130			
4-Bromophenyl-phenylether	2.35	0.333	mg/kg wet	3.333		70	40-140			
4-Chloroaniline	1.78	0.333	mg/kg wet	3.333		53	40-140			
4-Nitrophenol	1.95	1.67	mg/kg wet	3.333		58	30-130			
Acenaphthene	2.55	0.333	mg/kg wet	3.333		76	40-140			
Acenaphthylene	2.22	0.333	mg/kg wet	3.333		67	40-140			
Acetophenone	2.69	0.667	mg/kg wet	3.333		81	40-140			
Aniline	1.48	1.67	mg/kg wet	3.333		45	40-140			
Anthracene	2.54	0.333	mg/kg wet	3.333		76	40-140			
Azobenzene	2.58	0.333	mg/kg wet	3.333		77	40-140			
Benzo(a)anthracene	2.77	0.333	mg/kg wet	3.333		83	40-140			
Benzo(a)pyrene	2.49	0.167	mg/kg wet	3.333		75	40-140			
Benzo(b)fluoranthene	2.73	0.333	mg/kg wet	3.333		82	40-140			
Benzo(g,h,i)perylene	2.67	0.333	mg/kg wet	3.333		80	40-140			
Benzo(k)fluoranthene	2.34	0.333	mg/kg wet	3.333		70	40-140			
bis(2-Chloroethoxy)methane	2.28	0.333	mg/kg wet	3.333		68	40-140			
bis(2-Chloroethyl)ether	2.66	0.167	mg/kg wet	3.333		80	40-140			
bis(2-chloroisopropyl)Ether	2.41	0.167	mg/kg wet	3.333		72	40-140			
bis(2-Ethylhexyl)phthalate	2.58	0.333	mg/kg wet	3.333		77	40-140			
Butylbenzylphthalate	2.60	0.333	mg/kg wet	3.333		78	40-140			
Chrysene	2.63	0.167	mg/kg wet	3.333		79	40-140			
Dibenzo(a,h)Anthracene	2.77	0.167	mg/kg wet	3.333		83	40-140			
Dibenzofuran	2.43	0.333	mg/kg wet	3.333		73	40-140			
Diethylphthalate	2.64	0.333	mg/kg wet	3.333		79	40-140			
Dimethylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140			
Di-n-butylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140			
Di-n-octylphthalate	2.66	0.333	mg/kg wet	3.333		80	40-140			
Fluoranthene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Fluorene	2.65	0.333	mg/kg wet	3.333		80	40-140			
Hexachlorobenzene	2.58	0.167	mg/kg wet	3.333		77	40-140			
Hexachlorobutadiene	2.50	0.333	mg/kg wet	3.333		75	40-140			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Hexachloroethane	2.50	0.167	mg/kg wet	3.333		75	40-140			
Indeno(1,2,3-cd)Pyrene	2.70	0.333	mg/kg wet	3.333		81	40-140			
Isophorone	2.32	0.333	mg/kg wet	3.333		70	40-140			
Naphthalene	2.31	0.333	mg/kg wet	3.333		69	40-140			
Nitrobenzene	2.48	0.333	mg/kg wet	3.333		74	40-140			
N-Nitrosodimethylamine	1.75	0.333	mg/kg wet	3.333		52	40-140			
Pentachlorophenol	2.07	0.667	mg/kg wet	3.333		62	30-130			
Phenanthrene	2.42	0.333	mg/kg wet	3.333		72	40-140			
Phenol	2.19	0.333	mg/kg wet	3.333		66	30-130			
Pyrene	2.65	0.333	mg/kg wet	3.333		79	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.64*		mg/kg wet	*3.333*		*79*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.94*		mg/kg wet	*5.000*		*79*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.06*		mg/kg wet	*5.000*		*81*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.72*		mg/kg wet	*3.333*		*82*	*30-130*			
Surrogate: 2-Fluorophenol	*3.69*		mg/kg wet	*5.000*		*74*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.94*		mg/kg wet	*3.333*		*88*	*30-130*			
Surrogate: Phenol-d6	*4.15*		mg/kg wet	*5.000*		*83*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.93*		mg/kg wet	*3.333*		*88*	*30-130*			
LCS Dup										
1,2,4-Trichlorobenzene	2.13	0.333	mg/kg wet	3.333		64	40-140	7	30	
1,2-Dichlorobenzene	2.13	0.333	mg/kg wet	3.333		64	40-140	3	30	
1,3-Dichlorobenzene	1.94	0.333	mg/kg wet	3.333		58	40-140	6	30	
1,4-Dichlorobenzene	2.14	0.167	mg/kg wet	3.333		64	40-140	4	30	
2,4,5-Trichlorophenol	2.08	0.333	mg/kg wet	3.333		63	30-130	5	30	
2,4,6-Trichlorophenol	1.99	0.167	mg/kg wet	3.333		60	30-130	6	30	
2,4-Dichlorophenol	2.09	0.167	mg/kg wet	3.333		63	30-130	6	30	
2,4-Dimethylphenol	2.42	0.167	mg/kg wet	3.333		73	30-130	8	30	
2,4-Dinitrophenol	2.57	0.667	mg/kg wet	3.333		77	30-130	3	30	
2,4-Dinitrotoluene	2.35	0.167	mg/kg wet	3.333		71	40-140	3	30	
2,6-Dinitrotoluene	2.27	0.333	mg/kg wet	3.333		68	40-140	3	30	
2-Chloronaphthalene	2.10	0.333	mg/kg wet	3.333		63	40-140	7	30	
2-Chlorophenol	2.39	0.167	mg/kg wet	3.333		72	30-130	3	30	
2-Methylnaphthalene	2.23	0.167	mg/kg wet	3.333		67	40-140	7	30	
2-Methylphenol	2.28	0.333	mg/kg wet	3.333		68	30-130	6	30	
2-Nitrophenol	2.14	0.333	mg/kg wet	3.333		64	30-130	5	30	
3,3´-Dichlorobenzidine	1.56	0.333	mg/kg wet	3.333		47	40-140	6	30	
3+4-Methylphenol	4.43	0.667	mg/kg wet	6.667		66	30-130	7	30	
4-Bromophenyl-phenylether	2.18	0.333	mg/kg wet	3.333		65	40-140	8	30	
4-Chloroaniline	1.58	0.333	mg/kg wet	3.333		47	40-140	12	30	
4-Nitrophenol	1.99	1.67	mg/kg wet	3.333		60	30-130	2	30	
Acenaphthene	2.37	0.333	mg/kg wet	3.333		71	40-140	7	30	
Acenaphthylene	2.09	0.333	mg/kg wet	3.333		63	40-140	6	30	
Acetophenone	2.53	0.667	mg/kg wet	3.333		76	40-140	6	30	
Aniline	1.35	1.67	mg/kg wet	3.333		41	40-140	9	30	
Anthracene	2.38	0.333	mg/kg wet	3.333		71	40-140	6	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Azobenzene	2.38	0.333	mg/kg wet	3.333		72	40-140	8	30	
Benzo(a)anthracene	2.60	0.333	mg/kg wet	3.333		78	40-140	6	30	
Benzo(a)pyrene	2.30	0.167	mg/kg wet	3.333		69	40-140	8	30	
Benzo(b)fluoranthene	2.42	0.333	mg/kg wet	3.333		72	40-140	12	30	
Benzo(g,h,i)perylene	2.47	0.333	mg/kg wet	3.333		74	40-140	8	30	
Benzo(k)fluoranthene	2.25	0.333	mg/kg wet	3.333		67	40-140	4	30	
bis(2-Chloroethoxy)methane	2.14	0.333	mg/kg wet	3.333		64	40-140	6	30	
bis(2-Chloroethyl)ether	2.51	0.167	mg/kg wet	3.333		75	40-140	6	30	
bis(2-chloroisopropyl)Ether	2.25	0.167	mg/kg wet	3.333		67	40-140	7	30	
bis(2-Ethylhexyl)phthalate	2.44	0.333	mg/kg wet	3.333		73	40-140	6	30	
Butylbenzylphthalate	2.44	0.333	mg/kg wet	3.333		73	40-140	6	30	
Chrysene	2.47	0.167	mg/kg wet	3.333		74	40-140	6	30	
Dibenzo(a,h)Anthracene	2.54	0.167	mg/kg wet	3.333		76	40-140	9	30	
Dibenzofuran	2.27	0.333	mg/kg wet	3.333		68	40-140	7	30	
Diethylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140	4	30	
Dimethylphthalate	2.40	0.333	mg/kg wet	3.333		72	40-140	5	30	
Di-n-butylphthalate	2.37	0.333	mg/kg wet	3.333		71	40-140	6	30	
Di-n-octylphthalate	2.49	0.333	mg/kg wet	3.333		75	40-140	7	30	
Fluoranthene	2.33	0.333	mg/kg wet	3.333		70	40-140	5	30	
Fluorene	2.52	0.333	mg/kg wet	3.333		76	40-140	5	30	
Hexachlorobenzene	2.38	0.167	mg/kg wet	3.333		71	40-140	8	30	
Hexachlorobutadiene	2.34	0.333	mg/kg wet	3.333		70	40-140	6	30	
Hexachloroethane	2.35	0.167	mg/kg wet	3.333		71	40-140	6	30	
Indeno(1,2,3-cd)Pyrene	2.41	0.333	mg/kg wet	3.333		72	40-140	11	30	
Isophorone	2.17	0.333	mg/kg wet	3.333		65	40-140	7	30	
Naphthalene	2.18	0.333	mg/kg wet	3.333		66	40-140	5	30	
Nitrobenzene	2.36	0.333	mg/kg wet	3.333		71	40-140	5	30	
N-Nitrosodimethylamine	1.67	0.333	mg/kg wet	3.333		50	40-140	5	30	
Pentachlorophenol	1.98	0.667	mg/kg wet	3.333		59	30-130	5	30	
Phenanthrene	2.28	0.333	mg/kg wet	3.333		68	40-140	6	30	
Phenol	2.06	0.333	mg/kg wet	3.333		62	30-130	6	30	
Pyrene	2.47	0.333	mg/kg wet	3.333		74	40-140	7	30	
Surrogate: 1,2-Dichlorobenzene-d4	*2.40*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.56*		mg/kg wet	*5.000*		*71*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.71*		mg/kg wet	*5.000*		*74*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.44*		mg/kg wet	*3.333*		*73*	*30-130*			
Surrogate: 2-Fluorophenol	*3.32*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.67*		mg/kg wet	*3.333*		*80*	*30-130*			
Surrogate: Phenol-d6	*3.75*		mg/kg wet	*5.000*		*75*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.61*		mg/kg wet	*3.333*		*78*	*30-130*			
Classical Chemistry										
Batch DL11320 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DL11320 - General Preparation										
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	4.0	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			
Batch DL11342 - General Preparation										
Blank										
Conductivity	ND	5	umhos/cm							
LCS										
Conductivity	1310		umhos/cm	1412		93	90-110			
Batch DL11345 - General Preparation										
Reference										
Flashpoint	81		°F	81.00		100	97.9-102.1			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0419

Notes and Definitions

PT	Pentachlorophenol tailing factor > 2.
B-	Blank Spike recovery is below lower control limit (B-).
B+	Blank Spike recovery is above upper control limit (B+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
D	Diluted.
EL	Elevated Method Reporting Limits due to sample matrix (EL).
>	Greater than.
ICV+	Initial Calibration Verification recovery is above upper control limit (ICV+).
Z17	Temperature is within 23 +/-2 ºC.
Q	Calibration required quadratic regression (Q).
S-	Surrogate recovery(ies) below lower control limit (S-).
U	Analyte included in the analysis, but not detected
WL	Results obtained from a deionized water leach of the sample.
Z-10	Soil pH measured in water at 21.5 ºC.
Z-10a	Soil pH measured in water at 21.6 ºC.
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0419

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 21L0419
Date Received: 12/10/2021
Project Due Date: 12/17/2021
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.2 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** (Yes) / No / NA
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA
13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: 12/10/21 Time: 1928 By: ML

Sample Receiving Notes:

No percent solids for the vials, sample 2 methanol vial was received broken. One DI labeled "410-SI (2.5)" not on chain and other DI has no label.

14. Was there a need to contact Project Manager? (Yes) / No — Incorrect collection time on sample 1 MeoH - 830; Incorrect collection time on sample 2 DI - 900
    a. Was there a need to contact the client? Yes / No
    Who was contacted: Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	240867	Yes	N/A	Yes	VOA Vial	MeOH	
1	240870	Yes	N/A	Yes	VOA Vial	DI Water	
~~1~~	~~240871~~	~~Yes~~	~~N/A~~	~~Yes~~	~~VOA Vial~~	~~DI Water~~	
2	240876	Yes	N/A	Yes	8 oz jar	NP	TD12/10/21
2	240887	Yes	N/A	Yes	8 oz jar	NP	
2	240888	Yes	N/A	Yes	8 oz jar	NP	
3	240872	Yes	N/A	Yes	VOA Vial	DI Water	
~~3~~	~~240873~~	~~Yes~~	~~N/A~~	~~Yes~~	~~VOA Vial~~	~~DI Water~~	
4	240889	Yes	N/A	Yes	8 oz jar	NP	
4	240890	Yes	N/A	Yes	8 oz jar	NP	
5	240869	Yes	N/A	Yes	VOA Vial	MeOH	
5	240874	Yes	N/A	Yes	VOA Vial	DI Water	
5	240875	Yes	N/A	Yes	VOA Vial	DI Water	
6	240891	Yes	N/A	Yes	8 oz jar	NP	
6	240892	Yes	N/A	Yes	8 oz jar	NP	
7	240879	Yes	N/A	Yes	8 oz jar	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

ESS Project ID: 21L0419
Date Received: 12/10/2021

8	240880	Yes	N/A	Yes	8 oz jar	NP
9	240881	Yes	N/A	Yes	8 oz jar	NP
10	240882	Yes	N/A	Yes	8 oz jar	NP
11	240883	Yes	N/A	Yes	8 oz jar	NP
12	240884	Yes	N/A	Yes	8 oz jar	NP
13	240885	Yes	N/A	Yes	8 oz jar	NP
14	240886	Yes	N/A	Yes	8 oz jar	NP

2nd Review

Were all containers scanned into storage/lab? Initials TD

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Mayor Davis Date & Time: 12/10/21 1841

Reviewed By: [signature] Date & Time: 12/10/21 1928

Chain-of-Custody Record

Laboratory: ESS

Laboratory Job # (Lab use only) 2102419

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman
781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman
labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: (YES) NO

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: (MA) 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are (Method 1 S-1 and GW-2/GW-3) Circle if GW-1 is required.

Preservative

MEOH	H20	NA	NA	NA	NA	NA	NA	NA	

Analysis

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE		Sample Specific Remarks
1	2101938-B415-S1-(2.5)	12/10/2021	0800	Soil	3	JES	X	X									
2	2101938-B415-S1-(0-5)	12/10/2021	0801	Soil	3	JES			X	X	X	X	X	X	X		TCLP Lead if 20X exceeds
3	2101938-B416-S2-(7.5)	12/10/2021	0830	Soil	3	JES	X	X									
4	2101938-B416-S2-(5-10)	12/10/2021	0831	Soil	2	JES			X	X	X	X	X	X			TCLP Lead if 20X exceeds
5	2101938-B417-(5.5)	12/10/2021	0930	Soil	3	JES	X	X									
6	2101938-B417-(3-8)	12/10/2021	0931	Soil	2	JES			X	X	X	X	X	X			TCLP Lead if 20X exceeds
7	2101938-B418-S1-(0-5)	12/10/2021	1015	Soil	1	JES							X				Run
8	2101938-B418-S2-(5-10)	12/10/2021	1030	Soil	1	JES							X				Run
9	2101938-B419-S1-(0-5)	12/10/2021	1045	Soil	1	JES							X				Run
10	2101938-B419-S2-(5-10)	12/10/2021	1100	Soil	1	JES							X				Run
11	2101938-B420-S1-(0-5)	12/10/2021	1115	Soil	1	JES							X				Run
12	2101938-B420-S2-(5-10)	12/10/2021	1130	Soil	1	JES							X				Run

Sample Handling

Samples Field Filtered (YES) NO NA

Sampled Shipped With Ice (YES) NO

Relinquished by sampler: (signature)	Date:	Time:	Received by: (signature)
1.	12/10/2021	1330	GEI Sample Fridge
2. Friday	12/10/21	3:01	2.
3.	12/10/21		3.
4. 3.2 lbs	12/10/21	17 15:31	4.
5.			5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____
2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Run CRV if total Cr exceeds 100 mg/kg

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

Chain-of-Custody Record

Laboratory: ESS

Laboratory Job # (Lab use only) 2104119

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman
781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman
labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: YES (NO)

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: MA 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are Method 1 S-1 and GW-2/GW-3. **Circle if GW-1 is required.**

Preservative

MEOH	H20	NA	NA	NA	NA	NA	NA	NA

Analysis

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE	Sample Specific Remarks
13	2101938-B421-S1-(0-5)	12/10/2021	1145	Soil	1	JES							X			RUN
14	2101938-B421-S2-(5-10)	12/10/2021	1200	Soil	1	JES							X			RUN

Sample Handling

Samples Field Filtered: YES NO (NA)

Sampled Shipped With Ice: (YES) NO

Relinquished by sampler: (signature)	Date:	Time:	Received by: (signature)
1.	12/10/2021	1550	GEI Sample Fridge
2. Fridge	12/10/21	3:01	2.
3.	12/10/21	15:01	3.
4. 3.2 ice	12/10/21	15:31	4.
5.			5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____
2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

CERTIFICATE OF ANALYSIS

Ryan Hoffman
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801

RE: Parcel P3 Environmental Remediation (2103938)
ESS Laboratory Work Order Number: 21L0421

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 4:33 pm, Dec 17, 2021

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0421

SAMPLE RECEIPT

The following samples were received on December 10, 2021 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Low Level VOA vials were frozen by ESS Laboratory on December 10, 2021 at 19:08.

Lab Number	Sample Name	Matrix	Analysis
21L0421-01	2101938-B401-2.5	Soil	8260B Low
21L0421-02	2101938-B402-2.5	Soil	8260B Low
21L0421-03	2101938-B403-2.5	Soil	8260B Low
21L0421-04	2101938-B404-2.5	Soil	8260B Low
21L0421-05	2101938-B405-2.5	Soil	8260B Low
21L0421-06	2101938-B406-2.5	Soil	8260B Low
21L0421-07	2101938-B407-S1-2.5	Soil	8260B Low
21L0421-08	2101938-B407-S2-7.5	Soil	8260B Low
21L0421-09	2101938-B408-2-5	Soil	8260B Low
21L0421-10	2101938-B409-2.5	Soil	8260B Low
21L0421-11	2101938-B410-S1-2.5	Soil	8260B Low
21L0421-12	2101938-B410-S2-7.5	Soil	8260B Low
21L0421-13	2101938-B411-S1-2.5	Soil	8260B Low
21L0421-14	2101938-B411-S2-7.5	Soil	8260B Low
21L0421-15	2101938-B412-S1-2.5	Soil	8260B Low
21L0421-16	2101938-B412-S2-7.5	Soil	8260B Low
21L0421-17	2101938-B413-S1-2.5	Soil	8260B Low
21L0421-18	2101938-B413-S2-7.5	Soil	8260B, 8260B Low
21L0421-19	2101938-B414-S1-2.5	Soil	8260B Low
21L0421-20	2101938-B414-S2-7.5	Soil	8260B Low

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

PROJECT NARRATIVE

5035/8260B Volatile Organic Compounds / Low Level

21L0421-18	**Internal Standard(s) outside of criteria (I).** 1,4-Dichlorobenzene-D4 (48% @ 50-200%)
21L0421-20	**Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).** 1,4-Dichlorobenzene-D4 (28% @ 50-200%)
21L0421-20	**Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).** 4-Bromofluorobenzene (68% @ 70-130%), Toluene-d8 (132% @ 70-130%)
D1L0259-CCV1	**Calibration required quadratic regression (Q).** Bromoform (97% @ 80-120%), Dibromochloromethane (98% @ 80-120%), trans-1,3-Dichloropropene (101% @ 80-120%)
D1L0259-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).** Bromomethane (23% @ 20%)
D1L0282-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).** Acetone (21% @ 20%), Dichlorodifluoromethane (22% @ 20%), Tetrachloroethene (27% @ 20%)
D1L0282-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).** Naphthalene (24% @ 20%), Tertiary-amyl methyl ether (22% @ 20%)
D1L0288-CCV1	**Calibration required quadratic regression (Q).** Bromoform (109% @ 80-120%), Dibromochloromethane (108% @ 80-120%), trans-1,3-Dichloropropene (106% @ 80-120%)
D1L0288-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).** Bromomethane (44% @ 20%), Carbon Tetrachloride (21% @ 20%)
DL11447-BS1	**Blank Spike recovery is above upper control limit (B+).** Acetone (159% @ 70-130%), Tetrachloroethene (135% @ 70-130%)
DL11447-BS1	**Blank Spike recovery is below lower control limit (B-).** 1,2-Dibromo-3-Chloropropane (66% @ 70-130%)
DL11447-BSD1	**Blank Spike recovery is above upper control limit (B+).** Acetone (174% @ 70-130%), Tetrachloroethene (149% @ 70-130%)
DL11522-BS1	**Blank Spike recovery is above upper control limit (B+).** Bromomethane (143% @ 70-130%)
DL11522-BSD1	**Blank Spike recovery is above upper control limit (B+).** Bromomethane (139% @ 70-130%)

5035/8260B Volatile Organic Compounds / Methanol

D1L0315-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).** Tetrachloroethene (28% @ 20%)
DL11629-BS1	**Blank Spike recovery is above upper control limit (B+).** Acetone (135% @ 70-130%)
DL11629-BSD1	**Blank Spike recovery is above upper control limit (B+).** Acetone (139% @ 70-130%)

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0421

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
ESS Laboratory Work Order: 21L0421

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **21L0421-01 through 21L0421-20**

Matrices: ( ) Ground Water/Surface Water (X) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

CAM Protocol (check all that apply below):

(X) 8260 VOC CAM II A	( ) 7470/7471 Hg CAM III B	( ) MassDEP VPH (GC/PID/FID) CAM IV A	( ) 8082 PCB CAM V A	( ) 9014 Total Cyanide/PAC CAM VI A	( ) 6860 Perchlorate CAM VIII B
( ) 8270 SVOC CAM II B	( ) 7010 Metals CAM III C	( ) MassDEP VPH (GC/MS) CAM IV C	( ) 8081 Pesticides CAM V B	( ) 7196 Hex Cr CAM VI B	( ) MassDEP APH CAM IX A
( ) 6010 Metals CAM III A	( ) 6020 Metals CAM III D	( ) MassDEP EPH CAM IV B	( ) 8151 Herbicides CAM V C	( ) Explosives CAM VIII A	( ) TO-15 VOC CAM IX 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 (X) No ( )
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (X) 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 (X) No ( )
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (X) No ( )
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	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 (X) 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 protocols(s)?	Yes (X) 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 (X)*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes (X) No ( )*

****All negative responses must be addressed in an attached laboratory narrative.***

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.

Signature: Laurel Stoddard
Date: December 17, 2021
Printed Name: Laurel Stoddard
Position: Laboratory Director

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401-2.5
Date Sampled: 12/09/21 08:00
Percent Solids: 90
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1,1-Trichloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1,2,2-Tetrachloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1,2-Trichloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1-Dichloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,1-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2,3-Trichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2,3-Trichloropropane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2,4-Trichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2,4-Trimethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2-Dibromo-3-Chloropropane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2-Dibromoethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2-Dichloroethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,2-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,3,5-Trimethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,3-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,3-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,4-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
1,4-Dioxane	ND (0.0619)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
2,2-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
2-Butanone	ND (0.0387)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
2-Chlorotoluene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
2-Hexanone	ND (0.0387)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
4-Chlorotoluene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
4-Isopropyltoluene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
4-Methyl-2-Pentanone	ND (0.0387)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Acetone	ND (0.0387)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Benzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Bromobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Bromochloromethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401-2.5
Date Sampled: 12/09/21 08:00
Percent Solids: 90
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Bromoform	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Bromomethane	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Carbon Disulfide	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Carbon Tetrachloride	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Chlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Chloroethane	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Chloroform	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Chloromethane	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
cis-1,2-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
cis-1,3-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Dibromochloromethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Dibromomethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Dichlorodifluoromethane	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Diethyl Ether	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Di-isopropyl ether	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Ethyl tertiary-butyl ether	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Ethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Hexachlorobutadiene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Isopropylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Methyl tert-Butyl Ether	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Methylene Chloride	ND (0.0193)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Naphthalene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
n-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
n-Propylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
sec-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Styrene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
tert-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Tertiary-amyl methyl ether	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Tetrachloroethene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Tetrahydrofuran	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Toluene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401-2.5
Date Sampled: 12/09/21 08:00
Percent Solids: 90
Initial Volume: 7.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
trans-1,3-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Trichloroethene	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Trichlorofluoromethane	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Vinyl Chloride	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Xylene O	ND (0.0039)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Xylene P,M	ND (0.0077)		8260B Low		1	12/14/21 16:18	D1L0282	DL11447
Xylenes (Total)	ND (0.00773)		8260B Low		1	12/14/21 16:18		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*99 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*98 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402-2.5
Date Sampled: 12/09/21 08:15
Percent Solids: 89
Initial Volume: 10.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1,1-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1,2,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1,2-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,1-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2,3-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2,3-Trichloropropane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2,4-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2,4-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2-Dibromo-3-Chloropropane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2-Dibromoethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,3,5-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,3-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,3-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,4-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
1,4-Dioxane	ND (0.0434)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
2,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
2-Butanone	ND (0.0271)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
2-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
2-Hexanone	ND (0.0271)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
4-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
4-Isopropyltoluene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
4-Methyl-2-Pentanone	ND (0.0271)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Acetone	ND (0.0271)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Benzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Bromobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Bromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402-2.5
Date Sampled: 12/09/21 08:15
Percent Solids: 89
Initial Volume: 10.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Bromoform	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Bromomethane	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Carbon Disulfide	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Carbon Tetrachloride	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Chlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Chloroethane	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Chloroform	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Chloromethane	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
cis-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
cis-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Dibromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Dibromomethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Dichlorodifluoromethane	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Diethyl Ether	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Di-isopropyl ether	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Ethyl tertiary-butyl ether	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Ethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Hexachlorobutadiene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Isopropylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Methyl tert-Butyl Ether	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Methylene Chloride	ND (0.0136)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Naphthalene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
n-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
n-Propylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
sec-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Styrene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
tert-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Tertiary-amyl methyl ether	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Tetrachloroethene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Tetrahydrofuran	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Toluene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402-2.5
Date Sampled: 12/09/21 08:15
Percent Solids: 89
Initial Volume: 10.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
trans-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Trichloroethene	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Trichlorofluoromethane	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Vinyl Chloride	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Xylene O	ND (0.0027)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Xylene P,M	ND (0.0054)		8260B Low		1	12/14/21 16:43	D1L0282	DL11447
Xylenes (Total)	ND (0.00543)		8260B Low		1	12/14/21 16:43		[CALC]

	%Recovery	*Qualifier*	*Limits*
Surrogate: 1,2-Dichloroethane-d4	*107 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*95 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*101 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403-2.5
Date Sampled: 12/09/21 08:30
Percent Solids: 90
Initial Volume: 10.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
1,4-Dioxane	ND (0.0437)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
2-Butanone	ND (0.0273)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
2-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
2-Hexanone	ND (0.0273)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
4-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0273)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Acetone	ND (0.0273)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Benzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Bromobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Bromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403-2.5
Date Sampled: 12/09/21 08:30
Percent Solids: 90
Initial Volume: 10.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Bromoform	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Bromomethane	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Carbon Disulfide	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Chlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Chloroethane	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Chloroform	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Chloromethane	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Dibromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Dibromomethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Diethyl Ether	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Di-isopropyl ether	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Ethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Isopropylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Methylene Chloride	ND (0.0137)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Naphthalene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
n-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
n-Propylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
sec-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Styrene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
tert-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Tetrachloroethene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Tetrahydrofuran	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Toluene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403-2.5
Date Sampled: 12/09/21 08:30
Percent Solids: 90
Initial Volume: 10.2
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Trichloroethene	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Vinyl Chloride	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Xylene O	ND (0.0027)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Xylene P,M	ND (0.0055)		8260B Low		1	12/14/21 12:11	D1L0259	DL11422
Xylenes (Total)	ND (0.00546)		8260B Low		1	12/14/21 12:11		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*104 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*87 %*		*70-130*
Surrogate: Dibromofluoromethane	*89 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404-2.5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
1,4-Dioxane	ND (0.0803)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
2-Butanone	ND (0.0502)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
2-Chlorotoluene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
2-Hexanone	ND (0.0502)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
4-Chlorotoluene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0502)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Acetone	ND (0.0502)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Benzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Bromobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Bromochloromethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404-2.5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Bromoform	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Bromomethane	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Carbon Disulfide	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Chlorobenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Chloroethane	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Chloroform	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Chloromethane	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Dibromochloromethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Dibromomethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Diethyl Ether	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Di-isopropyl ether	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Ethylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Isopropylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Methylene Chloride	ND (0.0251)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Naphthalene	**0.0059** (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
n-Butylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
n-Propylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
sec-Butylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Styrene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
tert-Butylbenzene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Tetrachloroethene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Tetrahydrofuran	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Toluene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404-2.5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Trichloroethene	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Vinyl Chloride	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Xylene O	ND (0.0050)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Xylene P,M	ND (0.0100)		8260B Low		1	12/14/21 12:37	D1L0259	DL11422
Xylenes (Total)	ND (0.0100)		8260B Low		1	12/14/21 12:37		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*109 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*89 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*105 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
1,4-Dioxane	ND (0.0760)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
2-Butanone	ND (0.0475)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
2-Chlorotoluene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
2-Hexanone	ND (0.0475)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
4-Chlorotoluene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0475)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Acetone	ND (0.0475)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Benzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Bromobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Bromochloromethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Bromoform	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Bromomethane	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Carbon Disulfide	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Chlorobenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Chloroethane	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Chloroform	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Chloromethane	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Dibromochloromethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Dibromomethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Diethyl Ether	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Di-isopropyl ether	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Ethylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Isopropylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Methylene Chloride	ND (0.0238)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Naphthalene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
n-Butylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
n-Propylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
sec-Butylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Styrene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
tert-Butylbenzene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Tetrachloroethene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Tetrahydrofuran	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Toluene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 5.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Trichloroethene	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Vinyl Chloride	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Xylene O	ND (0.0048)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Xylene P,M	ND (0.0095)		8260B Low		1	12/14/21 13:02	D1L0259	DL11422
Xylenes (Total)	ND (0.00950)		8260B Low		1	12/14/21 13:02		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*83 %*		*70-130*
Surrogate: Dibromofluoromethane	*96 %*		*70-130*
Surrogate: Toluene-d8	*110 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406-2.5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 7.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
1,4-Dioxane	ND (0.0594)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
2-Butanone	ND (0.0371)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
2-Chlorotoluene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
2-Hexanone	ND (0.0371)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
4-Chlorotoluene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0371)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Acetone	ND (0.0371)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Benzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Bromobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Bromochloromethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406-2.5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 7.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Bromoform	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Bromomethane	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Carbon Disulfide	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Chlorobenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Chloroethane	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Chloroform	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Chloromethane	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Dibromochloromethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Dibromomethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Diethyl Ether	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Di-isopropyl ether	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Ethylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Isopropylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Methylene Chloride	ND (0.0186)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Naphthalene	**0.0125** (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
n-Butylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
n-Propylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
sec-Butylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Styrene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
tert-Butylbenzene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Tetrachloroethene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Tetrahydrofuran	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Toluene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406-2.5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 7.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Trichloroethene	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Vinyl Chloride	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Xylene O	ND (0.0037)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Xylene P,M	ND (0.0074)		8260B Low		1	12/14/21 13:28	D1L0259	DL11422
Xylenes (Total)	ND (0.00743)		8260B Low		1	12/14/21 13:28		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*113 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*89 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
1,4-Dioxane	ND (0.0722)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
2-Butanone	ND (0.0451)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
2-Chlorotoluene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
2-Hexanone	ND (0.0451)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
4-Chlorotoluene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0451)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Acetone	ND (0.0451)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Benzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Bromobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Bromochloromethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Bromoform	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Bromomethane	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Carbon Disulfide	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Chlorobenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Chloroethane	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Chloroform	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Chloromethane	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Dibromochloromethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Dibromomethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Diethyl Ether	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Di-isopropyl ether	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Ethylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Isopropylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Methylene Chloride	ND (0.0225)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Naphthalene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
n-Butylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
n-Propylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
sec-Butylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Styrene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
tert-Butylbenzene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Tetrachloroethene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Tetrahydrofuran	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Toluene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Trichloroethene	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Vinyl Chloride	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Xylene O	ND (0.0045)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Xylene P,M	ND (0.0090)		8260B Low		1	12/14/21 13:54	D1L0259	DL11422
Xylenes (Total)	ND (0.00902)		8260B Low		1	12/14/21 13:54		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*112 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*87 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
1,4-Dioxane	ND (0.0469)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
2-Butanone	ND (0.0293)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
2-Chlorotoluene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
2-Hexanone	ND (0.0293)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
4-Chlorotoluene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0293)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Acetone	ND (0.0293)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Benzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Bromobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Bromochloromethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Bromoform	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Bromomethane	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Carbon Disulfide	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Chlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Chloroethane	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Chloroform	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Chloromethane	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Dibromochloromethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Dibromomethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Diethyl Ether	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Di-isopropyl ether	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Ethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Isopropylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Methylene Chloride	ND (0.0147)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Naphthalene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
n-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
n-Propylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
sec-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Styrene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
tert-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Tetrachloroethene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Tetrahydrofuran	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Toluene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Trichloroethene	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Vinyl Chloride	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Xylene O	ND (0.0029)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Xylene P,M	ND (0.0059)		8260B Low		1	12/14/21 14:19	D1L0259	DL11422
Xylenes (Total)	ND (0.00587)		8260B Low		1	12/14/21 14:19		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*113 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*92 %*		*70-130*
Surrogate: Dibromofluoromethane	*99 %*		*70-130*
Surrogate: Toluene-d8	*104 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408-2-5
Date Sampled: 12/09/21 10:00
Percent Solids: 93
Initial Volume: 4.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0034)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
1,4-Dioxane	ND (0.0919)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
2-Butanone	ND (0.0574)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
2-Chlorotoluene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
2-Hexanone	ND (0.0574)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
4-Chlorotoluene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0574)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Acetone	ND (0.0574)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Benzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Bromobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Bromochloromethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408-2-5
Date Sampled: 12/09/21 10:00
Percent Solids: 93
Initial Volume: 4.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Bromoform	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Bromomethane	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Carbon Disulfide	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Chlorobenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Chloroethane	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Chloroform	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Chloromethane	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Dibromochloromethane	ND (0.0034)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Dibromomethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Diethyl Ether	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Di-isopropyl ether	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Ethylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Isopropylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Methylene Chloride	ND (0.0287)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Naphthalene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
n-Butylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
n-Propylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
sec-Butylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Styrene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
tert-Butylbenzene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Tetrachloroethene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Tetrahydrofuran	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Toluene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408-2-5
Date Sampled: 12/09/21 10:00
Percent Solids: 93
Initial Volume: 4.7
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Trichloroethene	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Vinyl Chloride	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Xylene O	ND (0.0057)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Xylene P,M	ND (0.0115)		8260B Low		1	12/14/21 14:45	D1L0259	DL11422
Xylenes (Total)	ND (0.0115)		8260B Low		1	12/14/21 14:45		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*87 %*		*70-130*
Surrogate: Dibromofluoromethane	*98 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409-2.5
Date Sampled: 12/09/21 11:00
Percent Solids: 90
Initial Volume: 7.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
1,4-Dioxane	ND (0.0625)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
2-Butanone	ND (0.0390)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
2-Chlorotoluene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
2-Hexanone	ND (0.0390)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
4-Chlorotoluene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0390)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Acetone	ND (0.0390)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Benzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Bromobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Bromochloromethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409-2.5
Date Sampled: 12/09/21 11:00
Percent Solids: 90
Initial Volume: 7.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Bromoform	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Bromomethane	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Carbon Disulfide	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Chlorobenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Chloroethane	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Chloroform	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Chloromethane	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Dibromochloromethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Dibromomethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Diethyl Ether	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Di-isopropyl ether	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Ethylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Isopropylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Methylene Chloride	ND (0.0195)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Naphthalene	**0.0051** (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
n-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
n-Propylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
sec-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Styrene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
tert-Butylbenzene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Tetrachloroethene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Tetrahydrofuran	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Toluene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409-2.5
Date Sampled: 12/09/21 11:00
Percent Solids: 90
Initial Volume: 7.1
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Trichloroethene	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Vinyl Chloride	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Xylene O	ND (0.0039)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Xylene P,M	ND (0.0078)		8260B Low		1	12/14/21 15:11	D1L0259	DL11422
Xylenes (Total)	ND (0.00781)		8260B Low		1	12/14/21 15:11		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*115 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*111 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1-2.5
Date Sampled: 12/09/21 11:15
Percent Solids: 91
Initial Volume: 6.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
1,4-Dioxane	ND (0.0662)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
2-Butanone	ND (0.0414)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
2-Chlorotoluene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
2-Hexanone	ND (0.0414)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
4-Chlorotoluene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0414)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Acetone	ND (0.0414)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Benzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Bromobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Bromochloromethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1-2.5
Date Sampled: 12/09/21 11:15
Percent Solids: 91
Initial Volume: 6.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Bromoform	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Bromomethane	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Carbon Disulfide	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Chlorobenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Chloroethane	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Chloroform	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Chloromethane	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Dibromochloromethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Dibromomethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Diethyl Ether	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Di-isopropyl ether	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Ethylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Isopropylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Methylene Chloride	ND (0.0207)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Naphthalene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
n-Butylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
n-Propylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
sec-Butylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Styrene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
tert-Butylbenzene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Tetrachloroethene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Tetrahydrofuran	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Toluene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1-2.5
Date Sampled: 12/09/21 11:15
Percent Solids: 91
Initial Volume: 6.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Trichloroethene	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Vinyl Chloride	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Xylene O	ND (0.0041)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Xylene P,M	ND (0.0083)		8260B Low		1	12/14/21 15:36	D1L0259	DL11422
Xylenes (Total)	ND (0.00828)		8260B Low		1	12/14/21 15:36		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*113 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*84 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*110 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2-7.5
Date Sampled: 12/09/21 11:30
Percent Solids: 86
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
1,4-Dioxane	ND (0.0613)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
2-Butanone	ND (0.0383)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
2-Chlorotoluene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
2-Hexanone	ND (0.0383)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
4-Chlorotoluene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0383)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Acetone	ND (0.0383)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Benzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Bromobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Bromochloromethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2-7.5
Date Sampled: 12/09/21 11:30
Percent Solids: 86
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Bromoform	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Bromomethane	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Carbon Disulfide	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Chlorobenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Chloroethane	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Chloroform	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Chloromethane	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Dibromochloromethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Dibromomethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Diethyl Ether	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Di-isopropyl ether	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Ethylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Isopropylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Methylene Chloride	ND (0.0192)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Naphthalene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
n-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
n-Propylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
sec-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Styrene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
tert-Butylbenzene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Tetrachloroethene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Tetrahydrofuran	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Toluene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2-7.5
Date Sampled: 12/09/21 11:30
Percent Solids: 86
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Trichloroethene	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Vinyl Chloride	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Xylene O	ND (0.0038)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Xylene P,M	ND (0.0077)		8260B Low		1	12/14/21 16:02	D1L0259	DL11422
Xylenes (Total)	ND (0.00767)		8260B Low		1	12/14/21 16:02		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*115 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*84 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*111 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 88
Initial Volume: 9.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
1,4-Dioxane	ND (0.0463)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
2-Butanone	ND (0.0290)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
2-Chlorotoluene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
2-Hexanone	ND (0.0290)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
4-Chlorotoluene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0290)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Acetone	ND (0.0290)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Benzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Bromobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Bromochloromethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 88
Initial Volume: 9.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Bromoform	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Bromomethane	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Carbon Disulfide	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Chlorobenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Chloroethane	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Chloroform	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Chloromethane	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Dibromochloromethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Dibromomethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Diethyl Ether	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Di-isopropyl ether	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Ethylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Isopropylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Methylene Chloride	ND (0.0145)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Naphthalene	**0.0036** (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
n-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
n-Propylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
sec-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Styrene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
tert-Butylbenzene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Tetrachloroethene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Tetrahydrofuran	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Toluene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 88
Initial Volume: 9.8
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Trichloroethene	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Vinyl Chloride	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Xylene O	ND (0.0029)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Xylene P,M	ND (0.0058)		8260B Low		1	12/14/21 16:28	D1L0259	DL11422
Xylenes (Total)	ND (0.00579)		8260B Low		1	12/14/21 16:28		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*114 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*83 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*112 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 84
Initial Volume: 5.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0033)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
1,4-Dioxane	ND (0.0880)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
2-Butanone	ND (0.0550)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
2-Chlorotoluene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
2-Hexanone	ND (0.0550)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
4-Chlorotoluene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0550)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Acetone	ND (0.0550)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Benzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Bromobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Bromochloromethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 84
Initial Volume: 5.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Bromoform	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Bromomethane	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Carbon Disulfide	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Chlorobenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Chloroethane	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Chloroform	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Chloromethane	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Dibromochloromethane	ND (0.0033)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Dibromomethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Diethyl Ether	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Di-isopropyl ether	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Ethylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Isopropylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Methylene Chloride	ND (0.0275)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Naphthalene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
n-Butylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
n-Propylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
sec-Butylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Styrene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
tert-Butylbenzene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Tetrachloroethene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Tetrahydrofuran	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Toluene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 84
Initial Volume: 5.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Trichloroethene	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Vinyl Chloride	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Xylene O	ND (0.0055)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Xylene P,M	ND (0.0110)		8260B Low		1	12/14/21 16:53	D1L0259	DL11422
Xylenes (Total)	ND (0.0110)		8260B Low		1	12/14/21 16:53		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*116 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*88 %*		*70-130*
Surrogate: Dibromofluoromethane	*101 %*		*70-130*
Surrogate: Toluene-d8	*107 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 10.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
1,4-Dioxane	ND (0.0437)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
2-Butanone	ND (0.0273)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
2-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
2-Hexanone	ND (0.0273)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
4-Chlorotoluene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0273)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Acetone	ND (0.0273)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Benzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Bromobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Bromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 10.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Bromoform	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Bromomethane	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Carbon Disulfide	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Chlorobenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Chloroethane	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Chloroform	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Chloromethane	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Dibromochloromethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Dibromomethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Diethyl Ether	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Di-isopropyl ether	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Ethylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Isopropylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Methylene Chloride	ND (0.0137)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Naphthalene	**0.0035** (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
n-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
n-Propylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
sec-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Styrene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
tert-Butylbenzene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Tetrachloroethene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Tetrahydrofuran	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Toluene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 10.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Trichloroethene	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Vinyl Chloride	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Xylene O	ND (0.0027)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Xylene P,M	ND (0.0055)		8260B Low		1	12/14/21 17:19	D1L0259	DL11422
Xylenes (Total)	ND (0.00546)		8260B Low		1	12/14/21 17:19		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*115 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*82 %*		*70-130*
Surrogate: Dibromofluoromethane	*102 %*		*70-130*
Surrogate: Toluene-d8	*112 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2-7.5
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 11
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
1,4-Dioxane	ND (0.0411)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
2-Butanone	ND (0.0257)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
2-Chlorotoluene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
2-Hexanone	ND (0.0257)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
4-Chlorotoluene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0257)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Acetone	ND (0.0257)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Benzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Bromobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Bromochloromethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2-7.5
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 11
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Bromoform	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Bromomethane	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Carbon Disulfide	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Chlorobenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Chloroethane	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Chloroform	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Chloromethane	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Dibromochloromethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Dibromomethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Diethyl Ether	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Di-isopropyl ether	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Ethylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Isopropylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Methylene Chloride	ND (0.0128)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Naphthalene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
n-Butylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
n-Propylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
sec-Butylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Styrene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
tert-Butylbenzene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Tetrachloroethene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Tetrahydrofuran	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Toluene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2-7.5
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 11
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Trichloroethene	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Vinyl Chloride	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Xylene O	ND (0.0026)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Xylene P,M	ND (0.0051)		8260B Low		1	12/14/21 17:44	D1L0259	DL11422
Xylenes (Total)	ND (0.00514)		8260B Low		1	12/14/21 17:44		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*118 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*83 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*111 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1,1-Trichloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1,2,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1,2-Trichloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1-Dichloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1-Dichloroethene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,1-Dichloropropene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2,3-Trichlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2,3-Trichloropropane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2,4-Trichlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2,4-Trimethylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2-Dibromo-3-Chloropropane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2-Dibromoethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2-Dichloroethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,2-Dichloropropane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,3,5-Trimethylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,3-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,3-Dichloropropane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,4-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
1,4-Dioxane	ND (0.0493)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
2,2-Dichloropropane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
2-Butanone	ND (0.0308)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
2-Chlorotoluene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
2-Hexanone	ND (0.0308)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
4-Chlorotoluene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
4-Isopropyltoluene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
4-Methyl-2-Pentanone	ND (0.0308)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Acetone	ND (0.0308)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Benzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Bromobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Bromochloromethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Bromoform	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Bromomethane	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Carbon Disulfide	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Carbon Tetrachloride	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Chlorobenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Chloroethane	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Chloroform	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Chloromethane	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
cis-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
cis-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Dibromochloromethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Dibromomethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Dichlorodifluoromethane	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Diethyl Ether	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Di-isopropyl ether	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Ethyl tertiary-butyl ether	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Ethylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Hexachlorobutadiene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Isopropylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Methyl tert-Butyl Ether	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Methylene Chloride	ND (0.0154)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Naphthalene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
n-Butylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
n-Propylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
sec-Butylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Styrene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
tert-Butylbenzene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Tertiary-amyl methyl ether	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Tetrachloroethene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Tetrahydrofuran	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Toluene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1-2.5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 9
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
trans-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Trichloroethene	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Trichlorofluoromethane	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Vinyl Chloride	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Xylene O	ND (0.0031)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Xylene P,M	ND (0.0062)		8260B Low		1	12/15/21 12:26	D1L0288	DL11522
Xylenes (Total)	ND (0.00616)		8260B Low		1	12/15/21 12:26		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*111 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*84 %*		*70-130*
Surrogate: Dibromofluoromethane	*100 %*		*70-130*
Surrogate: Toluene-d8	*111 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1,1-Trichloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1,2,2-Tetrachloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1,2-Trichloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1-Dichloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1-Dichloroethene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,1-Dichloropropene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2,3-Trichlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2,3-Trichloropropane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2,4-Trichlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2,4-Trimethylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2-Dibromo-3-Chloropropane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2-Dibromoethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2-Dichlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2-Dichloroethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,2-Dichloropropane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,3,5-Trimethylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,3-Dichlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,3-Dichloropropane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,4-Dichlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
1,4-Dioxane	ND (0.0583)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
2,2-Dichloropropane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
2-Butanone	ND (0.0364)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
2-Chlorotoluene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
2-Hexanone	ND (0.0364)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
4-Chlorotoluene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
4-Isopropyltoluene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
4-Methyl-2-Pentanone	ND (0.0364)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Acetone	ND (0.0364)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Benzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Bromobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Bromochloromethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Bromoform	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Bromomethane	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Carbon Disulfide	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Carbon Tetrachloride	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Chlorobenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Chloroethane	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Chloroform	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Chloromethane	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
cis-1,2-Dichloroethene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
cis-1,3-Dichloropropene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Dibromochloromethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Dibromomethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Dichlorodifluoromethane	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Diethyl Ether	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Di-isopropyl ether	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Ethyl tertiary-butyl ether	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Ethylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Hexachlorobutadiene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Isopropylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Methyl tert-Butyl Ether	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Methylene Chloride	ND (0.0182)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Naphthalene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
n-Butylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
n-Propylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
sec-Butylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Styrene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
tert-Butylbenzene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Tertiary-amyl methyl ether	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Tetrachloroethene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Tetrahydrofuran	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Toluene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 7.6
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
trans-1,3-Dichloropropene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Trichloroethene	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Trichlorofluoromethane	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Vinyl Chloride	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Xylene O	ND (0.0036)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Xylene P,M	ND (0.0073)		8260B Low		1	12/15/21 12:51	D1L0288	DL11522
Xylenes (Total)	ND (0.00728)		8260B Low		1	12/15/21 12:51		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*117 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*80 %*		*70-130*
Surrogate: Dibromofluoromethane	*106 %*		*70-130*
Surrogate: Toluene-d8	*115 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 23.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1,1-Trichloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1,2,2-Tetrachloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1,2-Trichloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1-Dichloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1-Dichloroethene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,1-Dichloropropene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2,3-Trichlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2,3-Trichloropropane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2,4-Trichlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2,4-Trimethylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2-Dibromo-3-Chloropropane	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2-Dibromoethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2-Dichlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2-Dichloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,2-Dichloropropane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,3,5-Trimethylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,3-Dichlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,3-Dichloropropane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,4-Dichlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
1,4-Dioxane - Screen	ND (32.7)		8260B		1	12/16/21 11:52	D1L0315	DL11629
2,2-Dichloropropane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
2-Butanone	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
2-Chlorotoluene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
2-Hexanone	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
4-Chlorotoluene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
4-Isopropyltoluene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
4-Methyl-2-Pentanone	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Acetone	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Benzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Bromobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Bromochloromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 23.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Bromoform	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Bromomethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Carbon Disulfide	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Carbon Tetrachloride	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Chlorobenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Chloroethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Chloroform	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Chloromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
cis-1,2-Dichloroethene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
cis-1,3-Dichloropropene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Dibromochloromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Dibromomethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Dichlorodifluoromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Diethyl Ether	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Di-isopropyl ether	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Ethyl tertiary-butyl ether	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Ethylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Hexachlorobutadiene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Isopropylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Methyl tert-Butyl Ether	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Methylene Chloride	ND (0.327)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Naphthalene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
n-Butylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
n-Propylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
sec-Butylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Styrene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
tert-Butylbenzene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Tertiary-amyl methyl ether	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Tetrachloroethene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Tetrahydrofuran	ND (0.817)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Toluene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2-7.5
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 23.4
Final Volume: 15
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Methanol

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
trans-1,3-Dichloropropene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Trichloroethene	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Trichlorofluoromethane	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Vinyl Chloride	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Xylene O	ND (0.163)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Xylene P,M	ND (0.327)		8260B		1	12/16/21 11:52	D1L0315	DL11629
Xylenes (Total)	ND (0.327)		8260B		1	12/16/21 11:52		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*102 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*109 %*		*70-130*
Surrogate: Dibromofluoromethane	*110 %*		*70-130*
Surrogate: Toluene-d8	*108 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 8.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
1,4-Dioxane	ND (0.0539)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
2-Butanone	ND (0.0337)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
2-Chlorotoluene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
2-Hexanone	ND (0.0337)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
4-Chlorotoluene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0337)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Acetone	ND (0.0337)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Benzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Bromobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Bromochloromethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 8.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Bromoform	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Bromomethane	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Carbon Disulfide	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Chlorobenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Chloroethane	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Chloroform	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Chloromethane	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Dibromochloromethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Dibromomethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Diethyl Ether	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Di-isopropyl ether	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Ethylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Isopropylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Methylene Chloride	ND (0.0168)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Naphthalene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
n-Butylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
n-Propylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
sec-Butylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Styrene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
tert-Butylbenzene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Tetrachloroethene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Tetrahydrofuran	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Toluene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1-2.5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 8.3
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Trichloroethene	**0.0057** (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Vinyl Chloride	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Xylene O	ND (0.0034)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Xylene P,M	ND (0.0067)		8260B Low		1	12/14/21 19:01	D1L0259	DL11422
Xylenes (Total)	ND (0.00674)		8260B Low		1	12/14/21 19:01		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*118 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*86 %*		*70-130*
Surrogate: Dibromofluoromethane	*103 %*		*70-130*
Surrogate: Toluene-d8	*109 %*		*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,1,1,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1,1-Trichloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1,2,2-Tetrachloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1,2-Trichloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1-Dichloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1-Dichloroethene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,1-Dichloropropene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2,3-Trichlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2,3-Trichloropropane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2,4-Trichlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2,4-Trimethylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2-Dibromo-3-Chloropropane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2-Dibromoethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2-Dichloroethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,2-Dichloropropane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,3,5-Trimethylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,3-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,3-Dichloropropane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,4-Dichlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
1,4-Dioxane	ND (0.0493)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
2,2-Dichloropropane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
2-Butanone	ND (0.0308)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
2-Chlorotoluene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
2-Hexanone	ND (0.0308)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
4-Chlorotoluene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
4-Isopropyltoluene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
4-Methyl-2-Pentanone	ND (0.0308)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Acetone	ND (0.0308)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Benzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Bromobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Bromochloromethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Bromodichloromethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Bromoform	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Bromomethane	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Carbon Disulfide	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Carbon Tetrachloride	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Chlorobenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Chloroethane	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Chloroform	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Chloromethane	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
cis-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
cis-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Dibromochloromethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Dibromomethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Dichlorodifluoromethane	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Diethyl Ether	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Di-isopropyl ether	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Ethyl tertiary-butyl ether	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Ethylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Hexachlorobutadiene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Isopropylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Methyl tert-Butyl Ether	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Methylene Chloride	ND (0.0154)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Naphthalene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
n-Butylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
n-Propylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
sec-Butylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Styrene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
tert-Butylbenzene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Tertiary-amyl methyl ether	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Tetrachloroethene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Tetrahydrofuran	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Toluene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2-7.5
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 9.4
Final Volume: 10
Extraction Method: 5035

ESS Laboratory Work Order: 21L0421
ESS Laboratory Sample ID: 21L0421-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: MD

5035/8260B Volatile Organic Compounds / Low Level

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
trans-1,2-Dichloroethene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
trans-1,3-Dichloropropene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Trichloroethene	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Trichlorofluoromethane	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Vinyl Chloride	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Xylene O	ND (0.0031)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Xylene P,M	ND (0.0062)		8260B Low		1	12/14/21 19:27	D1L0259	DL11422
Xylenes (Total)	ND (0.00617)		8260B Low		1	12/14/21 19:27		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	*120 %*		*70-130*
Surrogate: 4-Bromofluorobenzene	*68 %*	*SC*	*70-130*
Surrogate: Dibromofluoromethane	*108 %*		*70-130*
Surrogate: Toluene-d8	*132 %*	*SC*	*70-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.0800	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0525*		mg/kg wet	*0.05000*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0459*		mg/kg wet	*0.05000*		*92*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0478*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Toluene-d8	*0.0522*		mg/kg wet	*0.05000*		*104*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
1,1,1-Trichloroethane	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,1,2,2-Tetrachloroethane	0.0468	0.0050	mg/kg wet	0.05000		94	70-130			
1,1,2-Trichloroethane	0.0482	0.0050	mg/kg wet	0.05000		96	70-130			
1,1-Dichloroethane	0.0511	0.0050	mg/kg wet	0.05000		102	70-130			
1,1-Dichloroethene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130			
1,1-Dichloropropene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
1,2,3-Trichlorobenzene	0.0575	0.0050	mg/kg wet	0.05000		115	70-130			
1,2,3-Trichloropropane	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
1,2,4-Trichlorobenzene	0.0589	0.0050	mg/kg wet	0.05000		118	70-130			
1,2,4-Trimethylbenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130			
1,2-Dibromo-3-Chloropropane	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
1,2-Dibromoethane	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
1,2-Dichlorobenzene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130			
1,2-Dichloroethane	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
1,2-Dichloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
1,3,5-Trimethylbenzene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
1,3-Dichlorobenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
1,3-Dichloropropane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,4-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,4-Dioxane	1.03	0.0800	mg/kg wet	1.000		103	70-130			
2,2-Dichloropropane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
2-Butanone	0.269	0.0500	mg/kg wet	0.2500		108	70-130			
2-Chlorotoluene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
2-Hexanone	0.287	0.0500	mg/kg wet	0.2500		115	70-130			
4-Chlorotoluene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
4-Isopropyltoluene	0.0518	0.0050	mg/kg wet	0.05000		104	70-130			
4-Methyl-2-Pentanone	0.263	0.0500	mg/kg wet	0.2500		105	70-130			
Acetone	0.293	0.0500	mg/kg wet	0.2500		117	70-130			
Benzene	0.0512	0.0050	mg/kg wet	0.05000		102	70-130			
Bromobenzene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Bromochloromethane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Bromodichloromethane	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Bromoform	0.0490	0.0050	mg/kg wet	0.05000		98	70-130			
Bromomethane	0.0619	0.0100	mg/kg wet	0.05000		124	70-130			
Carbon Disulfide	0.0593	0.0050	mg/kg wet	0.05000		119	70-130			
Carbon Tetrachloride	0.0550	0.0050	mg/kg wet	0.05000		110	70-130			
Chlorobenzene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130			
Chloroethane	0.0559	0.0100	mg/kg wet	0.05000		112	70-130			
Chloroform	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
Chloromethane	0.0454	0.0100	mg/kg wet	0.05000		91	70-130			
cis-1,2-Dichloroethene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
cis-1,3-Dichloropropene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130			
Dibromochloromethane	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
Dibromomethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
Dichlorodifluoromethane	0.0463	0.0100	mg/kg wet	0.05000		93	70-130			
Diethyl Ether	0.0573	0.0050	mg/kg wet	0.05000		115	70-130			
Di-isopropyl ether	0.0535	0.0050	mg/kg wet	0.05000		107	70-130			
Ethyl tertiary-butyl ether	0.0544	0.0050	mg/kg wet	0.05000		109	70-130			
Ethylbenzene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Hexachlorobutadiene	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Isopropylbenzene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Methyl tert-Butyl Ether	0.0553	0.0050	mg/kg wet	0.05000		111	70-130			
Methylene Chloride	0.0480	0.0250	mg/kg wet	0.05000		96	70-130			
Naphthalene	0.0520	0.0050	mg/kg wet	0.05000		104	70-130			
n-Butylbenzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
n-Propylbenzene	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
sec-Butylbenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
Styrene	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
tert-Butylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130			
Tertiary-amyl methyl ether	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
Tetrachloroethene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Tetrahydrofuran	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
Toluene	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
trans-1,2-Dichloroethene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
trans-1,3-Dichloropropene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Trichloroethene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Trichlorofluoromethane	0.0534	0.0050	mg/kg wet	0.05000		107	70-130			
Vinyl Chloride	0.0529	0.0100	mg/kg wet	0.05000		106	70-130			
Xylene O	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
Xylene P,M	0.108	0.0100	mg/kg wet	0.1000		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0492*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0507*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130	1	20	
1,1,1-Trichloroethane	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	3	20	
1,1,2,2-Tetrachloroethane	0.0467	0.0050	mg/kg wet	0.05000		93	70-130	0.3	20	
1,1,2-Trichloroethane	0.0472	0.0050	mg/kg wet	0.05000		94	70-130	2	20	
1,1-Dichloroethane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130	2	20	
1,1-Dichloroethene	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	3	20	
1,1-Dichloropropene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2,3-Trichlorobenzene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
1,2,3-Trichloropropane	0.0489	0.0050	mg/kg wet	0.05000		98	70-130	0.8	20	
1,2,4-Trichlorobenzene	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	4	20	
1,2,4-Trimethylbenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
1,2-Dibromo-3-Chloropropane	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	2	20	
1,2-Dibromoethane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	0.8	20	
1,2-Dichlorobenzene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130	2	20	
1,2-Dichloroethane	0.0473	0.0050	mg/kg wet	0.05000		95	70-130	3	20	
1,2-Dichloropropane	0.0483	0.0050	mg/kg wet	0.05000		97	70-130	2	20	
1,3,5-Trimethylbenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	2	20	
1,3-Dichlorobenzene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130	3	20	
1,3-Dichloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	1	20	
1,4-Dichlorobenzene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130	0.6	20	
1,4-Dioxane	1.03	0.0800	mg/kg wet	1.000		103	70-130	0.2	20	
2,2-Dichloropropane	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	3	20	
2-Butanone	0.264	0.0500	mg/kg wet	0.2500		106	70-130	2	20	
2-Chlorotoluene	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	1	20	
2-Hexanone	0.284	0.0500	mg/kg wet	0.2500		114	70-130	1	20	
4-Chlorotoluene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	1	20	
4-Isopropyltoluene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
4-Methyl-2-Pentanone	0.261	0.0500	mg/kg wet	0.2500		105	70-130	0.5	20	
Acetone	0.255	0.0500	mg/kg wet	0.2500		102	70-130	14	20	
Benzene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130	3	20	
Bromobenzene	0.0496	0.0050	mg/kg wet	0.05000		99	70-130	0.7	20	
Bromochloromethane	0.0485	0.0050	mg/kg wet	0.05000		97	70-130	2	20	
Bromodichloromethane	0.0518	0.0050	mg/kg wet	0.05000		104	70-130	3	20	
Bromoform	0.0488	0.0050	mg/kg wet	0.05000		98	70-130	0.5	20	
Bromomethane	0.0593	0.0100	mg/kg wet	0.05000		119	70-130	4	20	
Carbon Disulfide	0.0580	0.0050	mg/kg wet	0.05000		116	70-130	2	20	
Carbon Tetrachloride	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	4	20	
Chlorobenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130	1	20	
Chloroethane	0.0551	0.0100	mg/kg wet	0.05000		110	70-130	1	20	
Chloroform	0.0493	0.0050	mg/kg wet	0.05000		99	70-130	2	20	
Chloromethane	0.0457	0.0100	mg/kg wet	0.05000		91	70-130	0.7	20	
cis-1,2-Dichloroethene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	2	20	
cis-1,3-Dichloropropene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	3	20	
Dibromochloromethane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
Dibromomethane	0.0492	0.0050	mg/kg wet	0.05000		98	70-130	2	20	
Dichlorodifluoromethane	0.0446	0.0100	mg/kg wet	0.05000		89	70-130	4	20	
Diethyl Ether	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	1	20	
Di-isopropyl ether	0.0522	0.0050	mg/kg wet	0.05000		104	70-130	2	20	
Ethyl tertiary-butyl ether	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	2	20	
Ethylbenzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	1	20	
Hexachlorobutadiene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	3	20	
Isopropylbenzene	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	1	20	
Methyl tert-Butyl Ether	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	0.9	20	
Methylene Chloride	0.0471	0.0250	mg/kg wet	0.05000		94	70-130	2	20	
Naphthalene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	1	20	
n-Butylbenzene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	1	20	
n-Propylbenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	2	20	
sec-Butylbenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130	1	20	
Styrene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	1	20	
tert-Butylbenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	1	20	
Tertiary-amyl methyl ether	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	1	20	
Tetrachloroethene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130	0.4	20	
Tetrahydrofuran	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	1	20	
Toluene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	3	20	
trans-1,2-Dichloroethene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130	3	20	
trans-1,3-Dichloropropene	0.0488	0.0050	mg/kg wet	0.05000		98	70-130	2	20	
Trichloroethene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130	3	20	
Trichlorofluoromethane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130	7	20	
Vinyl Chloride	0.0523	0.0100	mg/kg wet	0.05000		105	70-130	1	20	
Xylene O	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	3	20	
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130	1	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0485*		mg/kg wet	*0.05000*		*97*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11422 - 5035										
Surrogate: 4-Bromofluorobenzene	*0.0512*		mg/kg wet	*0.05000*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
Surrogate: Toluene-d8	*0.0500*		mg/kg wet	*0.05000*		*100*	*70-130*			
Batch DL11447 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.0800	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0573*		mg/kg wet	*0.05000*		*115*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0481*		mg/kg wet	*0.05000*		*96*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0521*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: Toluene-d8	*0.0493*		mg/kg wet	*0.05000*		*99*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0475	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,1-Trichloroethane	0.0477	0.0050	mg/kg wet	0.05000		95	70-130			
1,1,2,2-Tetrachloroethane	0.0453	0.0050	mg/kg wet	0.05000		91	70-130			
1,1,2-Trichloroethane	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
1,1-Dichloroethane	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
1,1-Dichloroethene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
1,1-Dichloropropene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
1,2,3-Trichlorobenzene	0.0456	0.0050	mg/kg wet	0.05000		91	70-130			

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Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
1,2,3-Trichloropropane	0.0417	0.0050	mg/kg wet	0.05000		83	70-130			
1,2,4-Trichlorobenzene	0.0452	0.0050	mg/kg wet	0.05000		90	70-130			
1,2,4-Trimethylbenzene	0.0494	0.0050	mg/kg wet	0.05000		99	70-130			
1,2-Dibromo-3-Chloropropane	0.0332	0.0050	mg/kg wet	0.05000		66	70-130			B-
1,2-Dibromoethane	0.0459	0.0050	mg/kg wet	0.05000		92	70-130			
1,2-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,2-Dichloroethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichloropropane	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
1,3,5-Trimethylbenzene	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,3-Dichlorobenzene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
1,3-Dichloropropane	0.0493	0.0050	mg/kg wet	0.05000		99	70-130			
1,4-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,4-Dioxane	0.833	0.0800	mg/kg wet	1.000		83	70-130			
2,2-Dichloropropane	0.0430	0.0050	mg/kg wet	0.05000		86	70-130			
2-Butanone	0.291	0.0500	mg/kg wet	0.2500		116	70-130			
2-Chlorotoluene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
2-Hexanone	0.247	0.0500	mg/kg wet	0.2500		99	70-130			
4-Chlorotoluene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
4-Isopropyltoluene	0.0483	0.0050	mg/kg wet	0.05000		97	70-130			
4-Methyl-2-Pentanone	0.234	0.0500	mg/kg wet	0.2500		94	70-130			
Acetone	0.398	0.0500	mg/kg wet	0.2500		159	70-130			B+
Benzene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
Bromobenzene	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
Bromochloromethane	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Bromodichloromethane	0.0543	0.0050	mg/kg wet	0.05000		109	70-130			
Bromoform	0.0403	0.0050	mg/kg wet	0.05000		81	70-130			
Bromomethane	0.0411	0.0100	mg/kg wet	0.05000		82	70-130			
Carbon Disulfide	0.0527	0.0050	mg/kg wet	0.05000		105	70-130			
Carbon Tetrachloride	0.0487	0.0050	mg/kg wet	0.05000		97	70-130			
Chlorobenzene	0.0495	0.0050	mg/kg wet	0.05000		99	70-130			
Chloroethane	0.0532	0.0100	mg/kg wet	0.05000		106	70-130			
Chloroform	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
Chloromethane	0.0431	0.0100	mg/kg wet	0.05000		86	70-130			
cis-1,2-Dichloroethene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
cis-1,3-Dichloropropene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130			
Dibromochloromethane	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
Dibromomethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
Dichlorodifluoromethane	0.0536	0.0100	mg/kg wet	0.05000		107	70-130			
Diethyl Ether	0.0520	0.0050	mg/kg wet	0.05000		104	70-130			
Di-isopropyl ether	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
Ethyl tertiary-butyl ether	0.0438	0.0050	mg/kg wet	0.05000		88	70-130			
Ethylbenzene	0.0489	0.0050	mg/kg wet	0.05000		98	70-130			
Hexachlorobutadiene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
Isopropylbenzene	0.0496	0.0050	mg/kg wet	0.05000		99	70-130			
Methyl tert-Butyl Ether	0.0416	0.0050	mg/kg wet	0.05000		83	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Methylene Chloride	0.0547	0.0250	mg/kg wet	0.05000		109	70-130			
Naphthalene	0.0360	0.0050	mg/kg wet	0.05000		72	70-130			
n-Butylbenzene	0.0480	0.0050	mg/kg wet	0.05000		96	70-130			
n-Propylbenzene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130			
sec-Butylbenzene	0.0485	0.0050	mg/kg wet	0.05000		97	70-130			
Styrene	0.0481	0.0050	mg/kg wet	0.05000		96	70-130			
tert-Butylbenzene	0.0492	0.0050	mg/kg wet	0.05000		98	70-130			
Tertiary-amyl methyl ether	0.0394	0.0050	mg/kg wet	0.05000		79	70-130			
Tetrachloroethene	0.0677	0.0050	mg/kg wet	0.05000		135	70-130			B+
Tetrahydrofuran	0.0360	0.0050	mg/kg wet	0.05000		72	70-130			
Toluene	0.0510	0.0050	mg/kg wet	0.05000		102	70-130			
trans-1,2-Dichloroethene	0.0522	0.0050	mg/kg wet	0.05000		104	70-130			
trans-1,3-Dichloropropene	0.0429	0.0050	mg/kg wet	0.05000		86	70-130			
Trichloroethene	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Trichlorofluoromethane	0.0524	0.0050	mg/kg wet	0.05000		105	70-130			
Vinyl Chloride	0.0489	0.0100	mg/kg wet	0.05000		98	70-130			
Xylene O	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
Xylene P,M	0.102	0.0100	mg/kg wet	0.1000		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0522*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0492*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0524*		mg/kg wet	*0.05000*		*105*	*70-130*			
Surrogate: Toluene-d8	*0.0498*		mg/kg wet	*0.05000*		*100*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0490	0.0050	mg/kg wet	0.05000		98	70-130	3	20	
1,1,1-Trichloroethane	0.0510	0.0050	mg/kg wet	0.05000		102	70-130	7	20	
1,1,2,2-Tetrachloroethane	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	7	20	
1,1,2-Trichloroethane	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,1-Dichloroethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
1,1-Dichloroethene	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	7	20	
1,1-Dichloropropene	0.0535	0.0050	mg/kg wet	0.05000		107	70-130	10	20	
1,2,3-Trichlorobenzene	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	6	20	
1,2,3-Trichloropropane	0.0452	0.0050	mg/kg wet	0.05000		90	70-130	8	20	
1,2,4-Trichlorobenzene	0.0475	0.0050	mg/kg wet	0.05000		95	70-130	5	20	
1,2,4-Trimethylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dibromo-3-Chloropropane	0.0378	0.0050	mg/kg wet	0.05000		76	70-130	13	20	
1,2-Dibromoethane	0.0486	0.0050	mg/kg wet	0.05000		97	70-130	6	20	
1,2-Dichlorobenzene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	4	20	
1,2-Dichloroethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,2-Dichloropropane	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	4	20	
1,3,5-Trimethylbenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
1,3-Dichlorobenzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
1,3-Dichloropropane	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	5	20	
1,4-Dichlorobenzene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
1,4-Dioxane	0.971	0.0800	mg/kg wet	1.000		97	70-130	15	20	
2,2-Dichloropropane	0.0457	0.0050	mg/kg wet	0.05000		91	70-130	6	20	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
2-Butanone	0.310	0.0500	mg/kg wet	0.2500		124	70-130	7	20	
2-Chlorotoluene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130	4	20	
2-Hexanone	0.269	0.0500	mg/kg wet	0.2500		108	70-130	9	20	
4-Chlorotoluene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	3	20	
4-Isopropyltoluene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	5	20	
4-Methyl-2-Pentanone	0.253	0.0500	mg/kg wet	0.2500		101	70-130	8	20	
Acetone	0.436	0.0500	mg/kg wet	0.2500		174	70-130	9	20	B+
Benzene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130	5	20	
Bromobenzene	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	3	20	
Bromochloromethane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	4	20	
Bromodichloromethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130	4	20	
Bromoform	0.0428	0.0050	mg/kg wet	0.05000		86	70-130	6	20	
Bromomethane	0.0426	0.0100	mg/kg wet	0.05000		85	70-130	4	20	
Carbon Disulfide	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	7	20	
Carbon Tetrachloride	0.0519	0.0050	mg/kg wet	0.05000		104	70-130	6	20	
Chlorobenzene	0.0517	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
Chloroethane	0.0560	0.0100	mg/kg wet	0.05000		112	70-130	5	20	
Chloroform	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	5	20	
Chloromethane	0.0451	0.0100	mg/kg wet	0.05000		90	70-130	5	20	
cis-1,2-Dichloroethene	0.0558	0.0050	mg/kg wet	0.05000		112	70-130	5	20	
cis-1,3-Dichloropropene	0.0484	0.0050	mg/kg wet	0.05000		97	70-130	4	20	
Dibromochloromethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
Dibromomethane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	5	20	
Dichlorodifluoromethane	0.0567	0.0100	mg/kg wet	0.05000		113	70-130	6	20	
Diethyl Ether	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	6	20	
Di-isopropyl ether	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	4	20	
Ethyl tertiary-butyl ether	0.0453	0.0050	mg/kg wet	0.05000		91	70-130	4	20	
Ethylbenzene	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	5	20	
Hexachlorobutadiene	0.0504	0.0050	mg/kg wet	0.05000		101	70-130	5	20	
Isopropylbenzene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	6	20	
Methyl tert-Butyl Ether	0.0441	0.0050	mg/kg wet	0.05000		88	70-130	6	20	
Methylene Chloride	0.0570	0.0250	mg/kg wet	0.05000		114	70-130	4	20	
Naphthalene	0.0394	0.0050	mg/kg wet	0.05000		79	70-130	9	20	
n-Butylbenzene	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	6	20	
n-Propylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	5	20	
sec-Butylbenzene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130	6	20	
Styrene	0.0501	0.0050	mg/kg wet	0.05000		100	70-130	4	20	
tert-Butylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130	5	20	
Tertiary-amyl methyl ether	0.0414	0.0050	mg/kg wet	0.05000		83	70-130	5	20	
Tetrachloroethene	0.0744	0.0050	mg/kg wet	0.05000		149	70-130	9	20	B+
Tetrahydrofuran	0.0415	0.0050	mg/kg wet	0.05000		83	70-130	14	20	
Toluene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	4	20	
trans-1,2-Dichloroethene	0.0555	0.0050	mg/kg wet	0.05000		111	70-130	6	20	
trans-1,3-Dichloropropene	0.0446	0.0050	mg/kg wet	0.05000		89	70-130	4	20	
Trichloroethene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	6	20	

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Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11447 - 5035										
Trichlorofluoromethane	0.0557	0.0050	mg/kg wet	0.05000		111	70-130	6	20	
Vinyl Chloride	0.0521	0.0100	mg/kg wet	0.05000		104	70-130	6	20	
Xylene O	0.0528	0.0050	mg/kg wet	0.05000		106	70-130	4	20	
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130	5	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0521*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0493*		mg/kg wet	*0.05000*		*99*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0517*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0499*		mg/kg wet	*0.05000*		*100*	*70-130*			
Batch DL11522 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,1-Trichloroethane	ND	0.0050	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.0050	mg/kg wet							
1,1,2-Trichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethane	ND	0.0050	mg/kg wet							
1,1-Dichloroethene	ND	0.0050	mg/kg wet							
1,1-Dichloropropene	ND	0.0050	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,3-Trichloropropane	ND	0.0050	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.0050	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	0.0050	mg/kg wet							
1,2-Dibromoethane	ND	0.0050	mg/kg wet							
1,2-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,2-Dichloroethane	ND	0.0050	mg/kg wet							
1,2-Dichloropropane	ND	0.0050	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.0050	mg/kg wet							
1,3-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,3-Dichloropropane	ND	0.0050	mg/kg wet							
1,4-Dichlorobenzene	ND	0.0050	mg/kg wet							
1,4-Dioxane	ND	0.0800	mg/kg wet							
2,2-Dichloropropane	ND	0.0050	mg/kg wet							
2-Butanone	ND	0.0500	mg/kg wet							
2-Chlorotoluene	ND	0.0050	mg/kg wet							
2-Hexanone	ND	0.0500	mg/kg wet							
4-Chlorotoluene	ND	0.0050	mg/kg wet							
4-Isopropyltoluene	ND	0.0050	mg/kg wet							
4-Methyl-2-Pentanone	ND	0.0500	mg/kg wet							
Acetone	ND	0.0500	mg/kg wet							
Benzene	ND	0.0050	mg/kg wet							
Bromobenzene	ND	0.0050	mg/kg wet							
Bromochloromethane	ND	0.0050	mg/kg wet							
Bromodichloromethane	ND	0.0050	mg/kg wet							
Bromoform	ND	0.0050	mg/kg wet							
Bromomethane	ND	0.0100	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11522 - 5035										
Carbon Disulfide	ND	0.0050	mg/kg wet							
Carbon Tetrachloride	ND	0.0050	mg/kg wet							
Chlorobenzene	ND	0.0050	mg/kg wet							
Chloroethane	ND	0.0100	mg/kg wet							
Chloroform	ND	0.0050	mg/kg wet							
Chloromethane	ND	0.0100	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Dibromochloromethane	ND	0.0050	mg/kg wet							
Dibromomethane	ND	0.0050	mg/kg wet							
Dichlorodifluoromethane	ND	0.0100	mg/kg wet							
Diethyl Ether	ND	0.0050	mg/kg wet							
Di-isopropyl ether	ND	0.0050	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.0050	mg/kg wet							
Ethylbenzene	ND	0.0050	mg/kg wet							
Hexachlorobutadiene	ND	0.0050	mg/kg wet							
Isopropylbenzene	ND	0.0050	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.0050	mg/kg wet							
Methylene Chloride	ND	0.0250	mg/kg wet							
Naphthalene	ND	0.0050	mg/kg wet							
n-Butylbenzene	ND	0.0050	mg/kg wet							
n-Propylbenzene	ND	0.0050	mg/kg wet							
sec-Butylbenzene	ND	0.0050	mg/kg wet							
Styrene	ND	0.0050	mg/kg wet							
tert-Butylbenzene	ND	0.0050	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.0050	mg/kg wet							
Tetrachloroethene	ND	0.0050	mg/kg wet							
Tetrahydrofuran	ND	0.0050	mg/kg wet							
Toluene	ND	0.0050	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.0050	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.0050	mg/kg wet							
Trichloroethene	ND	0.0050	mg/kg wet							
Trichlorofluoromethane	ND	0.0050	mg/kg wet							
Vinyl Chloride	ND	0.0100	mg/kg wet							
Xylene O	ND	0.0050	mg/kg wet							
Xylene P,M	ND	0.0100	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*0.0539*		mg/kg wet	*0.05000*		*108*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0454*		mg/kg wet	*0.05000*		*91*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0488*		mg/kg wet	*0.05000*		*98*	*70-130*			
Surrogate: Toluene-d8	*0.0517*		mg/kg wet	*0.05000*		*103*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
1,1,1-Trichloroethane	0.0537	0.0050	mg/kg wet	0.05000		107	70-130			
1,1,2,2-Tetrachloroethane	0.0484	0.0050	mg/kg wet	0.05000		97	70-130			
1,1,2-Trichloroethane	0.0492	0.0050	mg/kg wet	0.05000		98	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11522 - 5035										
1,1-Dichloroethane	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
1,1-Dichloroethene	0.0570	0.0050	mg/kg wet	0.05000		114	70-130			
1,1-Dichloropropene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
1,2,3-Trichlorobenzene	0.0545	0.0050	mg/kg wet	0.05000		109	70-130			
1,2,3-Trichloropropane	0.0497	0.0050	mg/kg wet	0.05000		99	70-130			
1,2,4-Trichlorobenzene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
1,2,4-Trimethylbenzene	0.0531	0.0050	mg/kg wet	0.05000		106	70-130			
1,2-Dibromo-3-Chloropropane	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
1,2-Dibromoethane	0.0492	0.0050	mg/kg wet	0.05000		98	70-130			
1,2-Dichlorobenzene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
1,2-Dichloroethane	0.0502	0.0050	mg/kg wet	0.05000		100	70-130			
1,2-Dichloropropane	0.0505	0.0050	mg/kg wet	0.05000		101	70-130			
1,3,5-Trimethylbenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130			
1,3-Dichlorobenzene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
1,3-Dichloropropane	0.0500	0.0050	mg/kg wet	0.05000		100	70-130			
1,4-Dichlorobenzene	0.0507	0.0050	mg/kg wet	0.05000		101	70-130			
1,4-Dioxane	0.989	0.0800	mg/kg wet	1.000		99	70-130			
2,2-Dichloropropane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
2-Butanone	0.270	0.0500	mg/kg wet	0.2500		108	70-130			
2-Chlorotoluene	0.0523	0.0050	mg/kg wet	0.05000		105	70-130			
2-Hexanone	0.287	0.0500	mg/kg wet	0.2500		115	70-130			
4-Chlorotoluene	0.0525	0.0050	mg/kg wet	0.05000		105	70-130			
4-Isopropyltoluene	0.0514	0.0050	mg/kg wet	0.05000		103	70-130			
4-Methyl-2-Pentanone	0.264	0.0500	mg/kg wet	0.2500		106	70-130			
Acetone	0.269	0.0500	mg/kg wet	0.2500		108	70-130			
Benzene	0.0519	0.0050	mg/kg wet	0.05000		104	70-130			
Bromobenzene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
Bromochloromethane	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
Bromodichloromethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
Bromoform	0.0530	0.0050	mg/kg wet	0.05000		106	70-130			
Bromomethane	0.0717	0.0100	mg/kg wet	0.05000		143	70-130			B+
Carbon Disulfide	0.0607	0.0050	mg/kg wet	0.05000		121	70-130			
Carbon Tetrachloride	0.0591	0.0050	mg/kg wet	0.05000		118	70-130			
Chlorobenzene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
Chloroethane	0.0641	0.0100	mg/kg wet	0.05000		128	70-130			
Chloroform	0.0521	0.0050	mg/kg wet	0.05000		104	70-130			
Chloromethane	0.0544	0.0100	mg/kg wet	0.05000		109	70-130			
cis-1,2-Dichloroethene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
cis-1,3-Dichloropropene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
Dibromochloromethane	0.0563	0.0050	mg/kg wet	0.05000		113	70-130			
Dibromomethane	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Dichlorodifluoromethane	0.0476	0.0100	mg/kg wet	0.05000		95	70-130			
Diethyl Ether	0.0584	0.0050	mg/kg wet	0.05000		117	70-130			
Di-isopropyl ether	0.0541	0.0050	mg/kg wet	0.05000		108	70-130			
Ethyl tertiary-butyl ether	0.0547	0.0050	mg/kg wet	0.05000		109	70-130			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11522 - 5035										
Ethylbenzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130			
Hexachlorobutadiene	0.0506	0.0050	mg/kg wet	0.05000		101	70-130			
Isopropylbenzene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130			
Methyl tert-Butyl Ether	0.0554	0.0050	mg/kg wet	0.05000		111	70-130			
Methylene Chloride	0.0501	0.0250	mg/kg wet	0.05000		100	70-130			
Naphthalene	0.0499	0.0050	mg/kg wet	0.05000		100	70-130			
n-Butylbenzene	0.0540	0.0050	mg/kg wet	0.05000		108	70-130			
n-Propylbenzene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
sec-Butylbenzene	0.0516	0.0050	mg/kg wet	0.05000		103	70-130			
Styrene	0.0536	0.0050	mg/kg wet	0.05000		107	70-130			
tert-Butylbenzene	0.0539	0.0050	mg/kg wet	0.05000		108	70-130			
Tertiary-amyl methyl ether	0.0540	0.0050	mg/kg wet	0.05000		108	70-130			
Tetrachloroethene	0.0440	0.0050	mg/kg wet	0.05000		88	70-130			
Tetrahydrofuran	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Toluene	0.0520	0.0050	mg/kg wet	0.05000		104	70-130			
trans-1,2-Dichloroethene	0.0546	0.0050	mg/kg wet	0.05000		109	70-130			
trans-1,3-Dichloropropene	0.0509	0.0050	mg/kg wet	0.05000		102	70-130			
Trichloroethene	0.0498	0.0050	mg/kg wet	0.05000		100	70-130			
Trichlorofluoromethane	0.0565	0.0050	mg/kg wet	0.05000		113	70-130			
Vinyl Chloride	0.0617	0.0100	mg/kg wet	0.05000		123	70-130			
Xylene O	0.0515	0.0050	mg/kg wet	0.05000		103	70-130			
Xylene P,M	0.107	0.0100	mg/kg wet	0.1000		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0503*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0504*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0520*		mg/kg wet	*0.05000*		*104*	*70-130*			
Surrogate: Toluene-d8	*0.0496*		mg/kg wet	*0.05000*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	0.0562	0.0050	mg/kg wet	0.05000		112	70-130	6	20	
1,1,1-Trichloroethane	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	0.7	20	
1,1,2,2-Tetrachloroethane	0.0508	0.0050	mg/kg wet	0.05000		102	70-130	5	20	
1,1,2-Trichloroethane	0.0513	0.0050	mg/kg wet	0.05000		103	70-130	4	20	
1,1-Dichloroethane	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	0.8	20	
1,1-Dichloroethene	0.0583	0.0050	mg/kg wet	0.05000		117	70-130	2	20	
1,1-Dichloropropene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130	0.8	20	
1,2,3-Trichlorobenzene	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	5	20	
1,2,3-Trichloropropane	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	6	20	
1,2,4-Trichlorobenzene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	3	20	
1,2,4-Trimethylbenzene	0.0560	0.0050	mg/kg wet	0.05000		112	70-130	5	20	
1,2-Dibromo-3-Chloropropane	0.0541	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
1,2-Dibromoethane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	6	20	
1,2-Dichlorobenzene	0.0537	0.0050	mg/kg wet	0.05000		107	70-130	5	20	
1,2-Dichloroethane	0.0506	0.0050	mg/kg wet	0.05000		101	70-130	0.8	20	
1,2-Dichloropropane	0.0512	0.0050	mg/kg wet	0.05000		102	70-130	1	20	
1,3,5-Trimethylbenzene	0.0556	0.0050	mg/kg wet	0.05000		111	70-130	4	20	
1,3-Dichlorobenzene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	4	20	

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Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11522 - 5035										
1,3-Dichloropropane	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	5	20	
1,4-Dichlorobenzene	0.0533	0.0050	mg/kg wet	0.05000		107	70-130	5	20	
1,4-Dioxane	1.06	0.0800	mg/kg wet	1.000		106	70-130	7	20	
2,2-Dichloropropane	0.0549	0.0050	mg/kg wet	0.05000		110	70-130	0.9	20	
2-Butanone	0.270	0.0500	mg/kg wet	0.2500		108	70-130	0.2	20	
2-Chlorotoluene	0.0548	0.0050	mg/kg wet	0.05000		110	70-130	5	20	
2-Hexanone	0.285	0.0500	mg/kg wet	0.2500		114	70-130	0.7	20	
4-Chlorotoluene	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	5	20	
4-Isopropyltoluene	0.0538	0.0050	mg/kg wet	0.05000		108	70-130	4	20	
4-Methyl-2-Pentanone	0.274	0.0500	mg/kg wet	0.2500		110	70-130	4	20	
Acetone	0.265	0.0500	mg/kg wet	0.2500		106	70-130	2	20	
Benzene	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
Bromobenzene	0.0532	0.0050	mg/kg wet	0.05000		106	70-130	7	20	
Bromochloromethane	0.0514	0.0050	mg/kg wet	0.05000		103	70-130	2	20	
Bromodichloromethane	0.0574	0.0050	mg/kg wet	0.05000		115	70-130	2	20	
Bromoform	0.0552	0.0050	mg/kg wet	0.05000		110	70-130	4	20	
Bromomethane	0.0694	0.0100	mg/kg wet	0.05000		139	70-130	3	20	B+
Carbon Disulfide	0.0609	0.0050	mg/kg wet	0.05000		122	70-130	0.3	20	
Carbon Tetrachloride	0.0588	0.0050	mg/kg wet	0.05000		118	70-130	0.5	20	
Chlorobenzene	0.0521	0.0050	mg/kg wet	0.05000		104	70-130	5	20	
Chloroethane	0.0636	0.0100	mg/kg wet	0.05000		127	70-130	0.8	20	
Chloroform	0.0526	0.0050	mg/kg wet	0.05000		105	70-130	1	20	
Chloromethane	0.0524	0.0100	mg/kg wet	0.05000		105	70-130	4	20	
cis-1,2-Dichloroethene	0.0544	0.0050	mg/kg wet	0.05000		109	70-130	1	20	
cis-1,3-Dichloropropene	0.0573	0.0050	mg/kg wet	0.05000		115	70-130	3	20	
Dibromochloromethane	0.0590	0.0050	mg/kg wet	0.05000		118	70-130	5	20	
Dibromomethane	0.0525	0.0050	mg/kg wet	0.05000		105	70-130	2	20	
Dichlorodifluoromethane	0.0472	0.0100	mg/kg wet	0.05000		94	70-130	0.8	20	
Diethyl Ether	0.0599	0.0050	mg/kg wet	0.05000		120	70-130	3	20	
Di-isopropyl ether	0.0550	0.0050	mg/kg wet	0.05000		110	70-130	2	20	
Ethyl tertiary-butyl ether	0.0561	0.0050	mg/kg wet	0.05000		112	70-130	3	20	
Ethylbenzene	0.0551	0.0050	mg/kg wet	0.05000		110	70-130	5	20	
Hexachlorobutadiene	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	4	20	
Isopropylbenzene	0.0564	0.0050	mg/kg wet	0.05000		113	70-130	6	20	
Methyl tert-Butyl Ether	0.0572	0.0050	mg/kg wet	0.05000		114	70-130	3	20	
Methylene Chloride	0.0506	0.0250	mg/kg wet	0.05000		101	70-130	0.9	20	
Naphthalene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	6	20	
n-Butylbenzene	0.0566	0.0050	mg/kg wet	0.05000		113	70-130	5	20	
n-Propylbenzene	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	5	20	
sec-Butylbenzene	0.0542	0.0050	mg/kg wet	0.05000		108	70-130	5	20	
Styrene	0.0563	0.0050	mg/kg wet	0.05000		113	70-130	5	20	
tert-Butylbenzene	0.0568	0.0050	mg/kg wet	0.05000		114	70-130	5	20	
Tertiary-amyl methyl ether	0.0560	0.0050	mg/kg wet	0.05000		112	70-130	4	20	
Tetrachloroethene	0.0464	0.0050	mg/kg wet	0.05000		93	70-130	5	20	
Tetrahydrofuran	0.0527	0.0050	mg/kg wet	0.05000		105	70-130	2	20	

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Low Level										
Batch DL11522 - 5035										
Toluene	0.0529	0.0050	mg/kg wet	0.05000		106	70-130	2	20	
trans-1,2-Dichloroethene	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	1	20	
trans-1,3-Dichloropropene	0.0530	0.0050	mg/kg wet	0.05000		106	70-130	4	20	
Trichloroethene	0.0503	0.0050	mg/kg wet	0.05000		101	70-130	1	20	
Trichlorofluoromethane	0.0554	0.0050	mg/kg wet	0.05000		111	70-130	2	20	
Vinyl Chloride	0.0622	0.0100	mg/kg wet	0.05000		124	70-130	0.8	20	
Xylene O	0.0540	0.0050	mg/kg wet	0.05000		108	70-130	5	20	
Xylene P,M	0.111	0.0100	mg/kg wet	0.1000		111	70-130	4	20	
Surrogate: 1,2-Dichloroethane-d4	*0.0500*		mg/kg wet	*0.05000*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.0506*		mg/kg wet	*0.05000*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*0.0515*		mg/kg wet	*0.05000*		*103*	*70-130*			
Surrogate: Toluene-d8	*0.0498*		mg/kg wet	*0.05000*		*100*	*70-130*			
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
Blank										
1,1,1,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,1-Trichloroethane	ND	0.200	mg/kg wet							
1,1,2,2-Tetrachloroethane	ND	0.200	mg/kg wet							
1,1,2-Trichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethane	ND	0.200	mg/kg wet							
1,1-Dichloroethene	ND	0.200	mg/kg wet							
1,1-Dichloropropene	ND	0.200	mg/kg wet							
1,2,3-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,3-Trichloropropane	ND	0.200	mg/kg wet							
1,2,4-Trichlorobenzene	ND	0.200	mg/kg wet							
1,2,4-Trimethylbenzene	ND	0.200	mg/kg wet							
1,2-Dibromo-3-Chloropropane	ND	1.00	mg/kg wet							
1,2-Dibromoethane	ND	0.200	mg/kg wet							
1,2-Dichlorobenzene	ND	0.200	mg/kg wet							
1,2-Dichloroethane	ND	0.200	mg/kg wet							
1,2-Dichloropropane	ND	0.200	mg/kg wet							
1,3,5-Trimethylbenzene	ND	0.200	mg/kg wet							
1,3-Dichlorobenzene	ND	0.200	mg/kg wet							
1,3-Dichloropropane	ND	0.200	mg/kg wet							
1,4-Dichlorobenzene	ND	0.200	mg/kg wet							
1,4-Dioxane - Screen	ND	40.0	mg/kg wet							
2,2-Dichloropropane	ND	0.200	mg/kg wet							
2-Butanone	ND	1.00	mg/kg wet							
2-Chlorotoluene	ND	0.200	mg/kg wet							
2-Hexanone	ND	1.00	mg/kg wet							
4-Chlorotoluene	ND	0.200	mg/kg wet							
4-Isopropyltoluene	ND	0.200	mg/kg wet							
4-Methyl-2-Pentanone	ND	1.00	mg/kg wet							
Acetone	ND	1.00	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
Benzene	ND	0.200	mg/kg wet							
Bromobenzene	ND	0.200	mg/kg wet							
Bromochloromethane	ND	0.200	mg/kg wet							
Bromodichloromethane	ND	0.200	mg/kg wet							
Bromoform	ND	0.200	mg/kg wet							
Bromomethane	ND	0.200	mg/kg wet							
Carbon Disulfide	ND	0.200	mg/kg wet							
Carbon Tetrachloride	ND	0.200	mg/kg wet							
Chlorobenzene	ND	0.200	mg/kg wet							
Chloroethane	ND	0.200	mg/kg wet							
Chloroform	ND	0.200	mg/kg wet							
Chloromethane	ND	0.200	mg/kg wet							
cis-1,2-Dichloroethene	ND	0.200	mg/kg wet							
cis-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Dibromochloromethane	ND	0.200	mg/kg wet							
Dibromomethane	ND	0.200	mg/kg wet							
Dichlorodifluoromethane	ND	0.200	mg/kg wet							
Diethyl Ether	ND	0.200	mg/kg wet							
Di-isopropyl ether	ND	0.200	mg/kg wet							
Ethyl tertiary-butyl ether	ND	0.200	mg/kg wet							
Ethylbenzene	ND	0.200	mg/kg wet							
Hexachlorobutadiene	ND	0.200	mg/kg wet							
Isopropylbenzene	ND	0.200	mg/kg wet							
Methyl tert-Butyl Ether	ND	0.200	mg/kg wet							
Methylene Chloride	ND	0.400	mg/kg wet							
Naphthalene	ND	0.200	mg/kg wet							
n-Butylbenzene	ND	0.200	mg/kg wet							
n-Propylbenzene	ND	0.200	mg/kg wet							
sec-Butylbenzene	ND	0.200	mg/kg wet							
Styrene	ND	0.200	mg/kg wet							
tert-Butylbenzene	ND	0.200	mg/kg wet							
Tertiary-amyl methyl ether	ND	0.200	mg/kg wet							
Tetrachloroethene	ND	0.200	mg/kg wet							
Tetrahydrofuran	ND	1.00	mg/kg wet							
Toluene	ND	0.200	mg/kg wet							
trans-1,2-Dichloroethene	ND	0.200	mg/kg wet							
trans-1,3-Dichloropropene	ND	0.200	mg/kg wet							
Trichloroethene	ND	0.200	mg/kg wet							
Trichlorofluoromethane	ND	0.200	mg/kg wet							
Vinyl Chloride	ND	0.200	mg/kg wet							
Xylene O	ND	0.200	mg/kg wet							
Xylene P,M	ND	0.400	mg/kg wet							
Surrogate: 1,2-Dichloroethane-d4	*5.12*		mg/kg wet	*5.000*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.27*		mg/kg wet	*5.000*		*105*	*70-130*			
Surrogate: Dibromofluoromethane	*5.28*		mg/kg wet	*5.000*		*106*	*70-130*			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
Surrogate: Toluene-d8	*5.22*		mg/kg wet	*5.000*		*104*	*70-130*			
LCS										
1,1,1,2-Tetrachloroethane	1.94	0.200	mg/kg wet	2.000		97	70-130			
1,1,1-Trichloroethane	1.92	0.200	mg/kg wet	2.000		96	70-130			
1,1,2,2-Tetrachloroethane	1.97	0.200	mg/kg wet	2.000		99	70-130			
1,1,2-Trichloroethane	1.90	0.200	mg/kg wet	2.000		95	70-130			
1,1-Dichloroethane	1.94	0.200	mg/kg wet	2.000		97	70-130			
1,1-Dichloroethene	2.16	0.200	mg/kg wet	2.000		108	70-130			
1,1-Dichloropropene	1.99	0.200	mg/kg wet	2.000		99	70-130			
1,2,3-Trichlorobenzene	1.94	0.200	mg/kg wet	2.000		97	70-130			
1,2,3-Trichloropropane	1.90	0.200	mg/kg wet	2.000		95	70-130			
1,2,4-Trichlorobenzene	1.90	0.200	mg/kg wet	2.000		95	70-130			
1,2,4-Trimethylbenzene	1.85	0.200	mg/kg wet	2.000		93	70-130			
1,2-Dibromo-3-Chloropropane	1.92	1.00	mg/kg wet	2.000		96	70-130			
1,2-Dibromoethane	1.98	0.200	mg/kg wet	2.000		99	70-130			
1,2-Dichlorobenzene	1.94	0.200	mg/kg wet	2.000		97	70-130			
1,2-Dichloroethane	1.97	0.200	mg/kg wet	2.000		98	70-130			
1,2-Dichloropropane	2.03	0.200	mg/kg wet	2.000		102	70-130			
1,3,5-Trimethylbenzene	1.92	0.200	mg/kg wet	2.000		96	70-130			
1,3-Dichlorobenzene	1.83	0.200	mg/kg wet	2.000		92	70-130			
1,3-Dichloropropane	2.16	0.200	mg/kg wet	2.000		108	70-130			
1,4-Dichlorobenzene	1.87	0.200	mg/kg wet	2.000		94	70-130			
1,4-Dioxane - Screen	65.2	40.0	mg/kg wet	40.00		163	44-241			
2,2-Dichloropropane	1.95	0.200	mg/kg wet	2.000		97	70-130			
2-Butanone	11.8	1.00	mg/kg wet	10.00		118	70-130			
2-Chlorotoluene	1.95	0.200	mg/kg wet	2.000		98	70-130			
2-Hexanone	12.4	1.00	mg/kg wet	10.00		124	70-130			
4-Chlorotoluene	1.91	0.200	mg/kg wet	2.000		95	70-130			
4-Isopropyltoluene	1.88	0.200	mg/kg wet	2.000		94	70-130			
4-Methyl-2-Pentanone	11.0	1.00	mg/kg wet	10.00		110	70-130			
Acetone	13.5	1.00	mg/kg wet	10.00		135	70-130			B+
Benzene	2.04	0.200	mg/kg wet	2.000		102	70-130			
Bromobenzene	1.89	0.200	mg/kg wet	2.000		94	70-130			
Bromochloromethane	1.94	0.200	mg/kg wet	2.000		97	70-130			
Bromodichloromethane	2.02	0.200	mg/kg wet	2.000		101	70-130			
Bromoform	1.81	0.200	mg/kg wet	2.000		90	70-130			
Bromomethane	1.84	0.200	mg/kg wet	2.000		92	70-130			
Carbon Disulfide	2.12	0.200	mg/kg wet	2.000		106	70-130			
Carbon Tetrachloride	2.01	0.200	mg/kg wet	2.000		100	70-130			
Chlorobenzene	2.03	0.200	mg/kg wet	2.000		101	70-130			
Chloroethane	2.20	0.200	mg/kg wet	2.000		110	70-130			
Chloroform	1.95	0.200	mg/kg wet	2.000		98	70-130			
Chloromethane	1.66	0.200	mg/kg wet	2.000		83	70-130			
cis-1,2-Dichloroethene	2.00	0.200	mg/kg wet	2.000		100	70-130			

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
cis-1,3-Dichloropropene	1.97	0.200	mg/kg wet	2.000		99	70-130			
Dibromochloromethane	1.95	0.200	mg/kg wet	2.000		97	70-130			
Dibromomethane	1.87	0.200	mg/kg wet	2.000		94	70-130			
Dichlorodifluoromethane	1.67	0.200	mg/kg wet	2.000		83	70-130			
Diethyl Ether	2.15	0.200	mg/kg wet	2.000		107	70-130			
Di-isopropyl ether	2.05	0.200	mg/kg wet	2.000		103	70-130			
Ethyl tertiary-butyl ether	1.98	0.200	mg/kg wet	2.000		99	70-130			
Ethylbenzene	2.03	0.200	mg/kg wet	2.000		102	70-130			
Hexachlorobutadiene	2.02	0.200	mg/kg wet	2.000		101	70-130			
Isopropylbenzene	1.85	0.200	mg/kg wet	2.000		93	70-130			
Methyl tert-Butyl Ether	2.08	0.200	mg/kg wet	2.000		104	70-130			
Methylene Chloride	2.12	0.400	mg/kg wet	2.000		106	70-130			
Naphthalene	1.90	0.200	mg/kg wet	2.000		95	70-130			
n-Butylbenzene	1.93	0.200	mg/kg wet	2.000		96	70-130			
n-Propylbenzene	1.92	0.200	mg/kg wet	2.000		96	70-130			
sec-Butylbenzene	1.89	0.200	mg/kg wet	2.000		94	70-130			
Styrene	2.01	0.200	mg/kg wet	2.000		100	70-130			
tert-Butylbenzene	1.99	0.200	mg/kg wet	2.000		100	70-130			
Tertiary-amyl methyl ether	2.02	0.200	mg/kg wet	2.000		101	70-130			
Tetrachloroethene	1.53	0.200	mg/kg wet	2.000		76	70-130			
Tetrahydrofuran	2.16	1.00	mg/kg wet	2.000		108	70-130			
Toluene	1.95	0.200	mg/kg wet	2.000		98	70-130			
trans-1,2-Dichloroethene	2.00	0.200	mg/kg wet	2.000		100	70-130			
trans-1,3-Dichloropropene	1.83	0.200	mg/kg wet	2.000		92	70-130			
Trichloroethene	1.80	0.200	mg/kg wet	2.000		90	70-130			
Trichlorofluoromethane	2.05	0.200	mg/kg wet	2.000		102	70-130			
Vinyl Chloride	2.21	0.200	mg/kg wet	2.000		111	70-130			
Xylene O	1.96	0.200	mg/kg wet	2.000		98	70-130			
Xylene P,M	4.14	0.400	mg/kg wet	4.000		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	*5.09*		mg/kg wet	*5.000*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.20*		mg/kg wet	*5.000*		*104*	*70-130*			
Surrogate: Dibromofluoromethane	*5.06*		mg/kg wet	*5.000*		*101*	*70-130*			
Surrogate: Toluene-d8	*4.95*		mg/kg wet	*5.000*		*99*	*70-130*			
LCS Dup										
1,1,1,2-Tetrachloroethane	1.85	0.200	mg/kg wet	2.000		92	70-130	5	20	
1,1,1-Trichloroethane	1.92	0.200	mg/kg wet	2.000		96	70-130	0.3	20	
1,1,2,2-Tetrachloroethane	2.03	0.200	mg/kg wet	2.000		102	70-130	3	20	
1,1,2-Trichloroethane	1.96	0.200	mg/kg wet	2.000		98	70-130	3	20	
1,1-Dichloroethane	2.09	0.200	mg/kg wet	2.000		105	70-130	7	20	
1,1-Dichloroethene	2.13	0.200	mg/kg wet	2.000		107	70-130	1	20	
1,1-Dichloropropene	2.04	0.200	mg/kg wet	2.000		102	70-130	2	20	
1,2,3-Trichlorobenzene	1.95	0.200	mg/kg wet	2.000		97	70-130	0.5	20	
1,2,3-Trichloropropane	2.01	0.200	mg/kg wet	2.000		101	70-130	6	20	
1,2,4-Trichlorobenzene	1.96	0.200	mg/kg wet	2.000		98	70-130	3	20	
1,2,4-Trimethylbenzene	1.90	0.200	mg/kg wet	2.000		95	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
1,2-Dibromo-3-Chloropropane	1.80	1.00	mg/kg wet	2.000		90	70-130	7	20	
1,2-Dibromoethane	1.99	0.200	mg/kg wet	2.000		99	70-130	0.4	20	
1,2-Dichlorobenzene	2.01	0.200	mg/kg wet	2.000		100	70-130	4	20	
1,2-Dichloroethane	1.93	0.200	mg/kg wet	2.000		96	70-130	2	20	
1,2-Dichloropropane	2.01	0.200	mg/kg wet	2.000		100	70-130	1	20	
1,3,5-Trimethylbenzene	2.01	0.200	mg/kg wet	2.000		101	70-130	5	20	
1,3-Dichlorobenzene	1.94	0.200	mg/kg wet	2.000		97	70-130	6	20	
1,3-Dichloropropane	2.03	0.200	mg/kg wet	2.000		102	70-130	6	20	
1,4-Dichlorobenzene	1.95	0.200	mg/kg wet	2.000		98	70-130	4	20	
1,4-Dioxane - Screen	63.1	40.0	mg/kg wet	40.00		158	44-241	3	200	
2,2-Dichloropropane	2.03	0.200	mg/kg wet	2.000		102	70-130	4	20	
2-Butanone	12.1	1.00	mg/kg wet	10.00		121	70-130	3	20	
2-Chlorotoluene	2.04	0.200	mg/kg wet	2.000		102	70-130	4	20	
2-Hexanone	12.1	1.00	mg/kg wet	10.00		121	70-130	2	20	
4-Chlorotoluene	2.01	0.200	mg/kg wet	2.000		100	70-130	5	20	
4-Isopropyltoluene	1.99	0.200	mg/kg wet	2.000		99	70-130	5	20	
4-Methyl-2-Pentanone	11.0	1.00	mg/kg wet	10.00		110	70-130	0.1	20	
Acetone	13.9	1.00	mg/kg wet	10.00		139	70-130	2	20	B+
Benzene	2.06	0.200	mg/kg wet	2.000		103	70-130	1	20	
Bromobenzene	2.00	0.200	mg/kg wet	2.000		100	70-130	6	20	
Bromochloromethane	1.99	0.200	mg/kg wet	2.000		99	70-130	3	20	
Bromodichloromethane	1.97	0.200	mg/kg wet	2.000		99	70-130	2	20	
Bromoform	1.71	0.200	mg/kg wet	2.000		85	70-130	6	20	
Bromomethane	1.81	0.200	mg/kg wet	2.000		91	70-130	2	20	
Carbon Disulfide	2.23	0.200	mg/kg wet	2.000		112	70-130	5	20	
Carbon Tetrachloride	2.08	0.200	mg/kg wet	2.000		104	70-130	4	20	
Chlorobenzene	2.02	0.200	mg/kg wet	2.000		101	70-130	0.5	20	
Chloroethane	2.20	0.200	mg/kg wet	2.000		110	70-130	0.4	20	
Chloroform	2.05	0.200	mg/kg wet	2.000		102	70-130	5	20	
Chloromethane	1.82	0.200	mg/kg wet	2.000		91	70-130	9	20	
cis-1,2-Dichloroethene	2.12	0.200	mg/kg wet	2.000		106	70-130	6	20	
cis-1,3-Dichloropropene	1.99	0.200	mg/kg wet	2.000		100	70-130	0.8	20	
Dibromochloromethane	1.88	0.200	mg/kg wet	2.000		94	70-130	3	20	
Dibromomethane	1.97	0.200	mg/kg wet	2.000		99	70-130	5	20	
Dichlorodifluoromethane	1.69	0.200	mg/kg wet	2.000		84	70-130	1	20	
Diethyl Ether	2.18	0.200	mg/kg wet	2.000		109	70-130	1	20	
Di-isopropyl ether	2.08	0.200	mg/kg wet	2.000		104	70-130	1	20	
Ethyl tertiary-butyl ether	2.04	0.200	mg/kg wet	2.000		102	70-130	3	20	
Ethylbenzene	2.06	0.200	mg/kg wet	2.000		103	70-130	1	20	
Hexachlorobutadiene	1.93	0.200	mg/kg wet	2.000		97	70-130	4	20	
Isopropylbenzene	2.02	0.200	mg/kg wet	2.000		101	70-130	9	20	
Methyl tert-Butyl Ether	2.19	0.200	mg/kg wet	2.000		109	70-130	5	20	
Methylene Chloride	2.14	0.400	mg/kg wet	2.000		107	70-130	0.9	20	
Naphthalene	1.85	0.200	mg/kg wet	2.000		92	70-130	3	20	
n-Butylbenzene	1.96	0.200	mg/kg wet	2.000		98	70-130	2	20	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
5035/8260B Volatile Organic Compounds / Methanol										
Batch DL11629 - 5035										
n-Propylbenzene	2.04	0.200	mg/kg wet	2.000		102	70-130	6	20	
sec-Butylbenzene	1.93	0.200	mg/kg wet	2.000		97	70-130	2	20	
Styrene	1.91	0.200	mg/kg wet	2.000		96	70-130	5	20	
tert-Butylbenzene	2.03	0.200	mg/kg wet	2.000		102	70-130	2	20	
Tertiary-amyl methyl ether	2.10	0.200	mg/kg wet	2.000		105	70-130	4	20	
Tetrachloroethene	1.74	0.200	mg/kg wet	2.000		87	70-130	13	20	
Tetrahydrofuran	2.40	1.00	mg/kg wet	2.000		120	70-130	11	20	
Toluene	2.10	0.200	mg/kg wet	2.000		105	70-130	7	20	
trans-1,2-Dichloroethene	2.00	0.200	mg/kg wet	2.000		100	70-130	0.1	20	
trans-1,3-Dichloropropene	1.91	0.200	mg/kg wet	2.000		95	70-130	4	20	
Trichloroethene	1.98	0.200	mg/kg wet	2.000		99	70-130	10	20	
Trichlorofluoromethane	2.13	0.200	mg/kg wet	2.000		106	70-130	4	20	
Vinyl Chloride	2.28	0.200	mg/kg wet	2.000		114	70-130	3	20	
Xylene O	2.01	0.200	mg/kg wet	2.000		100	70-130	2	20	
Xylene P,M	4.31	0.400	mg/kg wet	4.000		108	70-130	4	20	
Surrogate: 1,2-Dichloroethane-d4	*5.12*		mg/kg wet	*5.000*		*102*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*5.15*		mg/kg wet	*5.000*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*5.19*		mg/kg wet	*5.000*		*104*	*70-130*			
Surrogate: Toluene-d8	*5.02*		mg/kg wet	*5.000*		*100*	*70-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0421

Notes and Definitions

U	Analyte included in the analysis, but not detected
SC	Surrogate recovery(ies) outside of criteria. Reextraction/Reanalysis confirms results (SC).
Q	Calibration required quadratic regression (Q).
IC	Internal Standard(s) outside of criteria. Sample was reanalyzed to confirm (IC).
I	Internal Standard(s) outside of criteria (I).
D	Diluted.
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
B+	Blank Spike recovery is above upper control limit (B+).
B-	Blank Spike recovery is below lower control limit (B-).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit
EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0421

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 21L0421
Date Received: 12/10/2021
Project Due Date: 12/17/2021
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.2 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No)

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? (Yes) / No
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? (Yes) / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: 12/10/21 Time: 1908 By: JL

Sample Receiving Notes:

No % solid jars

14. Was there a need to contact Project Manager? (Yes) / No
    a. Was there a need to contact the client? Yes / No
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	240901	Yes	N/A	Yes	VOA Vial	MeOH	
1	240921	Yes	N/A	Yes	VOA Vial	DI Water	
1	240922	Yes	N/A	Yes	VOA Vial	DI Water	
2	240902	Yes	N/A	Yes	VOA Vial	MeOH	
2	240923	Yes	N/A	Yes	VOA Vial	DI Water	
2	240924	Yes	N/A	Yes	VOA Vial	DI Water	
3	240903	Yes	N/A	Yes	VOA Vial	MeOH	
3	240925	Yes	N/A	Yes	VOA Vial	DI Water	
3	240926	Yes	N/A	Yes	VOA Vial	DI Water	
4	240904	Yes	N/A	Yes	VOA Vial	MeOH	
4	240927	Yes	N/A	Yes	VOA Vial	DI Water	
4	240928	Yes	N/A	Yes	VOA Vial	DI Water	
5	240905	Yes	N/A	Yes	VOA Vial	MeOH	
5	240929	Yes	N/A	Yes	VOA Vial	DI Water	
5	240930	Yes	N/A	Yes	VOA Vial	DI Water	
6	240906	Yes	N/A	Yes	VOA Vial	MeOH	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

ESS Project ID: 21L0421

Date Received: 12/10/2021

6	240931	Yes	N/A	Yes	VOA Vial	DI Water
6	240932	Yes	N/A	Yes	VOA Vial	DI Water
7	240907	Yes	N/A	Yes	VOA Vial	MeOH
7	240933	Yes	N/A	Yes	VOA Vial	DI Water
7	240934	Yes	N/A	Yes	VOA Vial	DI Water
8	240908	Yes	N/A	Yes	VOA Vial	MeOH
8	240935	Yes	N/A	Yes	VOA Vial	DI Water
8	240936	Yes	N/A	Yes	VOA Vial	DI Water
9	240909	Yes	N/A	Yes	VOA Vial	MeOH
9	240937	Yes	N/A	Yes	VOA Vial	DI Water
9	240938	Yes	N/A	Yes	VOA Vial	DI Water
10	240910	Yes	N/A	Yes	VOA Vial	MeOH
10	240939	Yes	N/A	Yes	VOA Vial	DI Water
10	240940	Yes	N/A	Yes	VOA Vial	DI Water
11	240911	Yes	N/A	Yes	VOA Vial	MeOH
11	240941	Yes	N/A	Yes	VOA Vial	DI Water
11	240942	Yes	N/A	Yes	VOA Vial	DI Water
12	240912	Yes	N/A	Yes	VOA Vial	MeOH
12	240943	Yes	N/A	Yes	VOA Vial	DI Water
12	240944	Yes	N/A	Yes	VOA Vial	DI Water
13	240913	Yes	N/A	Yes	VOA Vial	MeOH
13	240945	Yes	N/A	Yes	VOA Vial	DI Water
13	240946	Yes	N/A	Yes	VOA Vial	DI Water
14	240914	Yes	N/A	Yes	VOA Vial	MeOH
14	240947	Yes	N/A	Yes	VOA Vial	DI Water
14	240948	Yes	N/A	Yes	VOA Vial	DI Water
15	240915	Yes	N/A	Yes	VOA Vial	MeOH
15	240949	Yes	N/A	Yes	VOA Vial	DI Water
15	240950	Yes	N/A	Yes	VOA Vial	DI Water
16	240916	Yes	N/A	Yes	VOA Vial	MeOH
16	240951	Yes	N/A	Yes	VOA Vial	DI Water
16	240952	Yes	N/A	Yes	VOA Vial	DI Water
17	240917	Yes	N/A	Yes	VOA Vial	MeOH
17	240953	Yes	N/A	Yes	VOA Vial	DI Water
17	240954	Yes	N/A	Yes	VOA Vial	DI Water
18	240918	Yes	N/A	Yes	VOA Vial	MeOH
18	240955	Yes	N/A	Yes	VOA Vial	DI Water
18	240956	Yes	N/A	Yes	VOA Vial	DI Water
19	240919	Yes	N/A	Yes	VOA Vial	MeOH
19	240957	Yes	N/A	Yes	VOA Vial	DI Water
19	240958	Yes	N/A	Yes	VOA Vial	DI Water
20	240920	Yes	N/A	Yes	VOA Vial	MeOH
20	240959	Yes	N/A	Yes	VOA Vial	DI Water
20	240960	Yes	N/A	Yes	VOA Vial	DI Water

2nd Review

Were all containers scanned into storage/lab? Initials TD

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

ESS Laboratory Sample and Cooler Receipt Checklist

Client:	GEI Consultants, Inc. - TB	ESS Project ID:	21L0421
		Date Received:	12/10/2021
Completed By:	Taylor Davis	Date & Time:	12/10/21 1858
Reviewed By:		Date & Time:	12/10/21 1908

Chain-of-Custody Record

Laboratory: ESS

Laboratory Job # (Lab use only) 210421

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman
781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman
labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: (YES) NO

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: (MA) 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are Method 1 S-1 and GW-2/GW-3 **Circle if GW-1 is required.**

Sample Handling

Samples Field Filtered: YES NO (NA)

Sampled Shipped With Ice: (YES) NO

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	Preservative: MEOH	H20	NA	NA	NA	NA	NA	NA	NA	Analysis: VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE	Sample Specific Remarks
1	2101938-B401-(2.5)	12/9/2021	0800	Soil	3	JES										X	X								
2	2101938-B402-(2.5)	12/9/2021	0815	Soil	3	JES										X	X								
3	2101938-B403-(2.5)	12/9/2021	0830	Soil	3	JES										X	X								
4	2101938-B404-(2.5)	12/9/2021	0846	Soil	3	JES										X	X								
5	2101938-B405-(2.5)	12/9/2021	0901	Soil	3	JES										X	X								
6	2101938-B406-(2.5)	12/9/2021	0916	Soil	3	JES										X	X								
7	2101938-B407-S1-(2.5)	12/9/2021	0931	Soil	3	JES										X	X								
8	2101938-B407-S2-(7.5)	12/9/2021	0946	Soil	3	JES										X	X								
9	2101938-B408-(2/5)	12/9/2021	1000	Soil	3	JES										X	X								
10	2101938-B409-(2.5)	12/9/2021	1100	Soil	3	JES										X	X								
11	2101938-B410-S1-(2.5)	12/9/2021	1115	Soil	3	JES										X	X								
12	2101938-B410-S2-(7.5)	12/9/2021	1130	Soil	3	JES										X	X								

	Date	Time	
Relinquished by sampler: (signature) 1. Jessy Bradley	12/9/21	1630	Received by: (signature) GEI Fridge
Relinquished by sampler: (signature) 2. Fridge	Date: 12/10/21	Time: 3:02	Received by: (signature) 2.
Relinquished by: (signature) 3.	Date: 12/10/21	Time: 15:02	Received by: (signature) 3.
Relinquished by: (signature) 4. 3.2 ice	Date: 12/10/21	Time: 17:32	Received by: (signature) 4.
Relinquished by: (signature) 5.	Date:	Time:	Received by: (signature) 5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____
2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Run tclp lead if 20x rule exceeded
Run CrVI if 100 mg/kg exceeded

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

Chain-of-Custody Record

Laboratory:

Laboratory Job # (Lab use only) 2104121

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman
781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman
labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: (YES) NO

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: (MA) 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are Method 1 S-1 and GW-2/GW-3. Circle if GW-1 is required.

Preservative

MEOH	H20	NA	NA	NA	NA	NA	NA	NA

Analysis

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE		Sample Specific Remarks
13	2101938-B411-S1-(2.5)	12/9/2021	0801	Soil	3	JES	X	X									
14	2101938-B411-S2-(7.5)	12/9/2021	0816	Soil	3	JES	X	X									
15	2101938-B412-S1-(2.5)	12/9/2021	0831	Soil	3	JES	X	X									
16	2101938-B412-S2-(7.5)	12/9/2021	0846	Soil	3	JES	X	X									
17	2101938-B413-S1-(2.5)	12/9/2021	0901	Soil	3	JES	X	X									
18	2101938-B413-S2-(7.5)	12/9/2021	0916	Soil	3	JES	X	X									
19	2101938-B414-S1-(2.5)	12/9/2021	0931	Soil	3	JES	X	X									
20	2101938-B414-S2-(7.5)	12/9/2021	0946	Soil	3	JES	X	X									

Sample Handling

Samples Field Filtered
YES NO (NA)

Sampled Shipped With Ice
(YES) NO

Relinquished by sampler: (signature)	Date:	Time:	Received by: (signature)
1. [signature]	12/9/21	1630	GEI Fridge
2. Fridge	12/10/21	3:02	2. [signature]
3. [signature]	12/10/21	15:02	3. [signature]
4. [signature] 3.2°C 12/10/21	12/10/21	17:31	4. [signature]
5.			5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____
2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Run TCLP lead if 20x rule exceeded

Run CRVI if total Cr exceeds 100 mg/kg

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

CERTIFICATE OF ANALYSIS

Ryan Hoffman
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801

RE: Parcel P3 Environmental Remediation (2103938)
ESS Laboratory Work Order Number: 21L0422

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard
Laboratory Director

REVIEWED
By ESS Laboratory at 3:37 pm, Dec 20, 2021

Analytical Summary
The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

The test results present in this report are in compliance with TNI and relative state standards, and/or client Quality Assurance Project Plans (QAPP). The laboratory has reviewed the following: Sample Preservations, Hold Times, Initial Calibrations, Continuing Calibrations, Method Blanks, Blank Spikes, Blank Spike Duplicates, Duplicates, Matrix Spikes, Matrix Spike Duplicates, Surrogates and Internal Standards. Any results which were found to be outside of the recommended ranges stated in our SOPs will be noted in the Project Narrative.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

SAMPLE RECEIPT

The following samples were received on December 10, 2021 for the analyses specified on the enclosed Chain of Custody Record.

To achieve CAM compliance for MCP data, ESS Laboratory has reviewed all QA/QC Requirements and Performance Standards listed in each method. Holding times and preservation have also been reviewed. All CAM requirements have been performed and achieved unless noted in the project narrative.

Each method has been set-up in the laboratory to reach required MCP standards. The methods for aqueous VOA and Soil Methanol VOA have known limitations for certain analytes. The regulatory standards may not be achieved due to these limitations. In addition, for all methods, matrix interferences, dilutions, and %Solids may elevate method reporting limits above regulatory standards. ESS Laboratory can provide, upon request, a Limit Checker (regulatory standard comparison spreadsheet) electronic deliverable which will highlight these exceedances.

Question I: All samples for EPH and metals were analyzed for a subset of the required MCP list per the client's request.

Polychlorinated Biphenyls by 8082

Laboratory control sample DL11009-BS1, associated with samples 21L0422-04 through -20, had the surrogate tetrachloro-m-xylene (TCMX) recovered below the 30% QC limit at 19%. All samples had the surrogate TCMS recovered within QC limits. No further corrective action was taken.

Question I: All samples for Metals were analyzed for a subset of the required MCP list per the client's request.

Lab Number	Sample Name	Matrix	Analysis
21L0422-01	2101938-B401 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-02	2101938-B402 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270D, 9045, 9050A
21L0422-03	2101938-B403 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-04	2101938-B404 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-05	2101938-B405 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-06	2101938-B406 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
ESS Laboratory Work Order: 21L0422

21L0422-07	2101938-B407-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-08	2101938-B407-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-09	2101938-B408 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270D, 9045, 9050A
21L0422-10	2101938-B409 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-11	2101938-B410-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270D, 9045, 9050A
21L0422-12	2101938-B410-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-13	2101938-B411-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-14	2101938-B411-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8081B, 8082A, 8100M, 8151A, 8270D, 9045, 9050A
21L0422-15	2101938-B412-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-16	2101938-B412-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-17	2101938-B413-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-18	2101938-B413-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-19	2101938-B414-S1 0-5	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A
21L0422-20	2101938-B414-S2 5-10	Soil	1010A, 1311, 1311/6010C, 6010C, 7.3.3.2, 7.3.4.1, 7471B, 8082A, 8100M, 8270D, 9045, 9050A

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

PROJECT NARRATIVE

8081B Organochlorine Pesticides

21L0422-02	**Lower value is used due to matrix interferences (LC).**
	4,4´-DDT
21L0422-02	**Percent difference between primary and confirmation results exceeds 40% (P).**
	4,4´-DDT

8082A Polychlorinated Biphenyls (PCB)

DL11009-BS1	**Surrogate recovery(ies) below lower control limit (S-).**
	Tetrachloro-m-xylene (19% @ 30-150%), Tetrachloro-m-xylene [2C] (19% @ 30-150%)

8151A Chlorinated Herbicides

21L0422-09	**Modified result**
	MCPP
21L0422-09	**Peaks found in the retention time window for MCPP did not confirm by GC/MS.**

8270D Semi-Volatile Organic Compounds

21L0422-01	**Elevated Method Reporting Limits due to sample matrix (EL).**
21L0422-05	**Elevated Method Reporting Limits due to sample matrix (EL).**
21L0422-10	**Elevated Method Reporting Limits due to sample matrix (EL).**
21L0422-12	**Elevated Method Reporting Limits due to sample matrix (EL).**
21L0422-14	**Elevated Method Reporting Limits due to sample matrix (EL).**
21L0422-19	**Elevated Method Reporting Limits due to sample matrix (EL).**
D1L0237-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (79% @ 80-120%), Pentachlorophenol (116% @ 80-120%)
D1L0237-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	4-Chloroaniline (21% @ 20%), Hexachlorobutadiene (21% @ 20%), Indeno(1,2,3-cd)Pyrene (26% @ 20%)
D1L0237-CCV1	**Continuing Calibration %Diff/Drift is below control limit (CD-).**
	2,4-Dinitrophenol (21% @ 20%)
D1L0238-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (145% @ 80-120%), Pentachlorophenol (93% @ 80-120%)
D1L0238-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	2,4-Dinitrophenol (45% @ 20%), bis(2-Chloroethyl)ether (25% @ 20%)
D1L0238-TUN1	**Pentachlorophenol tailing factor > 2.**
D1L0284-CCV1	**Calibration required quadratic regression (Q).**
	2,4-Dinitrophenol (93% @ 80-120%), Pentachlorophenol (98% @ 80-120%)
D1L0284-CCV1	**Continuing Calibration %Diff/Drift is above control limit (CD+).**
	Benzo(g,h,i)perylene (23% @ 20%), Dibenzo(a,h)Anthracene (30% @ 20%), Hexachlorobutadiene (21% @ 20%), Hexachloroethane (21% @ 20%), Indeno(1,2,3-cd)Pyrene (25% @ 20%), Nitrobenzene (21% @ 20%)
D1L0284-TUN1	**Benzidine tailing factor >2.**
D1L0284-TUN1	**Pentachlorophenol tailing factor > 2.**

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

D1L0307-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (123% @ 80-120%), Pentachlorophenol (118% @ 80-120%)

D1L0307-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (23% @ 20%), Pyridine (21% @ 20%)

D1L0324-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (91% @ 80-120%), Pentachlorophenol (98% @ 80-120%)

D1L0324-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
bis(2-Ethylhexyl)phthalate (25% @ 20%), Butylbenzylphthalate (21% @ 20%), Di-n-octylphthalate (30% @ 20%)

D1L0324-CCV1 **Initial Calibration Verification recovery is above upper control limit (ICV+).**
2,4-Dinitrophenol

D1L0342-CCV1 **Calibration required quadratic regression (Q).**
2,4-Dinitrophenol (133% @ 80-120%), Pentachlorophenol (120% @ 80-120%)

D1L0342-CCV1 **Continuing Calibration %Diff/Drift is above control limit (CD+).**
2,4-Dinitrophenol (33% @ 20%), Aniline (23% @ 20%), Benzo(k)fluoranthene (25% @ 20%)

D1L0342-CCV1 **Initial Calibration Verification recovery is below lower control limit (ICV-).**
Aniline

Total Metals

DL11525-BSD1 **Relative percent difference for duplicate is outside of criteria (D+).**
Arsenic (25% @ 20%), Barium (33% @ 20%), Cadmium (26% @ 20%), Chromium (26% @ 20%), Lead (25% @ 20%), Selenium (25% @ 20%), Silver (25% @ 20%)

No other observations noted.

End of Project Narrative.

DATA USABILITY LINKS

To ensure you are viewing the most current version of the documents below, please clear your internet cookies for www.ESSLaboratory.com. Consult your IT Support personnel for information on how to clear your internet cookies.

Definitions of Quality Control Parameters

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

EPH and VPH Alkane Lists

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

CURRENT SW-846 METHODOLOGY VERSIONS

Analytical Methods

1010A - Flashpoint
6010C - ICP
6020A - ICP MS
7010 - Graphite Furnace
7196A - Hexavalent Chromium
7470A - Aqueous Mercury
7471B - Solid Mercury
8011 - EDB/DBCP/TCP
8015C - GRO/DRO
8081B - Pesticides
8082A - PCB
8100M - TPH
8151A - Herbicides
8260B - VOA
8270D - SVOA
8270D SIM - SVOA Low Level
9014 - Cyanide
9038 - Sulfate
9040C - Aqueous pH
9045D - Solid pH (Corrosivity)
9050A - Specific Conductance
9056A - Anions (IC)
9060A - TOC
9095B - Paint Filter
MADEP 04-1.1 - EPH
MADEP 18-2.1 - VPH

Prep Methods

3005A - Aqueous ICP Digestion
3020A - Aqueous Graphite Furnace / ICP MS Digestion
3050B - Solid ICP / Graphite Furnace / ICP MS Digestion
3060A - Solid Hexavalent Chromium Digestion
3510C - Separatory Funnel Extraction
3520C - Liquid / Liquid Extraction
3540C - Manual Soxhlet Extraction
3541 - Automated Soxhlet Extraction
3546 - Microwave Extraction
3580A - Waste Dilution
5030B - Aqueous Purge and Trap
5030C - Aqueous Purge and Trap
5035A - Solid Purge and Trap

SW846 Reactivity Methods 7.3.3.2 (Reactive Cyanide) and 7.3.4.1 (Reactive Sulfide) have been withdrawn by EPA. These methods are reported per client request and are not NELAP accredited.

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

MassDEP Analytical Protocol Certification Form

MADEP RTN: _____

This form provides certification for the following data set: **21L0422-01 through 21L0422-20**

Matrices: ( ) Ground Water/Surface Water (x) Soil/Sediment ( ) Drinking Water ( ) Air ( ) Other:_____

CAM Protocol (check all that apply below):

( ) 8260 VOC CAM II A	(x) 7470/7471 Hg CAM III B	( ) MassDEP VPH (GC/PID/FID) CAM IV A	( ) 8082 PCB CAM V A	( ) 9014 Total Cyanide/PAC CAM VI A	( ) 6860 Perchlorate CAM VIII B
(x) 8270 SVOC CAM II B	( ) 7010 Metals CAM III C	( ) MassDEP VPH (GC/MS) CAM IV C	( ) 8081 Pesticides CAM V B	( ) 7196 Hex Cr CAM VI B	( ) MassDEP APH CAM IX A
(x) 6010 Metals CAM III A	( ) 6020 Metals CAM III D	(x) MassDEP EPH CAM IV B	( ) 8151 Herbicides CAM V C	( ) Explosives CAM VIII A	( ) TO-15 VOC CAM IX 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 (x) No ( )
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	Yes (x) 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 (x) No ( )
D	Does the laboratory report comply with all the reporting requirements specified in the CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	Yes (x) No ( )
E	VPH, EPH, APH and TO-15 only: a. Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	Yes (x) 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 (x) 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 protocols(s)? ***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.***	Yes ( ) No (x)*
H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	Yes ( ) No (x)*
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ( ) No (x)*

****All negative responses must be addressed in an attached laboratory narrative.***

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.

Signature: Laurel Stoddard Date: December 20, 2021

Printed Name: Laurel Stoddard Position: Laboratory Director

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.84** (2.27)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Barium	**118** (2.27)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Cadmium	**0.56** (0.45)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Chromium	**18.5** (0.91)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Lead	**343** (4.54)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Mercury	**0.668** (0.069)		7471B		2	JRB	12/16/21 16:01	0.64	40	DL11528
Selenium	ND (4.54)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525
Silver	ND (0.45)		6010C		1	KJK	12/15/21 18:08	2.45	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.938** (0.050)		1311/6010C		1	KJK	12/14/21 20:45	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 6:26		DL11008
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 6:26		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*74 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*84 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*55 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*92 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**425** (22.2)		8100M		2	12/15/21 18:05	D1L0322	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*71 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
1,2-Dichlorobenzene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
1,3-Dichlorobenzene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
1,4-Dichlorobenzene	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4,5-Trichlorophenol	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4,6-Trichlorophenol	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4-Dichlorophenol	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4-Dimethylphenol	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4-Dinitrophenol	ND (1.56)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,4-Dinitrotoluene	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2,6-Dinitrotoluene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2-Chloronaphthalene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2-Chlorophenol	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2-Methylnaphthalene	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2-Methylphenol	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
2-Nitrophenol	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
3,3′-Dichlorobenzidine	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
3+4-Methylphenol	ND (1.56)		8270D		2	12/16/21 17:57	D1L0307	DL11022
4-Bromophenyl-phenylether	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
4-Chloroaniline	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
4-Nitrophenol	ND (3.90)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Acenaphthene	**1.19** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Acenaphthylene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Acetophenone	ND (1.56)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Aniline	ND (3.90)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Anthracene	**2.55** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Azobenzene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Benzo(a)anthracene	**6.57** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Benzo(a)pyrene	**5.30** (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Benzo(b)fluoranthene	**4.91** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Benzo(g,h,i)perylene	**2.85** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Benzo(k)fluoranthene	**4.22** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
bis(2-Chloroethyl)ether	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
bis(2-chloroisopropyl)Ether	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Butylbenzylphthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Chrysene	**6.08** (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Dibenzo(a,h)Anthracene	**0.753** (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Dibenzofuran	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Diethylphthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Dimethylphthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Di-n-butylphthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Di-n-octylphthalate	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Fluoranthene	**14.5** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Fluorene	**1.02** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Hexachlorobenzene	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Hexachlorobutadiene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Hexachloroethane	ND (0.390)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Indeno(1,2,3-cd)Pyrene	**3.52** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Isophorone	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Naphthalene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Nitrobenzene	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
N-Nitrosodimethylamine	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Pentachlorophenol	ND (1.56)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Phenanthrene	**10.5** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Phenol	ND (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022
Pyrene	**12.3** (0.778)		8270D		2	12/16/21 17:57	D1L0307	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*48 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*59 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*54 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*57 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*51 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*51 %*		*30-130*				
Surrogate: Phenol-d6		*55 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*69 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**305** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.54** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.6 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B401 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 90
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-01
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.86** (2.27)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Barium	**78.1** (2.27)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Cadmium	ND (0.45)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Chromium	**30.5** (0.91)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Lead	**177** (4.53)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Mercury	**0.388** (0.031)		7471B		1	JRB	12/16/21 14:51	0.71	40	DL11528
Selenium	ND (4.53)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525
Silver	ND (0.45)		6010C		1	KJK	12/15/21 18:10	2.49	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.139** (0.050)		1311/6010C		1	KJK	12/14/21 20:48	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 19.6
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 21:10

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
4,4´-DDE	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
4,4´-DDT	**P, LC 0.0044** (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Alachlor	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Aldrin	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
alpha-BHC	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
alpha-Chlordane	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
beta-BHC	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Chlordane (Total)	ND (0.0230)		8081B		1	12/13/21 23:03	D1L0215	DL10908
delta-BHC	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Dieldrin	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Endosulfan I	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Endosulfan II	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Endosulfan Sulfate	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Endrin	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Endrin Ketone	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
gamma-BHC (Lindane)	ND (0.0017)		8081B		1	12/13/21 23:03	D1L0215	DL10908
gamma-Chlordane	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Heptachlor	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Heptachlor Epoxide	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Hexachlorobenzene	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908
Methoxychlor	ND (0.0029)		8081B		1	12/13/21 23:03	D1L0215	DL10908

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*57 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*53 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*56 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 6:46		DL11008
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 6:46		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*70 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*61 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*93 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**475** (22.5)		8100M		2	12/15/21 18:39	D1L0322	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*71 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 10.5
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/13/21 16:00

8151A Chlorinated Herbicides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2,4,5-T	ND (0.010)		8151A		1	12/15/21 23:05	D1L0297	DL11350
2,4,5-TP (Silvex)	ND (0.010)		8151A		1	12/15/21 23:05	D1L0297	DL11350
2,4-D	ND (0.051)		8151A		1	12/15/21 23:05	D1L0297	DL11350
2,4-DB	ND (0.051)		8151A		1	12/15/21 23:05	D1L0297	DL11350
Dalapon	ND (0.049)		8151A		1	12/15/21 23:05	D1L0297	DL11350
Dicamba	ND (0.010)		8151A		1	12/15/21 23:05	D1L0297	DL11350
Dichlorprop	ND (0.051)		8151A		1	12/15/21 23:05	D1L0297	DL11350
Dinoseb	ND (0.051)		8151A		1	12/15/21 23:05	D1L0297	DL11350
MCPA	ND (2.50)		8151A		1	12/15/21 23:05	D1L0297	DL11350
MCPP	ND (2.53)		8151A		1	12/15/21 23:05	D1L0297	DL11350

	%Recovery	Qualifier	Limits
Surrogate: DCAA	*65 %*		*30-150*
Surrogate: DCAA [2C]	*56 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.774)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2-Chloronaphthalene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2-Chlorophenol	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2-Methylnaphthalene	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2-Methylphenol	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
2-Nitrophenol	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
3+4-Methylphenol	ND (0.774)		8270D		1	12/16/21 22:06	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
4-Chloroaniline	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
4-Nitrophenol	ND (1.94)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Acenaphthene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Acenaphthylene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Acetophenone	ND (0.774)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Aniline	ND (1.94)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Anthracene	**0.902** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Azobenzene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Benzo(a)anthracene	**2.62** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Benzo(a)pyrene	**2.11** (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Benzo(b)fluoranthene	**1.86** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.26** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Benzo(k)fluoranthene	**1.72** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Butylbenzylphthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Chrysene	**2.44** (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.314** (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Dibenzofuran	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Diethylphthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Dimethylphthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Di-n-butylphthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Di-n-octylphthalate	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Fluoranthene	**5.09** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Fluorene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Hexachlorobenzene	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Hexachlorobutadiene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Hexachloroethane	ND (0.194)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**1.48** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Isophorone	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Naphthalene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Nitrobenzene	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Pentachlorophenol	ND (0.774)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Phenanthrene	**3.94** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Phenol	ND (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022
Pyrene	**5.26** (0.386)		8270D		1	12/16/21 22:06	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*63 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*64 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*66 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 14.6
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*65 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*65 %*		*30-130*				
Surrogate: Phenol-d6		*68 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*86 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**273** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.68** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B402 0-5
Date Sampled: 12/09/21 08:16
Percent Solids: 89
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-02
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**16.7** (2.30)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Barium	**89.0** (2.30)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Cadmium	**0.49** (0.46)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Chromium	**26.7** (0.92)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Lead	**232** (4.61)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Mercury	**0.646** (0.064)		7471B		2	JRB	12/16/21 16:03	0.69	40	DL11528
Selenium	ND (4.61)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525
Silver	ND (0.46)		6010C		1	KJK	12/15/21 18:12	2.42	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.088** (0.050)		1311/6010C		1	KJK	12/14/21 20:50	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:05

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 7:06		DL11008
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 7:06		DL11008

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*75 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*95 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 19.2
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**510** (23.2)		8100M		2	12/15/21 19:13	D1L0322	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*70 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.719)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2-Chloronaphthalene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2-Chlorophenol	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2-Methylnaphthalene	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2-Methylphenol	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
2-Nitrophenol	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
3+4-Methylphenol	ND (0.719)		8270D		1	12/16/21 22:38	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
4-Chloroaniline	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
4-Nitrophenol	ND (1.80)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Acenaphthene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Acenaphthylene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Acetophenone	ND (0.719)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Aniline	ND (1.80)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Anthracene	**0.738** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Azobenzene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Benzo(a)anthracene	**2.21** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Benzo(a)pyrene	**1.81** (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Benzo(b)fluoranthene	**1.59** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.02** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Benzo(k)fluoranthene	**1.46** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Butylbenzylphthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Chrysene	**2.09** (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.270** (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Dibenzofuran	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Diethylphthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Dimethylphthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Di-n-butylphthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Di-n-octylphthalate	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Fluoranthene	**4.22** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Fluorene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Hexachlorobenzene	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Hexachlorobutadiene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Hexachloroethane	ND (0.180)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**1.21** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Isophorone	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Naphthalene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Nitrobenzene	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Pentachlorophenol	ND (0.719)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Phenanthrene	**3.13** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Phenol	ND (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022
Pyrene	**4.84** (0.359)		8270D		1	12/16/21 22:38	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*71 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*69 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*77 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*70 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*72 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*73 %*		*30-130*				
Surrogate: Phenol-d6		*79 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*103 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**218** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.73** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B403 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 90
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-03
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**8.70** (2.48)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Barium	**94.3** (2.48)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Cadmium	ND (0.50)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Chromium	**25.8** (0.99)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Lead	**170** (4.95)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Mercury	**0.605** (0.035)		7471B		1	JRB	12/16/21 14:55	0.65	40	DL11528
Selenium	ND (4.95)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525
Silver	ND (0.50)		6010C		1	KJK	12/15/21 18:13	2.31	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.068** (0.050)		1311/6010C		1	KJK	12/14/21 20:52	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1260 [2C]	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 21:27		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 21:27		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*86 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*74 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*76 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 19.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**438** (23.0)		8100M		2	12/15/21 19:46	D1L0322	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*73 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.738)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2-Chloronaphthalene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2-Chlorophenol	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2-Methylnaphthalene	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2-Methylphenol	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
2-Nitrophenol	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
3+4-Methylphenol	ND (0.738)		8270D		1	12/16/21 23:10	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
4-Chloroaniline	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
4-Nitrophenol	ND (1.85)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Acenaphthene	**0.619** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Acenaphthylene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Acetophenone	ND (0.738)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Aniline	ND (1.85)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Anthracene	**1.48** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Azobenzene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Benzo(a)anthracene	**4.15** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Benzo(a)pyrene	**3.37** (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Benzo(b)fluoranthene	**3.18** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.91** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Benzo(k)fluoranthene	**2.68** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Butylbenzylphthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Chrysene	**3.83** (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.496** (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Dibenzofuran	**0.418** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Diethylphthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Dimethylphthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Di-n-butylphthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Di-n-octylphthalate	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Fluoranthene	**8.44** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Fluorene	**0.547** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Hexachlorobenzene	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Hexachlorobutadiene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Hexachloroethane	ND (0.185)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**2.34** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Isophorone	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Naphthalene	**0.469** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Nitrobenzene	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Pentachlorophenol	ND (0.738)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Phenanthrene	**6.41** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Phenol	ND (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022
Pyrene	**8.94** (0.369)		8270D		1	12/16/21 23:10	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*67 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*62 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*71 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*68 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*68 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*70 %*		*30-130*				
Surrogate: Phenol-d6		*71 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*96 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**232** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.36** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B404 0-5
Date Sampled: 12/09/21 08:46
Percent Solids: 87
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-04
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.75** (2.13)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Barium	**73.3** (2.13)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Cadmium	ND (0.43)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Chromium	**12.9** (0.85)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Lead	**225** (4.27)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Mercury	**0.443** (0.034)		7471B		1	JRB	12/16/21 14:57	0.64	40	DL11528
Selenium	ND (4.27)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525
Silver	ND (0.43)		6010C		1	KJK	12/15/21 18:22	2.54	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.212** (0.050)		1311/6010C		1	KJK	12/14/21 20:54	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 19.1
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 21:47		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 21:47		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*88 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*95 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 19.9
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**247** (21.8)		8100M		2	12/15/21 20:20	D1L0322	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*71 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4-Dinitrophenol	ND (1.52)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2-Chloronaphthalene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2-Chlorophenol	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2-Methylnaphthalene	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2-Methylphenol	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
2-Nitrophenol	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
3+4-Methylphenol	ND (1.52)		8270D		2	12/16/21 23:41	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
4-Chloroaniline	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
4-Nitrophenol	ND (3.80)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Acenaphthene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Acenaphthylene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Acetophenone	ND (1.52)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Aniline	ND (3.80)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Anthracene	**1.24** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Azobenzene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Benzo(a)anthracene	**3.78** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Benzo(a)pyrene	**3.14** (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Benzo(b)fluoranthene	**3.18** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.71** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Benzo(k)fluoranthene	**2.45** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Butylbenzylphthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Chrysene	**3.56** (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.477** (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Dibenzofuran	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Diethylphthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Dimethylphthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Di-n-butylphthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Di-n-octylphthalate	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Fluoranthene	**7.75** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Fluorene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Hexachlorobenzene	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Hexachlorobutadiene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Hexachloroethane	ND (0.380)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**2.10** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Isophorone	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Naphthalene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Nitrobenzene	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Pentachlorophenol	ND (1.52)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Phenanthrene	**5.54** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Phenol	ND (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022
Pyrene	**8.21** (0.757)		8270D		2	12/16/21 23:41	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*62 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*58 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*67 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*61 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*63 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*62 %*		*30-130*				
Surrogate: Phenol-d6		*68 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*89 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**395** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.99** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B405 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 92
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-05
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.36** (2.11)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Barium	**88.5** (2.11)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Cadmium	ND (0.42)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Chromium	**19.8** (0.84)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Lead	**210** (4.21)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Mercury	**0.462** (0.032)		7471B		1	JRB	12/16/21 14:59	0.67	40	DL11528
Selenium	ND (4.21)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525
Silver	ND (0.42)		6010C		1	KJK	12/15/21 18:23	2.61	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.165** (0.050)		1311/6010C		1	KJK	12/14/21 20:57	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 19.7
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 22:06		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 22:06		DL11009

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*89 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*95 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*78 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*81 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**128** (10.9)		8100M		1	12/14/21 16:52	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*80 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.709)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2-Chloronaphthalene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2-Chlorophenol	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2-Methylnaphthalene	**0.358** (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2-Methylphenol	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
2-Nitrophenol	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
3+4-Methylphenol	ND (0.709)		8270D		1	12/17/21 0:13	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
4-Chloroaniline	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
4-Nitrophenol	ND (1.78)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Acenaphthene	**0.949** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Acenaphthylene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Acetophenone	ND (0.709)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Aniline	ND (1.78)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Anthracene	**1.46** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Azobenzene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Benzo(a)anthracene	**2.81** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Benzo(a)pyrene	**2.29** (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Benzo(b)fluoranthene	**2.04** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.12** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Benzo(k)fluoranthene	**1.84** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Butylbenzylphthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Chrysene	**2.60** (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.310** (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Dibenzofuran	**0.748** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Diethylphthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Dimethylphthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Di-n-butylphthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Di-n-octylphthalate	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Fluoranthene	**5.70** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Fluorene	**0.879** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Hexachlorobenzene	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Hexachlorobutadiene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Hexachloroethane	ND (0.178)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**1.39** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Isophorone	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Naphthalene	**0.934** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Nitrobenzene	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Pentachlorophenol	ND (0.709)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Phenanthrene	**5.99** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Phenol	ND (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022
Pyrene	**6.00** (0.354)		8270D		1	12/17/21 0:13	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*72 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*72 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*79 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*75 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*74 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*74 %*		*30-130*				
Surrogate: Phenol-d6		*80 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*101 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**209** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.91** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B406 0-5
Date Sampled: 12/09/21 09:16
Percent Solids: 91
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-06
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**4.33** (2.28)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Barium	**67.7** (2.28)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Cadmium	ND (0.46)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Chromium	**17.0** (0.91)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Lead	**133** (4.57)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Mercury	**0.267** (0.032)		7471B		1	JRB	12/16/21 15:01	0.67	40	DL11528
Selenium	ND (4.57)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525
Silver	ND (0.46)		6010C		1	KJK	12/15/21 18:25	2.37	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.142** (0.050)		1311/6010C		1	KJK	12/14/21 20:59	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 19.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 22:26		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 22:26		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*85 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*90 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*72 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*74 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 20.2
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**118** (10.7)		8100M		1	12/14/21 17:26	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*84 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.727)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2-Chloronaphthalene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2-Chlorophenol	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2-Methylnaphthalene	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2-Methylphenol	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
2-Nitrophenol	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
3+4-Methylphenol	ND (0.727)		8270D		1	12/17/21 0:45	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
4-Chloroaniline	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
4-Nitrophenol	ND (1.82)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Acenaphthene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Acenaphthylene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Acetophenone	ND (0.727)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Aniline	ND (1.82)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Anthracene	**0.590** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Azobenzene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Benzo(a)anthracene	**1.93** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Benzo(a)pyrene	**1.61** (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Benzo(b)fluoranthene	**1.47** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Benzo(g,h,i)perylene	**0.851** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Benzo(k)fluoranthene	**1.32** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Butylbenzylphthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Chrysene	**1.82** (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.234** (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Dibenzofuran	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Diethylphthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Dimethylphthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Di-n-butylphthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Di-n-octylphthalate	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Fluoranthene	**3.74** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Fluorene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Hexachlorobenzene	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Hexachlorobutadiene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Hexachloroethane	ND (0.182)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**1.04** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Isophorone	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Naphthalene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Nitrobenzene	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Pentachlorophenol	ND (0.727)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Phenanthrene	**2.74** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Phenol	ND (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022
Pyrene	**3.81** (0.363)		8270D		1	12/17/21 0:45	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*64 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*59 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*69 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*65 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*68 %*		*30-130*				
Surrogate: Phenol-d6		*68 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*87 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**216** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.93** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 92
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-07
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**3.92** (2.41)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Barium	**60.0** (2.41)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Cadmium	ND (0.48)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Chromium	**16.6** (0.96)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Lead	**183** (4.82)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Mercury	**0.454** (0.033)		7471B		1	JRB	12/16/21 15:03	0.67	40	DL11528
Selenium	ND (4.82)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525
Silver	ND (0.48)		6010C		1	KJK	12/15/21 18:27	2.29	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.117** (0.050)		1311/6010C		1	KJK	12/14/21 21:01	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 19.5
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 22:46		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 22:46		DL11009

	%Recovery	*Qualifier*	*Limits*
Surrogate: Decachlorobiphenyl	*82 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*88 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*72 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 19.2
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**73.2** (11.5)		8100M		1	12/14/21 18:01	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*88 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.761)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2-Chloronaphthalene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2-Chlorophenol	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2-Methylnaphthalene	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2-Methylphenol	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
2-Nitrophenol	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
3+4-Methylphenol	ND (0.761)		8270D		1	12/17/21 1:16	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
4-Chloroaniline	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
4-Nitrophenol	ND (1.91)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Acenaphthene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Acenaphthylene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Acetophenone	ND (0.761)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Aniline	ND (1.91)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Anthracene	**0.573** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Azobenzene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Benzo(a)anthracene	**1.18** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Benzo(a)pyrene	**0.947** (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Benzo(b)fluoranthene	**0.904** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Benzo(g,h,i)perylene	**0.480** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Benzo(k)fluoranthene	**0.716** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Butylbenzylphthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Chrysene	**1.10** (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Dibenzo(a,h)Anthracene	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Dibenzofuran	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Diethylphthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Dimethylphthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Di-n-butylphthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Di-n-octylphthalate	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Fluoranthene	**2.49** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Fluorene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Hexachlorobenzene	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Hexachlorobutadiene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Hexachloroethane	ND (0.191)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**0.597** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Isophorone	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Naphthalene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Nitrobenzene	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Pentachlorophenol	ND (0.761)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Phenanthrene	**2.31** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Phenol	ND (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022
Pyrene	**2.48** (0.380)		8270D		1	12/17/21 1:16	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*69 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*65 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*74 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*73 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*71 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*72 %*		*30-130*				
Surrogate: Phenol-d6		*74 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*91 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**210** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.15** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B407-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 91
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-08
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.83** (2.25)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Barium	**86.9** (2.25)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Cadmium	ND (0.45)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Chromium	**21.0** (0.90)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Lead	**170** (4.50)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Mercury	**0.393** (0.036)		7471B		1	JRB	12/16/21 15:05	0.6	40	DL11528
Selenium	ND (4.50)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525
Silver	ND (0.45)		6010C		1	KJK	12/15/21 18:28	2.4	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.153** (0.050)		1311/6010C		1	KJK	12/14/21 21:03	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 19.4
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/15/21 19:40

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
4,4´-DDE [2C]	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
4,4´-DDT [2C]	**0.0143** (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Alachlor	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Aldrin	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
alpha-BHC	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
alpha-Chlordane	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
beta-BHC	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Chlordane (Total)	ND (0.0223)		8081B		1	12/16/21 20:49	D1L0309	DL11506
delta-BHC	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Dieldrin	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Endosulfan I	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Endosulfan II	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Endosulfan Sulfate	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Endrin	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Endrin Ketone	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
gamma-BHC (Lindane)	ND (0.0017)		8081B		1	12/16/21 20:49	D1L0309	DL11506
gamma-Chlordane [2C]	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Heptachlor	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Heptachlor Epoxide	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Hexachlorobenzene	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506
Methoxychlor	ND (0.0028)		8081B		1	12/16/21 20:49	D1L0309	DL11506

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*79 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*84 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*58 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*66 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 19.1
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 23:06		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 23:06		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*86 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*93 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*75 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*79 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**260** (10.7)		8100M		1	12/14/21 18:35	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*84 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 10.1
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/13/21 16:00

8151A Chlorinated Herbicides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2,4,5-T	ND (0.010)		8151A		1	12/15/21 23:33	D1L0297	DL11350
2,4,5-TP (Silvex)	ND (0.010)		8151A		1	12/15/21 23:33	D1L0297	DL11350
2,4-D	ND (0.050)		8151A		1	12/15/21 23:33	D1L0297	DL11350
2,4-DB	ND (0.051)		8151A		1	12/15/21 23:33	D1L0297	DL11350
Dalapon	ND (0.049)		8151A		1	12/15/21 23:33	D1L0297	DL11350
Dicamba	ND (0.010)		8151A		1	12/15/21 23:33	D1L0297	DL11350
Dichlorprop	ND (0.050)		8151A		1	12/15/21 23:33	D1L0297	DL11350
Dinoseb	ND (0.051)		8151A		1	12/15/21 23:33	D1L0297	DL11350
MCPA	ND (2.49)		8151A		1	12/15/21 23:33	D1L0297	DL11350
MCPP	# ND (2.51)		8151A		1	12/15/21 23:33	D1L0297	DL11350

	%Recovery	Qualifier	Limits
Surrogate: DCAA	*83 %*		*30-150*
Surrogate: DCAA [2C]	*80 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4-Dinitrophenol	ND (0.697)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2-Chloronaphthalene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2-Chlorophenol	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2-Methylnaphthalene	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2-Methylphenol	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
2-Nitrophenol	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
3+4-Methylphenol	ND (0.697)		8270D		1	12/17/21 1:48	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
4-Chloroaniline	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
4-Nitrophenol	ND (1.75)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Acenaphthene	**0.396** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Acenaphthylene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Acetophenone	ND (0.697)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Aniline	ND (1.75)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Anthracene	**1.18** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Azobenzene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Benzo(a)anthracene	**3.99** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Benzo(a)pyrene	**3.27** (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Benzo(b)fluoranthene	**2.88** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Benzo(g,h,i)perylene	**1.51** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Benzo(k)fluoranthene	**2.72** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Butylbenzylphthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Chrysene	**3.61** (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.456** (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Dibenzofuran	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Diethylphthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Dimethylphthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Di-n-butylphthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Di-n-octylphthalate	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Fluoranthene	**6.56** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Fluorene	**0.385** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Hexachlorobenzene	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Hexachlorobutadiene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Hexachloroethane	ND (0.175)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**1.93** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Isophorone	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Naphthalene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Nitrobenzene	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Pentachlorophenol	ND (0.697)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Phenanthrene	**4.57** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Phenol	ND (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022
Pyrene	**7.52** (0.348)		8270D		1	12/17/21 1:48	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*68 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*63 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*73 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*69 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*69 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*70 %*		*30-130*				
Surrogate: Phenol-d6		*73 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*94 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**225** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.05** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11060
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B408 0-5
Date Sampled: 12/09/21 10:01
Percent Solids: 93
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-09
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.18** (2.45)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Barium	**107** (2.45)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Cadmium	**0.54** (0.49)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Chromium	**18.6** (0.98)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Lead	**350** (4.91)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Mercury	**0.669** (0.062)		7471B		2	JRB	12/16/21 16:05	0.71	40	DL11528
Selenium	ND (4.91)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525
Silver	ND (0.49)		6010C		1	KJK	12/15/21 18:30	2.26	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.252** (0.050)		1311/6010C		1	KJK	12/14/21 21:06	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 20.2
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1221	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1232	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1242	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1248	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1254	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1260	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1262	ND (0.05)		8082A		1	12/13/21 23:26		DL11009
Aroclor 1268	ND (0.05)		8082A		1	12/13/21 23:26		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*88 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*97 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*72 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*77 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**351** (10.8)		8100M		1	12/14/21 19:08	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
1,2-Dichlorobenzene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
1,3-Dichlorobenzene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
1,4-Dichlorobenzene	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4,5-Trichlorophenol	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4,6-Trichlorophenol	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4-Dichlorophenol	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4-Dimethylphenol	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4-Dinitrophenol	ND (1.43)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,4-Dinitrotoluene	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2,6-Dinitrotoluene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2-Chloronaphthalene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2-Chlorophenol	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2-Methylnaphthalene	**0.407** (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2-Methylphenol	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
2-Nitrophenol	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
3,3′-Dichlorobenzidine	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
3+4-Methylphenol	ND (1.43)		8270D		2	12/17/21 2:20	D1L0324	DL11022
4-Bromophenyl-phenylether	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
4-Chloroaniline	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
4-Nitrophenol	ND (3.58)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Acenaphthene	**1.37** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Acenaphthylene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Acetophenone	ND (1.43)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Aniline	ND (3.58)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Anthracene	**3.10** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Azobenzene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Benzo(a)anthracene	**7.10** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Benzo(a)pyrene	**5.33** (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Benzo(b)fluoranthene	**5.03** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Benzo(g,h,i)perylene	**2.45** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Benzo(k)fluoranthene	**4.34** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
bis(2-Chloroethyl)ether	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
bis(2-chloroisopropyl)Ether	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
bis(2-Ethylhexyl)phthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Butylbenzylphthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Chrysene	**6.34** (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Dibenzo(a,h)Anthracene	**0.729** (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Dibenzofuran	**0.985** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Diethylphthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Dimethylphthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Di-n-butylphthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Di-n-octylphthalate	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Fluoranthene	**14.1** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Fluorene	**1.41** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Hexachlorobenzene	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Hexachlorobutadiene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Hexachloroethane	ND (0.358)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Indeno(1,2,3-cd)Pyrene	**3.12** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Isophorone	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Naphthalene	**0.766** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Nitrobenzene	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
N-Nitrosodimethylamine	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Pentachlorophenol	ND (1.43)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Phenanthrene	**13.1** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Phenol	ND (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022
Pyrene	**15.1** (0.715)		8270D		2	12/17/21 2:20	D1L0324	DL11022

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*47 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*47 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*54 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*54 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 15.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/10/21 22:35

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*49 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*52 %*		*30-130*				
Surrogate: Phenol-d6		*57 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*81 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**200** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.31** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.6 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B409 0-5
Date Sampled: 12/09/21 11:01
Percent Solids: 90
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-10
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**4.71** (2.20)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Barium	**83.8** (2.20)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Cadmium	ND (0.44)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Chromium	**23.2** (0.88)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Lead	**161** (4.41)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Mercury	**0.455** (0.035)		7471B		1	JRB	12/16/21 15:22	0.62	40	DL11528
Selenium	ND (4.41)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525
Silver	ND (0.44)		6010C		1	KJK	12/15/21 18:47	2.48	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.106** (0.050)		1311/6010C		1	KJK	12/14/21 21:23	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 19.9
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/15/21 19:40

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
4,4´-DDE [2C]	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
4,4´-DDT [2C]	**0.0073** (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Alachlor	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Aldrin	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
alpha-BHC	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
alpha-Chlordane [2C]	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
beta-BHC	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Chlordane (Total) [2C]	ND (0.0220)		8081B		1	12/16/21 21:16	D1L0309	DL11506
delta-BHC	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Dieldrin	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Endosulfan I	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Endosulfan II	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Endosulfan Sulfate	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Endrin	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Endrin Ketone	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
gamma-BHC (Lindane)	ND (0.0016)		8081B		1	12/16/21 21:16	D1L0309	DL11506
gamma-Chlordane	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Heptachlor	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Heptachlor Epoxide	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Hexachlorobenzene	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506
Methoxychlor	ND (0.0027)		8081B		1	12/16/21 21:16	D1L0309	DL11506

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*71 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*81 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*67 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*73 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 19.6
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/13/21 23:46		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/13/21 23:46		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*90 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*101 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*81 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*84 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 19.8
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**218** (22.1)		8100M		2	12/14/21 19:43	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*93 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 10.3
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/13/21 16:00

8151A Chlorinated Herbicides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2,4,5-T	ND (0.010)		8151A		1	12/16/21 0:02	D1L0297	DL11350
2,4,5-TP (Silvex)	ND (0.010)		8151A		1	12/16/21 0:02	D1L0297	DL11350
2,4-D	ND (0.050)		8151A		1	12/16/21 0:02	D1L0297	DL11350
2,4-DB	ND (0.050)		8151A		1	12/16/21 0:02	D1L0297	DL11350
Dalapon	ND (0.048)		8151A		1	12/16/21 0:02	D1L0297	DL11350
Dicamba	ND (0.010)		8151A		1	12/16/21 0:02	D1L0297	DL11350
Dichlorprop	ND (0.050)		8151A		1	12/16/21 0:02	D1L0297	DL11350
Dinoseb	ND (0.050)		8151A		1	12/16/21 0:02	D1L0297	DL11350
MCPA	ND (2.47)		8151A		1	12/16/21 0:02	D1L0297	DL11350
MCPP	ND (2.49)		8151A		1	12/16/21 0:02	D1L0297	DL11350

	%Recovery	Qualifier	Limits
Surrogate: DCAA	*88 %*		*30-150*
Surrogate: DCAA [2C]	*78 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
1,2-Dichlorobenzene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
1,3-Dichlorobenzene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
1,4-Dichlorobenzene	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4,5-Trichlorophenol	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4,6-Trichlorophenol	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4-Dichlorophenol	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4-Dimethylphenol	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4-Dinitrophenol	ND (0.734)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,4-Dinitrotoluene	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2,6-Dinitrotoluene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2-Chloronaphthalene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2-Chlorophenol	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2-Methylnaphthalene	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2-Methylphenol	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
2-Nitrophenol	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
3,3′-Dichlorobenzidine	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
3+4-Methylphenol	ND (0.734)		8270D		1	12/14/21 5:54	D1L0237	DL11313
4-Bromophenyl-phenylether	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
4-Chloroaniline	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
4-Nitrophenol	ND (1.84)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Acenaphthene	**0.512** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Acenaphthylene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Acetophenone	ND (0.734)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Aniline	ND (1.84)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Anthracene	**1.58** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Azobenzene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Benzo(a)anthracene	**5.12** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Benzo(a)pyrene	**4.22** (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Benzo(b)fluoranthene	**4.26** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Benzo(g,h,i)perylene	**2.52** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Benzo(k)fluoranthene	**2.58** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
bis(2-Chloroethyl)ether	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
bis(2-chloroisopropyl)Ether	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Butylbenzylphthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Chrysene	**5.08** (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Dibenzo(a,h)Anthracene	**0.727** (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Dibenzofuran	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Diethylphthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Dimethylphthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Di-n-butylphthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Di-n-octylphthalate	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Fluoranthene	**8.42** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Fluorene	**0.473** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Hexachlorobenzene	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Hexachlorobutadiene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Hexachloroethane	ND (0.184)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Indeno(1,2,3-cd)Pyrene	**2.88** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Isophorone	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Naphthalene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Nitrobenzene	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
N-Nitrosodimethylamine	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Pentachlorophenol	ND (0.734)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Phenanthrene	**5.75** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Phenol	ND (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313
Pyrene	**7.05** (0.366)		8270D		1	12/14/21 5:54	D1L0237	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*66 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*81 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*73 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 14.9
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*66 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*67 %*		*30-130*				
Surrogate: Phenol-d6		*69 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*82 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**228** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.54** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	EEM	12/13/21 11:18	mg/kg	DL11320
Reactive Sulfide	ND (2.0)		7.3.4.1		1	EEM	12/13/21 11:18	mg/kg	DL11320

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S1 0-5
Date Sampled: 12/09/21 11:16
Percent Solids: 91
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-11
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.98** (2.38)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Barium	**728** (2.38)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Cadmium	**2.81** (0.48)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Chromium	**17.0** (0.95)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Lead	**461** (4.76)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Mercury	**0.756** (0.062)		7471B		2	JRB	12/16/21 16:20	0.75	40	DL11528
Selenium	ND (4.76)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525
Silver	ND (0.48)		6010C		1	KJK	12/15/21 18:49	2.45	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.051** (0.050)		1311/6010C		1	KJK	12/14/21 21:26	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 19.1
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 0:06		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 0:06		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*90 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*96 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*80 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*81 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 19.7
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**648** (23.7)		8100M		2	12/14/21 20:17	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*87 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 15.1
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
1,2-Dichlorobenzene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
1,3-Dichlorobenzene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
1,4-Dichlorobenzene	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4,5-Trichlorophenol	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4,6-Trichlorophenol	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4-Dichlorophenol	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4-Dimethylphenol	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4-Dinitrophenol	ND (1.54)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,4-Dinitrotoluene	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2,6-Dinitrotoluene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2-Chloronaphthalene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2-Chlorophenol	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2-Methylnaphthalene	**0.440** (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2-Methylphenol	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
2-Nitrophenol	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
3,3′-Dichlorobenzidine	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
3+4-Methylphenol	ND (1.54)		8270D		2	12/14/21 6:25	D1L0237	DL11313
4-Bromophenyl-phenylether	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
4-Chloroaniline	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
4-Nitrophenol	ND (3.87)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Acenaphthene	**2.47** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Acenaphthylene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Acetophenone	ND (1.54)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Aniline	ND (3.87)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Anthracene	**6.04** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Azobenzene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Benzo(a)anthracene	**10.4** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Benzo(a)pyrene	**8.62** (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Benzo(b)fluoranthene	**9.08** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Benzo(g,h,i)perylene	**5.29** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Benzo(k)fluoranthene	**5.66** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 15.1
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
bis(2-Chloroethyl)ether	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
bis(2-chloroisopropyl)Ether	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Butylbenzylphthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Chrysene	**9.40** (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Dibenzo(a,h)Anthracene	**1.37** (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Dibenzofuran	**1.81** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Diethylphthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Dimethylphthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Di-n-butylphthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Di-n-octylphthalate	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Fluoranthene	**23.3** (7.71)		8270D		20	12/15/21 7:23	D1L0237	DL11313
Fluorene	**2.78** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Hexachlorobenzene	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Hexachlorobutadiene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Hexachloroethane	ND (0.387)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Indeno(1,2,3-cd)Pyrene	**6.55** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Isophorone	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Naphthalene	**1.51** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Nitrobenzene	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
N-Nitrosodimethylamine	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Pentachlorophenol	ND (1.54)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Phenanthrene	**19.7** (7.71)		8270D		20	12/15/21 7:23	D1L0237	DL11313
Phenol	ND (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313
Pyrene	**17.4** (0.771)		8270D		2	12/14/21 6:25	D1L0237	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*52 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*81 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*60 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*70 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 15.1
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*57 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*56 %*		*30-130*				
Surrogate: Phenol-d6		*63 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*83 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**204** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.98** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B410-S2 5-10
Date Sampled: 12/09/21 11:31
Percent Solids: 86
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-12
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.88** (2.44)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Barium	**109** (2.44)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Cadmium	**0.57** (0.49)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Chromium	**19.9** (0.97)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Lead	**313** (4.87)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Mercury	**0.414** (0.034)		7471B		1	JRB	12/16/21 15:26	0.66	40	DL11528
Selenium	ND (4.87)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525
Silver	ND (0.49)		6010C		1	KJK	12/15/21 18:51	2.33	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.377** (0.050)		1311/6010C		1	KJK	12/14/21 21:28	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 19.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 0:25		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 0:25		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*92 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*98 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*82 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*87 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 20.5
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**217** (11.1)		8100M		1	12/14/21 20:50	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 15.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
1,2-Dichlorobenzene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
1,3-Dichlorobenzene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
1,4-Dichlorobenzene	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4,5-Trichlorophenol	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4,6-Trichlorophenol	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4-Dichlorophenol	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4-Dimethylphenol	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4-Dinitrophenol	ND (0.742)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,4-Dinitrotoluene	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2,6-Dinitrotoluene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2-Chloronaphthalene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2-Chlorophenol	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2-Methylnaphthalene	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2-Methylphenol	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
2-Nitrophenol	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
3,3′-Dichlorobenzidine	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
3+4-Methylphenol	ND (0.742)		8270D		1	12/14/21 6:56	D1L0237	DL11313
4-Bromophenyl-phenylether	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
4-Chloroaniline	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
4-Nitrophenol	ND (1.86)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Acenaphthene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Acenaphthylene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Acetophenone	ND (0.742)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Aniline	ND (1.86)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Anthracene	**0.875** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Azobenzene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Benzo(a)anthracene	**2.41** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Benzo(a)pyrene	**1.96** (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Benzo(b)fluoranthene	**1.91** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Benzo(g,h,i)perylene	**1.15** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Benzo(k)fluoranthene	**1.45** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 15.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
bis(2-Chloroethyl)ether	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
bis(2-chloroisopropyl)Ether	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Butylbenzylphthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Chrysene	**2.25** (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Dibenzo(a,h)Anthracene	**0.357** (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Dibenzofuran	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Diethylphthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Dimethylphthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Di-n-butylphthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Di-n-octylphthalate	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Fluoranthene	**4.97** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Fluorene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Hexachlorobenzene	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Hexachlorobutadiene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Hexachloroethane	ND (0.186)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Indeno(1,2,3-cd)Pyrene	**1.47** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Isophorone	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Naphthalene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Nitrobenzene	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
N-Nitrosodimethylamine	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Pentachlorophenol	ND (0.742)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Phenanthrene	**3.63** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Phenol	ND (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313
Pyrene	**3.78** (0.371)		8270D		1	12/14/21 6:56	D1L0237	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*62 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*83 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*65 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*72 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 15.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*63 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*65 %*		*30-130*				
Surrogate: Phenol-d6		*64 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*79 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**237** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.08** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.3 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S1 0-5
Date Sampled: 12/09/21 08:01
Percent Solids: 88
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-13
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.65** (2.36)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Barium	**89.6** (2.36)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Cadmium	ND (0.47)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Chromium	**24.8** (0.94)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Lead	**168** (4.71)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Mercury	**0.189** (0.036)		7471B		1	JRB	12/16/21 15:28	0.65	40	DL11528
Selenium	ND (4.71)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525
Silver	ND (0.47)		6010C		1	KJK	12/15/21 18:52	2.52	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.183** (0.050)		1311/6010C		1	KJK	12/14/21 21:30	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 19.8
Final Volume: 5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/15/21 19:40

8081B Organochlorine Pesticides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
4,4´-DDD	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
4,4´-DDE	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
4,4´-DDT	**0.0081** (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Alachlor	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Aldrin	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
alpha-BHC	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
alpha-Chlordane	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
beta-BHC	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Chlordane (Total)	ND (0.0240)		8081B		1	12/16/21 21:44	D1L0309	DL11506
delta-BHC	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Dieldrin	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Endosulfan I	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Endosulfan II	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Endosulfan Sulfate	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Endrin	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Endrin Ketone	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
gamma-BHC (Lindane)	ND (0.0018)		8081B		1	12/16/21 21:44	D1L0309	DL11506
gamma-Chlordane	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Heptachlor	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Heptachlor Epoxide	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Hexachlorobenzene	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506
Methoxychlor	ND (0.0030)		8081B		1	12/16/21 21:44	D1L0309	DL11506

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*72 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*77 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*60 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*72 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 0:45		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 0:45		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*79 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*66 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*67 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 20.1
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/10/21 22:35

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**278** (11.8)		8100M		1	12/14/21 21:24	D1L0275	DL11021

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*86 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 10.4
Final Volume: 4
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: DMC
Prepared: 12/13/21 16:00

8151A Chlorinated Herbicides

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
2,4,5-T	ND (0.011)		8151A		1	12/16/21 0:31	D1L0297	DL11350
2,4,5-TP (Silvex)	ND (0.011)		8151A		1	12/16/21 0:31	D1L0297	DL11350
2,4-D	ND (0.054)		8151A		1	12/16/21 0:31	D1L0297	DL11350
2,4-DB	ND (0.054)		8151A		1	12/16/21 0:31	D1L0297	DL11350
Dalapon	ND (0.052)		8151A		1	12/16/21 0:31	D1L0297	DL11350
Dicamba	ND (0.011)		8151A		1	12/16/21 0:31	D1L0297	DL11350
Dichlorprop	ND (0.054)		8151A		1	12/16/21 0:31	D1L0297	DL11350
Dinoseb	ND (0.054)		8151A		1	12/16/21 0:31	D1L0297	DL11350
MCPA	ND (2.65)		8151A		1	12/16/21 0:31	D1L0297	DL11350
MCPP	ND (2.68)		8151A		1	12/16/21 0:31	D1L0297	DL11350

	%Recovery	Qualifier	Limits
Surrogate: DCAA	*63 %*		*30-150*
Surrogate: DCAA [2C]	*58 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
1,2-Dichlorobenzene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
1,3-Dichlorobenzene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
1,4-Dichlorobenzene	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4,5-Trichlorophenol	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4,6-Trichlorophenol	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4-Dichlorophenol	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4-Dimethylphenol	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4-Dinitrophenol	ND (1.66)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,4-Dinitrotoluene	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2,6-Dinitrotoluene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2-Chloronaphthalene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2-Chlorophenol	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2-Methylnaphthalene	**0.920** (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2-Methylphenol	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
2-Nitrophenol	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
3,3′-Dichlorobenzidine	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
3+4-Methylphenol	ND (1.66)		8270D		2	12/14/21 7:28	D1L0237	DL11313
4-Bromophenyl-phenylether	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
4-Chloroaniline	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
4-Nitrophenol	ND (4.16)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Acenaphthene	**2.37** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Acenaphthylene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Acetophenone	ND (1.66)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Aniline	ND (4.16)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Anthracene	**4.31** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Azobenzene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Benzo(a)anthracene	**9.30** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Benzo(a)pyrene	**7.13** (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Benzo(b)fluoranthene	**6.90** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Benzo(g,h,i)perylene	**3.88** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Benzo(k)fluoranthene	**5.14** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
bis(2-Chloroethyl)ether	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
bis(2-chloroisopropyl)Ether	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
bis(2-Ethylhexyl)phthalate	**6.30** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Butylbenzylphthalate	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Chrysene	**8.99** (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Dibenzo(a,h)Anthracene	**1.25** (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Dibenzofuran	**1.79** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Diethylphthalate	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Dimethylphthalate	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Di-n-butylphthalate	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Di-n-octylphthalate	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Fluoranthene	**18.1** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Fluorene	**2.35** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Hexachlorobenzene	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Hexachlorobutadiene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Hexachloroethane	ND (0.416)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Indeno(1,2,3-cd)Pyrene	**4.97** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Isophorone	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Naphthalene	**1.63** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Nitrobenzene	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
N-Nitrosodimethylamine	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Pentachlorophenol	ND (1.66)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Phenanthrene	**19.4** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Phenol	ND (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313
Pyrene	**18.0** (0.830)		8270D		2	12/14/21 7:28	D1L0237	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*68 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*84 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*75 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*78 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 14.3
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*71 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*69 %*		*30-130*				
Surrogate: Phenol-d6		*77 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*101 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**247** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.96** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.3 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B411-S2 5-10
Date Sampled: 12/09/21 08:16
Percent Solids: 84
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-14
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.29** (2.39)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Barium	**101** (2.39)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Cadmium	ND (0.48)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Chromium	**19.1** (0.96)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Lead	**197** (4.79)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Mercury	**0.536** (0.033)		7471B		1	JRB	12/16/21 15:30	0.68	40	DL11528
Selenium	ND (4.79)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525
Silver	ND (0.48)		6010C		1	KJK	12/15/21 18:54	2.35	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.079** (0.050)		1311/6010C		1	KJK	12/14/21 21:33	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 20.1
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 1:05		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 1:05		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*90 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*99 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*80 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 19.8
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**173** (11.4)		8100M		1	12/14/21 23:07	D1L0275	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*104 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4-Dinitrophenol	ND (0.766)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2-Chloronaphthalene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2-Chlorophenol	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2-Methylnaphthalene	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2-Methylphenol	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
2-Nitrophenol	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
3+4-Methylphenol	ND (0.766)		8270D		1	12/17/21 13:25	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
4-Chloroaniline	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
4-Nitrophenol	ND (1.92)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Acenaphthene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Acenaphthylene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Acetophenone	ND (0.766)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Aniline	ND (1.92)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Anthracene	**0.661** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Azobenzene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Benzo(a)anthracene	**2.19** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Benzo(a)pyrene	**1.94** (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Benzo(b)fluoranthene	**1.73** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Benzo(g,h,i)perylene	**1.17** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Benzo(k)fluoranthene	**1.56** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Butylbenzylphthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Chrysene	**2.02** (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**0.318** (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Dibenzofuran	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Diethylphthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Dimethylphthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Di-n-butylphthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Di-n-octylphthalate	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Fluoranthene	**4.05** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Fluorene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Hexachlorobenzene	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Hexachlorobutadiene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Hexachloroethane	ND (0.192)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**1.33** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Isophorone	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Naphthalene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Nitrobenzene	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Pentachlorophenol	ND (0.766)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Phenanthrene	**2.77** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Phenol	ND (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313
Pyrene	**3.96** (0.382)		8270D		1	12/17/21 13:25	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*70 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*91 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*75 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*74 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 14.7
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*75 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*71 %*		*30-130*				
Surrogate: Phenol-d6		*76 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*94 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**338** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**7.91** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.2 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S1 0-5
Date Sampled: 12/09/21 08:31
Percent Solids: 89
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-15
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.66** (2.33)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Barium	**111** (2.33)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Cadmium	**1.16** (0.47)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Chromium	**20.1** (0.93)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Lead	**287** (4.65)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Mercury	**0.558** (0.035)		7471B		1	JRB	12/16/21 15:32	0.64	40	DL11528
Selenium	ND (4.65)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525
Silver	ND (0.47)		6010C		1	KJK	12/15/21 18:56	2.43	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.179** (0.050)		1311/6010C		1	KJK	12/14/21 21:35	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1260 [2C]	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 1:25		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 1:25		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*89 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*96 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*79 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*83 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 20.7
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**215** (10.9)		8100M		1	12/14/21 23:42	D1L0275	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*98 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4-Dinitrophenol	ND (0.780)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2-Chloronaphthalene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2-Chlorophenol	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2-Methylnaphthalene	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2-Methylphenol	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
2-Nitrophenol	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
3+4-Methylphenol	ND (0.780)		8270D		1	12/17/21 13:57	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
4-Chloroaniline	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
4-Nitrophenol	ND (1.95)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Acenaphthene	**0.491** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Acenaphthylene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Acetophenone	ND (0.780)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Aniline	ND (1.95)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Anthracene	**1.47** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Azobenzene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Benzo(a)anthracene	**4.02** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Benzo(a)pyrene	**3.34** (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Benzo(b)fluoranthene	**2.99** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Benzo(g,h,i)perylene	**1.92** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Benzo(k)fluoranthene	**2.66** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Butylbenzylphthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Chrysene	**3.64** (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**0.526** (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Dibenzofuran	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Diethylphthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Dimethylphthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Di-n-butylphthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Di-n-octylphthalate	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Fluoranthene	**7.97** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Fluorene	**0.558** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Hexachlorobenzene	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Hexachlorobutadiene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Hexachloroethane	ND (0.195)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**2.24** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Isophorone	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Naphthalene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Nitrobenzene	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Pentachlorophenol	ND (0.780)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Phenanthrene	**6.09** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Phenol	ND (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313
Pyrene	**7.52** (0.389)		8270D		1	12/17/21 13:57	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*70 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*91 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*74 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*71 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*74 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*68 %*		*30-130*				
Surrogate: Phenol-d6		*76 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*92 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**244** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.12** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.3 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B412-S2 5-10
Date Sampled: 12/09/21 08:46
Percent Solids: 88
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-16
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.12** (2.31)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Barium	**78.1** (2.31)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Cadmium	ND (0.46)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Chromium	**19.5** (0.92)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Lead	**179** (4.62)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Mercury	**0.444** (0.030)		7471B		1	JRB	12/16/21 15:34	0.72	40	DL11528
Selenium	ND (4.62)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525
Silver	ND (0.46)		6010C		1	KJK	12/15/21 18:57	2.4	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.235** (0.050)		1311/6010C		1	KJK	12/14/21 21:57	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 19.4
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 1:45		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 1:45		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*93 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*98 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*84 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*90 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 19
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**147** (11.7)		8100M		1	12/15/21 0:16	D1L0275	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*98 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 14.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4-Dinitrophenol	ND (0.770)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2-Chloronaphthalene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2-Chlorophenol	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2-Methylnaphthalene	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2-Methylphenol	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
2-Nitrophenol	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
3+4-Methylphenol	ND (0.770)		8270D		1	12/17/21 14:28	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
4-Chloroaniline	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
4-Nitrophenol	ND (1.93)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Acenaphthene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Acenaphthylene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Acetophenone	ND (0.770)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Aniline	ND (1.93)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Anthracene	**0.640** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Azobenzene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Benzo(a)anthracene	**1.77** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Benzo(a)pyrene	**1.57** (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Benzo(b)fluoranthene	**1.46** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Benzo(g,h,i)perylene	**0.945** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Benzo(k)fluoranthene	**1.19** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 14.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Butylbenzylphthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Chrysene	**1.58** (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**0.254** (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Dibenzofuran	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Diethylphthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Dimethylphthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Di-n-butylphthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Di-n-octylphthalate	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Fluoranthene	**3.63** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Fluorene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Hexachlorobenzene	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Hexachlorobutadiene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Hexachloroethane	ND (0.193)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**1.09** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Isophorone	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Naphthalene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Nitrobenzene	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Pentachlorophenol	ND (0.770)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Phenanthrene	**2.55** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Phenol	ND (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313
Pyrene	**3.37** (0.384)		8270D		1	12/17/21 14:28	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*64 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*84 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*68 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*65 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 14.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*67 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*62 %*		*30-130*				
Surrogate: Phenol-d6		*69 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*85 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**260** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.12** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.5 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S1 0-5
Date Sampled: 12/09/21 09:01
Percent Solids: 90
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-17
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**5.38** (2.35)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Barium	**103** (2.35)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Cadmium	ND (0.47)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Chromium	**17.4** (0.94)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Lead	**194** (4.69)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Mercury	**1.12** (0.060)		7471B		2	JRB	12/16/21 16:22	0.73	40	DL11528
Selenium	ND (4.69)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525
Silver	ND (0.47)		6010C		1	KJK	12/15/21 18:59	2.36	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	ND (0.050)		1311/6010C		1	KJK	12/14/21 22:00	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 19.8
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 2:05		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 2:05		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*83 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*87 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*83 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*86 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 20
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**199** (22.1)		8100M		2	12/15/21 20:54	D1L0322	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*89 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4-Dinitrophenol	ND (0.719)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2-Chloronaphthalene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2-Chlorophenol	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2-Methylnaphthalene	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2-Methylphenol	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
2-Nitrophenol	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
3+4-Methylphenol	ND (0.719)		8270D		1	12/17/21 14:58	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
4-Chloroaniline	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
4-Nitrophenol	ND (1.80)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Acenaphthene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Acenaphthylene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Acetophenone	ND (0.719)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Aniline	ND (1.80)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Anthracene	**0.605** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Azobenzene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Benzo(a)anthracene	**1.74** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Benzo(a)pyrene	**1.53** (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Benzo(b)fluoranthene	**1.37** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Benzo(g,h,i)perylene	**0.937** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Benzo(k)fluoranthene	**1.21** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Butylbenzylphthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Chrysene	**1.60** (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**0.265** (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Dibenzofuran	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Diethylphthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Dimethylphthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Di-n-butylphthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Di-n-octylphthalate	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Fluoranthene	**3.32** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Fluorene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Hexachlorobenzene	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Hexachlorobutadiene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Hexachloroethane	ND (0.180)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**1.08** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Isophorone	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Naphthalene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Nitrobenzene	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Pentachlorophenol	ND (0.719)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Phenanthrene	**2.52** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Phenol	ND (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313
Pyrene	**3.26** (0.359)		8270D		1	12/17/21 14:58	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*65 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*88 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*70 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*70 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 15.4
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*69 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*64 %*		*30-130*				
Surrogate: Phenol-d6		*72 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*91 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**289** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.17** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B413-S2 5-10
Date Sampled: 12/09/21 09:16
Percent Solids: 90
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-18
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**6.06** (2.18)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Barium	**87.6** (2.18)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Cadmium	ND (0.44)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Chromium	**16.6** (0.87)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Lead	**305** (4.35)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Mercury	**0.574** (0.036)		7471B		1	JRB	12/16/21 15:43	0.61	40	DL11528
Selenium	ND (4.35)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525
Silver	ND (0.44)		6010C		1	KJK	12/15/21 19:01	2.57	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.122** (0.050)		1311/6010C		1	KJK	12/14/21 22:02	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 20
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1260 [2C]	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 2:24		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 2:24		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*97 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*97 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*68 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*73 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 19.7
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**839** (22.7)		8100M		2	12/15/21 21:28	D1L0322	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*91 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4-Dinitrophenol	ND (1.54)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2-Chloronaphthalene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2-Chlorophenol	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2-Methylnaphthalene	**0.472** (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2-Methylphenol	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
2-Nitrophenol	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
3+4-Methylphenol	ND (1.54)		8270D		2	12/17/21 15:29	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
4-Chloroaniline	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
4-Nitrophenol	ND (3.86)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Acenaphthene	**1.83** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Acenaphthylene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Acetophenone	ND (1.54)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Aniline	ND (3.86)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Anthracene	**6.05** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Azobenzene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Benzo(a)anthracene	**18.6** (7.70)		8270D		20	12/17/21 22:14	D1L0342	DL11313
Benzo(a)pyrene	**16.5** (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Benzo(b)fluoranthene	**15.5** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Benzo(g,h,i)perylene	**9.05** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Benzo(k)fluoranthene	**9.83** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Butylbenzylphthalate	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Chrysene	**18.4** (3.86)		8270D		20	12/17/21 22:14	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**2.16** (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Dibenzofuran	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Diethylphthalate	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Dimethylphthalate	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Di-n-butylphthalate	**0.864** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Di-n-octylphthalate	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Fluoranthene	**33.8** (7.70)		8270D		20	12/17/21 22:14	D1L0342	DL11313
Fluorene	**1.89** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Hexachlorobenzene	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Hexachlorobutadiene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Hexachloroethane	ND (0.386)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**10.1** (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Isophorone	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Naphthalene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Nitrobenzene	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Pentachlorophenol	ND (1.54)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Phenanthrene	**22.0** (7.70)		8270D		20	12/17/21 22:14	D1L0342	DL11313
Phenol	ND (0.770)		8270D		2	12/17/21 15:29	D1L0342	DL11313
Pyrene	**41.9** (7.70)		8270D		20	12/17/21 22:14	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*74 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*92 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*80 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*78 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 14.5
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*78 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*75 %*		*30-130*				
Surrogate: Phenol-d6		*81 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*95 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**261** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.28** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.4 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S1 0-5
Date Sampled: 12/09/21 09:31
Percent Solids: 89
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-19
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry

Extraction Method: 3050B

Total Metals

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	**11.0** (2.38)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Barium	**74.4** (2.38)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Cadmium	ND (0.48)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Chromium	**13.4** (0.95)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Lead	**303** (4.75)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Mercury	**0.282** (0.036)		7471B		1	JRB	12/16/21 15:45	0.64	40	DL11528
Selenium	ND (4.75)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525
Silver	**1.49** (0.48)		6010C		1	KJK	12/15/21 19:03	2.44	100	DL11525

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/L

Extraction Method: 3005A TCLP

1311 TCLP Metals

Analyte	Results (MRL)	MDL	Method	TCLP Limit	DF	Analyst	Analyzed	I/V	F/V	Batch
Lead	**0.287** (0.050)		1311/6010C		1	KJK	12/14/21 22:04	50	50	DL11420

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 19.3
Final Volume: 10
Extraction Method: 3540C

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: JLG
Prepared: 12/10/21 22:10

8082A Polychlorinated Biphenyls (PCB)

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Aroclor 1016	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1221	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1232	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1242	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1248	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1254	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1260	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1262	ND (0.06)		8082A		1	12/14/21 2:44		DL11009
Aroclor 1268	ND (0.06)		8082A		1	12/14/21 2:44		DL11009

	%Recovery	Qualifier	Limits
Surrogate: Decachlorobiphenyl	*73 %*		*30-150*
Surrogate: Decachlorobiphenyl [2C]	*84 %*		*30-150*
Surrogate: Tetrachloro-m-xylene	*64 %*		*30-150*
Surrogate: Tetrachloro-m-xylene [2C]	*69 %*		*30-150*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 20.4
Final Volume: 1
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: BXK
Prepared: 12/13/21 19:40

8100M Total Petroleum Hydrocarbons

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Total Petroleum Hydrocarbons	**244** (22.7)		8100M		2	12/15/21 22:01	D1L0322	DL11314

	%Recovery	Qualifier	Limits
Surrogate: O-Terphenyl	*82 %*		*40-140*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 15.2
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
1,2,4-Trichlorobenzene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
1,2-Dichlorobenzene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
1,3-Dichlorobenzene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
1,4-Dichlorobenzene	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4,5-Trichlorophenol	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4,6-Trichlorophenol	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4-Dichlorophenol	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4-Dimethylphenol	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4-Dinitrophenol	ND (0.763)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,4-Dinitrotoluene	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2,6-Dinitrotoluene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2-Chloronaphthalene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2-Chlorophenol	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2-Methylnaphthalene	**0.424** (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2-Methylphenol	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
2-Nitrophenol	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
3,3′-Dichlorobenzidine	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
3+4-Methylphenol	ND (0.763)		8270D		1	12/17/21 16:00	D1L0342	DL11313
4-Bromophenyl-phenylether	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
4-Chloroaniline	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
4-Nitrophenol	ND (1.91)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Acenaphthene	**0.412** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Acenaphthylene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Acetophenone	ND (0.763)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Aniline	ND (1.91)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Anthracene	**1.03** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Azobenzene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Benzo(a)anthracene	**3.07** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Benzo(a)pyrene	**2.76** (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Benzo(b)fluoranthene	**2.51** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Benzo(g,h,i)perylene	**1.75** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Benzo(k)fluoranthene	**2.11** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 15.2
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
bis(2-Chloroethoxy)methane	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
bis(2-Chloroethyl)ether	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
bis(2-chloroisopropyl)Ether	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
bis(2-Ethylhexyl)phthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Butylbenzylphthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Chrysene	**2.96** (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Dibenzo(a,h)Anthracene	**0.436** (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Dibenzofuran	**0.393** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Diethylphthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Dimethylphthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Di-n-butylphthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Di-n-octylphthalate	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Fluoranthene	**6.15** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Fluorene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Hexachlorobenzene	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Hexachlorobutadiene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Hexachloroethane	ND (0.191)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Indeno(1,2,3-cd)Pyrene	**1.97** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Isophorone	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Naphthalene	**0.425** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Nitrobenzene	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
N-Nitrosodimethylamine	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Pentachlorophenol	ND (0.763)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Phenanthrene	**4.67** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Phenol	ND (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313
Pyrene	**5.99** (0.381)		8270D		1	12/17/21 16:00	D1L0342	DL11313

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichlorobenzene-d4	*69 %*		*30-130*
Surrogate: 2,4,6-Tribromophenol	*88 %*		*30-130*
Surrogate: 2-Chlorophenol-d4	*70 %*		*30-130*
Surrogate: 2-Fluorobiphenyl	*71 %*		*30-130*

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 15.2
Final Volume: 0.5
Extraction Method: 3546

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: mg/kg dry
Analyst: TJ
Prepared: 12/13/21 19:20

8270D Semi-Volatile Organic Compounds

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyzed	Sequence	Batch
Surrogate: 2-Fluorophenol		*68 %*		*30-130*				
Surrogate: Nitrobenzene-d5		*68 %*		*30-130*				
Surrogate: Phenol-d6		*71 %*		*30-130*				
Surrogate: p-Terphenyl-d14		*96 %*		*30-130*				

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil

Classical Chemistry

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Units	Batch
Conductivity	**346** (5)		9050A		1	CCP	12/13/21 21:33	umhos/cm	DL11369
Corrosivity (pH)	**8.04** (N/A)		9045		1	EAM	12/10/21 20:20	S.U.	DL11061
Corrosivity (pH) Sample Temp	**Soil pH measured in water at 21.6 ºC.**								
Flashpoint	**> 200** (N/A)		1010A		1	CCP	12/14/21 16:30	°F	DL11433
Reactive Cyanide	ND (2.0)		7.3.3.2		1	JLK	12/13/21 15:38	mg/kg	DL11341
Reactive Sulfide	ND (2.0)		7.3.4.1		1	JLK	12/13/21 15:38	mg/kg	DL11341

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
Client Sample ID: 2101938-B414-S2 5-10
Date Sampled: 12/09/21 09:46
Percent Solids: 86
Initial Volume: 100
Final Volume: 2000
Extraction Method: 1311

ESS Laboratory Work Order: 21L0422
ESS Laboratory Sample ID: 21L0422-20
Sample Matrix: Soil
Units: °C
Analyst: JCG
Prepared: 12/13/21 11:50

TCLP Extraction by 1311

Analyte	Results (MRL)	MDL	Method	Limit	DF	Analyst	Analyzed	Batch
Temperature (Min C)	**21.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Max C)	**23.4** (N/A)		1311		1	JCG	12/14/21 6:45	DL11063
Temperature (Range)	**Temperature is within 23 +/-2 °C.** (N/A)							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Total Metals										
Batch DL11525 - 3050B										
Blank										
Arsenic	ND	2.50	mg/kg wet							
Barium	ND	2.50	mg/kg wet							
Cadmium	ND	0.50	mg/kg wet							
Chromium	ND	1.00	mg/kg wet							
Lead	ND	5.00	mg/kg wet							
Selenium	ND	5.00	mg/kg wet							
Silver	ND	0.50	mg/kg wet							
LCS										
Arsenic	97.1	8.06	mg/kg wet	93.10		104	80-120			
Barium	731	8.06	mg/kg wet	690.0		106	75-125			
Cadmium	305	1.61	mg/kg wet	301.0		101	75-125			
Chromium	336	3.23	mg/kg wet	326.0		103	70-130			
Lead	205	16.1	mg/kg wet	192.0		107	80-120			
Selenium	276	16.1	mg/kg wet	270.0		102	80-120			
Silver	66.6	1.61	mg/kg wet	63.70		104	80-120			
LCS Dup										
Arsenic	75.3	7.25	mg/kg wet	93.10		81	80-120	25	20	D+
Barium	526	7.25	mg/kg wet	690.0		76	75-125	33	20	D+
Cadmium	235	1.45	mg/kg wet	301.0		78	75-125	26	20	D+
Chromium	258	2.90	mg/kg wet	326.0		79	70-130	26	20	D+
Lead	159	14.5	mg/kg wet	192.0		83	80-120	25	20	D+
Selenium	215	14.5	mg/kg wet	270.0		80	80-120	25	20	D+
Silver	51.8	1.45	mg/kg wet	63.70		81	80-120	25	20	D+
Batch DL11528 - 3050B										
Blank										
Mercury	ND	0.033	mg/kg wet							
LCS										
Mercury	16.9	2.83	mg/kg wet	15.40		110	80-120			
LCS Dup										
Mercury	16.2	3.19	mg/kg wet	15.40		105	80-120	4	20	
1311 TCLP Metals										
Batch DL11420 - 3005A_TCLP										
Blank										
Lead	ND	0.050	mg/L							
LCS										
Lead	0.474	0.050	mg/L	0.5000		95	80-120			
LCS Dup										
Lead	0.487	0.050	mg/L	0.5000		97	80-120	3	20	
8081B Organochlorine Pesticides										

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL10908 - 3546										
Blank										
4,4´-DDD	ND	0.0025	mg/kg wet							
4,4´-DDD [2C]	ND	0.0025	mg/kg wet							
4,4´-DDE	ND	0.0025	mg/kg wet							
4,4´-DDE [2C]	ND	0.0025	mg/kg wet							
4,4´-DDT	ND	0.0025	mg/kg wet							
4,4´-DDT [2C]	ND	0.0025	mg/kg wet							
Alachlor	ND	0.0025	mg/kg wet							
Alachlor [2C]	ND	0.0025	mg/kg wet							
Aldrin	ND	0.0025	mg/kg wet							
Aldrin [2C]	ND	0.0025	mg/kg wet							
alpha-BHC	ND	0.0025	mg/kg wet							
alpha-BHC [2C]	ND	0.0025	mg/kg wet							
alpha-Chlordane	ND	0.0025	mg/kg wet							
alpha-Chlordane [2C]	ND	0.0025	mg/kg wet							
beta-BHC	ND	0.0025	mg/kg wet							
beta-BHC [2C]	ND	0.0025	mg/kg wet							
Chlordane (Total)	ND	0.0200	mg/kg wet							
Chlordane (Total) [2C]	ND	0.0200	mg/kg wet							
delta-BHC	ND	0.0025	mg/kg wet							
delta-BHC [2C]	ND	0.0025	mg/kg wet							
Dieldrin	ND	0.0025	mg/kg wet							
Dieldrin [2C]	ND	0.0025	mg/kg wet							
Endosulfan I	ND	0.0025	mg/kg wet							
Endosulfan I [2C]	ND	0.0025	mg/kg wet							
Endosulfan II	ND	0.0025	mg/kg wet							
Endosulfan II [2C]	ND	0.0025	mg/kg wet							
Endosulfan Sulfate	ND	0.0025	mg/kg wet							
Endosulfan Sulfate [2C]	ND	0.0025	mg/kg wet							
Endrin	ND	0.0025	mg/kg wet							
Endrin [2C]	ND	0.0025	mg/kg wet							
Endrin Ketone	ND	0.0025	mg/kg wet							
Endrin Ketone [2C]	ND	0.0025	mg/kg wet							
gamma-BHC (Lindane)	ND	0.0015	mg/kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0015	mg/kg wet							
gamma-Chlordane	ND	0.0025	mg/kg wet							
gamma-Chlordane [2C]	ND	0.0025	mg/kg wet							
Heptachlor	ND	0.0025	mg/kg wet							
Heptachlor [2C]	ND	0.0025	mg/kg wet							
Heptachlor Epoxide	ND	0.0025	mg/kg wet							
Heptachlor Epoxide [2C]	ND	0.0025	mg/kg wet							
Hexachlorobenzene	ND	0.0025	mg/kg wet							
Hexachlorobenzene [2C]	ND	0.0025	mg/kg wet							
Methoxychlor	ND	0.0025	mg/kg wet							
Methoxychlor [2C]	ND	0.0025	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL10908 - 3546										
Surrogate: Decachlorobiphenyl	*0.0111*		mg/kg wet	*0.01250*		*89*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0115*		mg/kg wet	*0.01250*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0113*		mg/kg wet	*0.01250*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0113*		mg/kg wet	*0.01250*		*91*	*30-150*			
LCS										
4,4´-DDD	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
4,4´-DDD [2C]	0.0118	0.0025	mg/kg wet	0.01250		94	40-140			
4,4´-DDE	0.0118	0.0025	mg/kg wet	0.01250		95	40-140			
4,4´-DDE [2C]	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
4,4´-DDT	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
4,4´-DDT [2C]	0.0122	0.0025	mg/kg wet	0.01250		97	40-140			
Alachlor	0.0108	0.0025	mg/kg wet	0.01250		86	40-140			
Alachlor [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Aldrin	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Aldrin [2C]	0.0123	0.0025	mg/kg wet	0.01250		98	40-140			
alpha-BHC	0.0117	0.0025	mg/kg wet	0.01250		93	40-140			
alpha-BHC [2C]	0.0122	0.0025	mg/kg wet	0.01250		97	40-140			
alpha-Chlordane	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
alpha-Chlordane [2C]	0.0116	0.0025	mg/kg wet	0.01250		92	40-140			
beta-BHC	0.0114	0.0025	mg/kg wet	0.01250		91	40-140			
beta-BHC [2C]	0.0115	0.0025	mg/kg wet	0.01250		92	40-140			
delta-BHC	0.0118	0.0025	mg/kg wet	0.01250		95	40-140			
delta-BHC [2C]	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Dieldrin	0.0126	0.0025	mg/kg wet	0.01250		101	40-140			
Dieldrin [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
Endosulfan I	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Endosulfan I [2C]	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
Endosulfan II	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
Endosulfan II [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Endosulfan Sulfate	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Endosulfan Sulfate [2C]	0.0116	0.0025	mg/kg wet	0.01250		93	40-140			
Endrin	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Endrin [2C]	0.0119	0.0025	mg/kg wet	0.01250		96	40-140			
Endrin Ketone	0.0120	0.0025	mg/kg wet	0.01250		96	40-140			
Endrin Ketone [2C]	0.0108	0.0025	mg/kg wet	0.01250		86	40-140			
gamma-BHC (Lindane)	0.0116	0.0015	mg/kg wet	0.01250		93	40-140			
gamma-BHC (Lindane) [2C]	0.0118	0.0015	mg/kg wet	0.01250		95	40-140			
gamma-Chlordane	0.0132	0.0025	mg/kg wet	0.01250		105	40-140			
gamma-Chlordane [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			
Heptachlor	0.0115	0.0025	mg/kg wet	0.01250		92	40-140			
Heptachlor [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Heptachlor Epoxide	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Heptachlor Epoxide [2C]	0.0118	0.0025	mg/kg wet	0.01250		94	40-140			
Hexachlorobenzene	0.0109	0.0025	mg/kg wet	0.01250		87	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL10908 - 3546										
Hexachlorobenzene [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Methoxychlor	0.0110	0.0025	mg/kg wet	0.01250		88	40-140			
Methoxychlor [2C]	0.0112	0.0025	mg/kg wet	0.01250		90	40-140			
Surrogate: Decachlorobiphenyl	*0.0109*		mg/kg wet	*0.01250*		*87*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0111*		mg/kg wet	*0.01250*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0114*		mg/kg wet	*0.01250*		*92*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
LCS Dup										
4,4´-DDD	0.0127	0.0025	mg/kg wet	0.01250		101	40-140	6	30	
4,4´-DDD [2C]	0.0123	0.0025	mg/kg wet	0.01250		99	40-140	5	30	
4,4´-DDE	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	2	30	
4,4´-DDE [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	3	30	
4,4´-DDT	0.0141	0.0025	mg/kg wet	0.01250		113	40-140	8	30	
4,4´-DDT [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140	8	30	
Alachlor	0.0114	0.0025	mg/kg wet	0.01250		91	40-140	6	30	
Alachlor [2C]	0.0114	0.0025	mg/kg wet	0.01250		91	40-140	4	30	
Aldrin	0.0119	0.0025	mg/kg wet	0.01250		95	40-140	1	30	
Aldrin [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	0.7	30	
alpha-BHC	0.0117	0.0025	mg/kg wet	0.01250		94	40-140	0.4	30	
alpha-BHC [2C]	0.0123	0.0025	mg/kg wet	0.01250		99	40-140	1	30	
alpha-Chlordane	0.0117	0.0025	mg/kg wet	0.01250		94	40-140	2	30	
alpha-Chlordane [2C]	0.0118	0.0025	mg/kg wet	0.01250		94	40-140	2	30	
beta-BHC	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	0.9	30	
beta-BHC [2C]	0.0117	0.0025	mg/kg wet	0.01250		93	40-140	2	30	
delta-BHC	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	3	30	
delta-BHC [2C]	0.0122	0.0025	mg/kg wet	0.01250		97	40-140	4	30	
Dieldrin	0.0128	0.0025	mg/kg wet	0.01250		103	40-140	2	30	
Dieldrin [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140	2	30	
Endosulfan I	0.0117	0.0025	mg/kg wet	0.01250		94	40-140	1	30	
Endosulfan I [2C]	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	2	30	
Endosulfan II	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	3	30	
Endosulfan II [2C]	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	4	30	
Endosulfan Sulfate	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	7	30	
Endosulfan Sulfate [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	7	30	
Endrin	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	3	30	
Endrin [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	4	30	
Endrin Ketone	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	6	30	
Endrin Ketone [2C]	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	6	30	
gamma-BHC (Lindane)	0.0117	0.0015	mg/kg wet	0.01250		94	40-140	1	30	
gamma-BHC (Lindane) [2C]	0.0121	0.0015	mg/kg wet	0.01250		96	40-140	2	30	
gamma-Chlordane	0.0133	0.0025	mg/kg wet	0.01250		106	40-140	0.9	30	
gamma-Chlordane [2C]	0.0137	0.0025	mg/kg wet	0.01250		110	40-140	2	30	
Heptachlor	0.0118	0.0025	mg/kg wet	0.01250		94	40-140	2	30	
Heptachlor [2C]	0.0123	0.0025	mg/kg wet	0.01250		98	40-140	2	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL10908 - 3546										
Heptachlor Epoxide	0.0118	0.0025	mg/kg wet	0.01250		95	40-140	0.8	30	
Heptachlor Epoxide [2C]	0.0119	0.0025	mg/kg wet	0.01250		96	40-140	1	30	
Hexachlorobenzene	0.0105	0.0025	mg/kg wet	0.01250		84	40-140	4	30	
Hexachlorobenzene [2C]	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	0.5	30	
Methoxychlor	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	10	30	
Methoxychlor [2C]	0.0123	0.0025	mg/kg wet	0.01250		98	40-140	9	30	
Surrogate: Decachlorobiphenyl	*0.0112*		mg/kg wet	*0.01250*		*90*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0116*		mg/kg wet	*0.01250*		*93*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0111*		mg/kg wet	*0.01250*		*88*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0111*		mg/kg wet	*0.01250*		*89*	*30-150*			
Batch DL11506 - 3546										
Blank										
4,4´-DDD	ND	0.0025	mg/kg wet							
4,4´-DDD [2C]	ND	0.0025	mg/kg wet							
4,4´-DDE	ND	0.0025	mg/kg wet							
4,4´-DDE [2C]	ND	0.0025	mg/kg wet							
4,4´-DDT	ND	0.0025	mg/kg wet							
4,4´-DDT [2C]	ND	0.0025	mg/kg wet							
Alachlor	ND	0.0025	mg/kg wet							
Alachlor [2C]	ND	0.0025	mg/kg wet							
Aldrin	ND	0.0025	mg/kg wet							
Aldrin [2C]	ND	0.0025	mg/kg wet							
alpha-BHC	ND	0.0025	mg/kg wet							
alpha-BHC [2C]	ND	0.0025	mg/kg wet							
alpha-Chlordane	ND	0.0025	mg/kg wet							
alpha-Chlordane [2C]	ND	0.0025	mg/kg wet							
beta-BHC	ND	0.0025	mg/kg wet							
beta-BHC [2C]	ND	0.0025	mg/kg wet							
Chlordane (Total)	ND	0.0200	mg/kg wet							
Chlordane (Total) [2C]	ND	0.0200	mg/kg wet							
delta-BHC	ND	0.0025	mg/kg wet							
delta-BHC [2C]	ND	0.0025	mg/kg wet							
Dieldrin	ND	0.0025	mg/kg wet							
Dieldrin [2C]	ND	0.0025	mg/kg wet							
Endosulfan I	ND	0.0025	mg/kg wet							
Endosulfan I [2C]	ND	0.0025	mg/kg wet							
Endosulfan II	ND	0.0025	mg/kg wet							
Endosulfan II [2C]	ND	0.0025	mg/kg wet							
Endosulfan Sulfate	ND	0.0025	mg/kg wet							
Endosulfan Sulfate [2C]	ND	0.0025	mg/kg wet							
Endrin	ND	0.0025	mg/kg wet							
Endrin [2C]	ND	0.0025	mg/kg wet							
Endrin Ketone	ND	0.0025	mg/kg wet							
Endrin Ketone [2C]	ND	0.0025	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
gamma-BHC (Lindane)	ND	0.0015	mg/kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0015	mg/kg wet							
gamma-Chlordane	ND	0.0025	mg/kg wet							
gamma-Chlordane [2C]	ND	0.0025	mg/kg wet							
Heptachlor	ND	0.0025	mg/kg wet							
Heptachlor [2C]	ND	0.0025	mg/kg wet							
Heptachlor Epoxide	ND	0.0025	mg/kg wet							
Heptachlor Epoxide [2C]	ND	0.0025	mg/kg wet							
Hexachlorobenzene	ND	0.0025	mg/kg wet							
Hexachlorobenzene [2C]	ND	0.0025	mg/kg wet							
Methoxychlor	ND	0.0025	mg/kg wet							
Methoxychlor [2C]	ND	0.0025	mg/kg wet							
Surrogate: Decachlorobiphenyl	*0.0124*		mg/kg wet	*0.01250*		*100*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0122*		mg/kg wet	*0.01250*		*97*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0118*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0119*		mg/kg wet	*0.01250*		*95*	*30-150*			
LCS										
4,4´-DDD	0.0141	0.0025	mg/kg wet	0.01250		113	40-140			
4,4´-DDD [2C]	0.0137	0.0025	mg/kg wet	0.01250		110	40-140			
4,4´-DDE	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
4,4´-DDE [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
4,4´-DDT	0.0156	0.0025	mg/kg wet	0.01250		125	40-140			
4,4´-DDT [2C]	0.0149	0.0025	mg/kg wet	0.01250		120	40-140			
Alachlor	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Alachlor [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140			
Aldrin	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Aldrin [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
alpha-BHC	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
alpha-BHC [2C]	0.0133	0.0025	mg/kg wet	0.01250		106	40-140			
alpha-Chlordane	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
alpha-Chlordane [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
beta-BHC	0.0124	0.0025	mg/kg wet	0.01250		99	40-140			
beta-BHC [2C]	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
delta-BHC	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
delta-BHC [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			
Dieldrin	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
Dieldrin [2C]	0.0141	0.0025	mg/kg wet	0.01250		112	40-140			
Endosulfan I	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Endosulfan I [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140			
Endosulfan II	0.0139	0.0025	mg/kg wet	0.01250		112	40-140			
Endosulfan II [2C]	0.0138	0.0025	mg/kg wet	0.01250		110	40-140			
Endosulfan Sulfate	0.0145	0.0025	mg/kg wet	0.01250		116	40-140			
Endosulfan Sulfate [2C]	0.0143	0.0025	mg/kg wet	0.01250		115	40-140			
Endrin	0.0134	0.0025	mg/kg wet	0.01250		107	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

8081B Organochlorine Pesticides

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch DL11506 - 3546										
Endrin [2C]	0.0135	0.0025	mg/kg wet	0.01250		108	40-140			
Endrin Ketone	0.0149	0.0025	mg/kg wet	0.01250		120	40-140			
Endrin Ketone [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
gamma-BHC (Lindane)	0.0126	0.0015	mg/kg wet	0.01250		101	40-140			
gamma-BHC (Lindane) [2C]	0.0130	0.0015	mg/kg wet	0.01250		104	40-140			
gamma-Chlordane	0.0141	0.0025	mg/kg wet	0.01250		113	40-140			
gamma-Chlordane [2C]	0.0145	0.0025	mg/kg wet	0.01250		116	40-140			
Heptachlor	0.0127	0.0025	mg/kg wet	0.01250		101	40-140			
Heptachlor [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140			
Heptachlor Epoxide	0.0125	0.0025	mg/kg wet	0.01250		100	40-140			
Heptachlor Epoxide [2C]	0.0127	0.0025	mg/kg wet	0.01250		102	40-140			
Hexachlorobenzene	0.0115	0.0025	mg/kg wet	0.01250		92	40-140			
Hexachlorobenzene [2C]	0.0117	0.0025	mg/kg wet	0.01250		94	40-140			
Methoxychlor	0.0146	0.0025	mg/kg wet	0.01250		117	40-140			
Methoxychlor [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140			
Surrogate: Decachlorobiphenyl	*0.0132*		mg/kg wet	*0.01250*		*106*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0130*		mg/kg wet	*0.01250*		*104*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0126*		mg/kg wet	*0.01250*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0127*		mg/kg wet	*0.01250*		*102*	*30-150*			
LCS Dup										
4,4´-DDD	0.0138	0.0025	mg/kg wet	0.01250		110	40-140	2	30	
4,4´-DDD [2C]	0.0138	0.0025	mg/kg wet	0.01250		110	40-140	0.2	30	
4,4´-DDE	0.0131	0.0025	mg/kg wet	0.01250		105	40-140	0.8	30	
4,4´-DDE [2C]	0.0132	0.0025	mg/kg wet	0.01250		106	40-140	0.2	30	
4,4´-DDT	0.0157	0.0025	mg/kg wet	0.01250		125	40-140	0.09	30	
4,4´-DDT [2C]	0.0148	0.0025	mg/kg wet	0.01250		119	40-140	0.7	30	
Alachlor	0.0128	0.0025	mg/kg wet	0.01250		102	40-140	0.5	30	
Alachlor [2C]	0.0121	0.0025	mg/kg wet	0.01250		97	40-140	0.1	30	
Aldrin	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	0.7	30	
Aldrin [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
alpha-BHC	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	1	30	
alpha-BHC [2C]	0.0131	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
alpha-Chlordane	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	0.06	30	
alpha-Chlordane [2C]	0.0124	0.0025	mg/kg wet	0.01250		100	40-140	0.4	30	
beta-BHC	0.0122	0.0025	mg/kg wet	0.01250		98	40-140	2	30	
beta-BHC [2C]	0.0124	0.0025	mg/kg wet	0.01250		99	40-140	0.9	30	
delta-BHC	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	4	30	
delta-BHC [2C]	0.0132	0.0025	mg/kg wet	0.01250		105	40-140	2	30	
Dieldrin	0.0135	0.0025	mg/kg wet	0.01250		108	40-140	0.6	30	
Dieldrin [2C]	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	0.2	30	
Endosulfan I	0.0124	0.0025	mg/kg wet	0.01250		100	40-140	0.7	30	
Endosulfan I [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	0.3	30	
Endosulfan II	0.0140	0.0025	mg/kg wet	0.01250		112	40-140	0.3	30	
Endosulfan II [2C]	0.0138	0.0025	mg/kg wet	0.01250		111	40-140	0.5	30	

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Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8081B Organochlorine Pesticides										
Batch DL11506 - 3546										
Endosulfan Sulfate	0.0146	0.0025	mg/kg wet	0.01250		117	40-140	0.6	30	
Endosulfan Sulfate [2C]	0.0143	0.0025	mg/kg wet	0.01250		115	40-140	0.05	30	
Endrin	0.0134	0.0025	mg/kg wet	0.01250		107	40-140	0.3	30	
Endrin [2C]	0.0134	0.0025	mg/kg wet	0.01250		107	40-140	0.3	30	
Endrin Ketone	0.0150	0.0025	mg/kg wet	0.01250		120	40-140	0.2	30	
Endrin Ketone [2C]	0.0133	0.0025	mg/kg wet	0.01250		107	40-140	0.6	30	
gamma-BHC (Lindane)	0.0125	0.0015	mg/kg wet	0.01250		100	40-140	1	30	
gamma-BHC (Lindane) [2C]	0.0128	0.0015	mg/kg wet	0.01250		103	40-140	2	30	
gamma-Chlordane	0.0141	0.0025	mg/kg wet	0.01250		113	40-140	0.3	30	
gamma-Chlordane [2C]	0.0144	0.0025	mg/kg wet	0.01250		115	40-140	0.3	30	
Heptachlor	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	1	30	
Heptachlor [2C]	0.0130	0.0025	mg/kg wet	0.01250		104	40-140	2	30	
Heptachlor Epoxide	0.0125	0.0025	mg/kg wet	0.01250		100	40-140	0.2	30	
Heptachlor Epoxide [2C]	0.0126	0.0025	mg/kg wet	0.01250		101	40-140	0.7	30	
Hexachlorobenzene	0.0110	0.0025	mg/kg wet	0.01250		88	40-140	5	30	
Hexachlorobenzene [2C]	0.0115	0.0025	mg/kg wet	0.01250		92	40-140	2	30	
Methoxychlor	0.0146	0.0025	mg/kg wet	0.01250		117	40-140	0.5	30	
Methoxychlor [2C]	0.0141	0.0025	mg/kg wet	0.01250		113	40-140	1	30	
Surrogate: Decachlorobiphenyl	*0.0129*		mg/kg wet	*0.01250*		*103*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0127*		mg/kg wet	*0.01250*		*101*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0118*		mg/kg wet	*0.01250*		*95*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0120*		mg/kg wet	*0.01250*		*96*	*30-150*			
8082A Polychlorinated Biphenyls (PCB)										
Batch DL11008 - 3540C										
Blank										
Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL11008 - 3540C										
Surrogate: Decachlorobiphenyl	*0.0205*		mg/kg wet	*0.02500*		*82*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0223*		mg/kg wet	*0.02500*		*89*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0182*		mg/kg wet	*0.02500*		*73*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0206*		mg/kg wet	*0.02500*		*82*	*30-150*			
LCS										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		82	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		85	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140			
Surrogate: Decachlorobiphenyl	*0.0212*		mg/kg wet	*0.02500*		*85*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0225*		mg/kg wet	*0.02500*		*90*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0196*		mg/kg wet	*0.02500*		*78*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0215*		mg/kg wet	*0.02500*		*86*	*30-150*			
LCS Dup										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		86	40-140	5	30	
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		84	40-140	3	30	
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		88	40-140	4	30	
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		87	40-140	3	30	
Surrogate: Decachlorobiphenyl	*0.0218*		mg/kg wet	*0.02500*		*87*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0228*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0194*		mg/kg wet	*0.02500*		*78*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0216*		mg/kg wet	*0.02500*		*86*	*30-150*			
Batch DL11009 - 3540C										
Blank										
Aroclor 1016	ND	0.05	mg/kg wet							
Aroclor 1016 [2C]	ND	0.05	mg/kg wet							
Aroclor 1221	ND	0.05	mg/kg wet							
Aroclor 1221 [2C]	ND	0.05	mg/kg wet							
Aroclor 1232	ND	0.05	mg/kg wet							
Aroclor 1232 [2C]	ND	0.05	mg/kg wet							
Aroclor 1242	ND	0.05	mg/kg wet							
Aroclor 1242 [2C]	ND	0.05	mg/kg wet							
Aroclor 1248	ND	0.05	mg/kg wet							
Aroclor 1248 [2C]	ND	0.05	mg/kg wet							
Aroclor 1254	ND	0.05	mg/kg wet							
Aroclor 1254 [2C]	ND	0.05	mg/kg wet							
Aroclor 1260	ND	0.05	mg/kg wet							
Aroclor 1260 [2C]	ND	0.05	mg/kg wet							
Aroclor 1262	ND	0.05	mg/kg wet							
Aroclor 1262 [2C]	ND	0.05	mg/kg wet							
Aroclor 1268	ND	0.05	mg/kg wet							
Aroclor 1268 [2C]	ND	0.05	mg/kg wet							

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Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8082A Polychlorinated Biphenyls (PCB)										
Batch DL11009 - 3540C										
Surrogate: Decachlorobiphenyl	*0.0228*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0243*		mg/kg wet	*0.02500*		*97*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0143*		mg/kg wet	*0.02500*		*57*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0165*		mg/kg wet	*0.02500*		*66*	*30-150*			
LCS										
Aroclor 1016	0.4	0.05	mg/kg wet	0.5000		80	40-140			
Aroclor 1016 [2C]	0.4	0.05	mg/kg wet	0.5000		73	40-140			
Aroclor 1260	0.4	0.05	mg/kg wet	0.5000		89	40-140			
Aroclor 1260 [2C]	0.4	0.05	mg/kg wet	0.5000		90	40-140			
Surrogate: Decachlorobiphenyl	*0.0226*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0239*		mg/kg wet	*0.02500*		*96*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.00473*		mg/kg wet	*0.02500*		*19*	*30-150*			*S-*
Surrogate: Tetrachloro-m-xylene [2C]	*0.00480*		mg/kg wet	*0.02500*		*19*	*30-150*			*S-*
LCS Dup										
Aroclor 1016	0.5	0.05	mg/kg wet	0.5000		100	40-140	22	30	
Aroclor 1016 [2C]	0.5	0.05	mg/kg wet	0.5000		91	40-140	22	30	
Aroclor 1260	0.5	0.05	mg/kg wet	0.5000		96	40-140	7	30	
Aroclor 1260 [2C]	0.5	0.05	mg/kg wet	0.5000		96	40-140	7	30	
Surrogate: Decachlorobiphenyl	*0.0242*		mg/kg wet	*0.02500*		*97*	*30-150*			
Surrogate: Decachlorobiphenyl [2C]	*0.0257*		mg/kg wet	*0.02500*		*103*	*30-150*			
Surrogate: Tetrachloro-m-xylene	*0.0229*		mg/kg wet	*0.02500*		*91*	*30-150*			
Surrogate: Tetrachloro-m-xylene [2C]	*0.0241*		mg/kg wet	*0.02500*		*96*	*30-150*			
8100M Total Petroleum Hydrocarbons										
Batch DL11021 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Hexatriacontane (C36)	ND	0.2	mg/kg wet							
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	10.0	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.52*		mg/kg wet	*5.000*		*90*	*40-140*			

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Quality Control Data

8100M Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch DL11021 - 3546										
LCS										
Decane (C10)	1.6	0.2	mg/kg wet	2.500		66	40-140			
Docosane (C22)	2.3	0.2	mg/kg wet	2.500		94	40-140			
Dodecane (C12)	1.7	0.2	mg/kg wet	2.500		67	40-140			
Eicosane (C20)	2.3	0.2	mg/kg wet	2.500		90	40-140			
Hexacosane (C26)	2.4	0.2	mg/kg wet	2.500		95	40-140			
Hexadecane (C16)	2.0	0.2	mg/kg wet	2.500		80	40-140			
Hexatriacontane (C36)	2.3	0.2	mg/kg wet	2.500		94	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Nonane (C9)	1.3	0.2	mg/kg wet	2.500		52	30-140			
Octacosane (C28)	2.3	0.2	mg/kg wet	2.500		92	40-140			
Octadecane (C18)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Tetracosane (C24)	2.1	0.2	mg/kg wet	2.500		85	40-140			
Tetradecane (C14)	1.9	0.2	mg/kg wet	2.500		77	40-140			
Total Petroleum Hydrocarbons	33.2	10.0	mg/kg wet	35.00		95	40-140			
Triacontane (C30)	2.3	0.2	mg/kg wet	2.500		91	40-140			
Surrogate: O-Terphenyl	*4.84*		mg/kg wet	*5.000*		*97*	*40-140*			
LCS Dup										
Decane (C10)	1.5	0.2	mg/kg wet	2.500		62	40-140	7	25	
Docosane (C22)	2.2	0.2	mg/kg wet	2.500		89	40-140	5	25	
Dodecane (C12)	1.6	0.2	mg/kg wet	2.500		62	40-140	8	25	
Eicosane (C20)	2.1	0.2	mg/kg wet	2.500		86	40-140	5	25	
Hexacosane (C26)	2.2	0.2	mg/kg wet	2.500		90	40-140	5	25	
Hexadecane (C16)	1.9	0.2	mg/kg wet	2.500		77	40-140	4	25	
Hexatriacontane (C36)	2.2	0.2	mg/kg wet	2.500		89	40-140	5	25	
Nonadecane (C19)	2.0	0.2	mg/kg wet	2.500		81	40-140	9	25	
Nonane (C9)	1.4	0.2	mg/kg wet	2.500		55	30-140	5	25	
Octacosane (C28)	2.2	0.2	mg/kg wet	2.500		88	40-140	5	25	
Octadecane (C18)	2.1	0.2	mg/kg wet	2.500		83	40-140	5	25	
Tetracosane (C24)	2.0	0.2	mg/kg wet	2.500		81	40-140	5	25	
Tetradecane (C14)	1.8	0.2	mg/kg wet	2.500		73	40-140	6	25	
Total Petroleum Hydrocarbons	27.0	10.0	mg/kg wet	35.00		77	40-140	21	25	
Triacontane (C30)	2.2	0.2	mg/kg wet	2.500		87	40-140	5	25	
Surrogate: O-Terphenyl	*4.56*		mg/kg wet	*5.000*		*91*	*40-140*			
Batch DL11314 - 3546										
Blank										
Decane (C10)	ND	0.2	mg/kg wet							
Docosane (C22)	ND	0.2	mg/kg wet							
Dodecane (C12)	ND	0.2	mg/kg wet							
Eicosane (C20)	ND	0.2	mg/kg wet							
Hexacosane (C26)	ND	0.2	mg/kg wet							
Hexadecane (C16)	ND	0.2	mg/kg wet							
Hexatriacontane (C36)	ND	0.2	mg/kg wet							

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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8100M Total Petroleum Hydrocarbons										
Batch DL11314 - 3546										
Nonadecane (C19)	ND	0.2	mg/kg wet							
Nonane (C9)	ND	0.2	mg/kg wet							
Octacosane (C28)	ND	0.2	mg/kg wet							
Octadecane (C18)	ND	0.2	mg/kg wet							
Tetracosane (C24)	ND	0.2	mg/kg wet							
Tetradecane (C14)	ND	0.2	mg/kg wet							
Total Petroleum Hydrocarbons	ND	10.0	mg/kg wet							
Triacontane (C30)	ND	0.2	mg/kg wet							
Surrogate: O-Terphenyl	*4.58*		mg/kg wet	*5.000*		*92*	*40-140*			
LCS										
Decane (C10)	1.9	0.2	mg/kg wet	2.500		78	40-140			
Docosane (C22)	2.4	0.2	mg/kg wet	2.500		97	40-140			
Dodecane (C12)	2.0	0.2	mg/kg wet	2.500		82	40-140			
Eicosane (C20)	2.4	0.2	mg/kg wet	2.500		96	40-140			
Hexacosane (C26)	2.5	0.2	mg/kg wet	2.500		98	40-140			
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Hexatriacontane (C36)	2.6	0.2	mg/kg wet	2.500		103	40-140			
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		89	40-140			
Nonane (C9)	1.5	0.2	mg/kg wet	2.500		62	30-140			
Octacosane (C28)	2.4	0.2	mg/kg wet	2.500		96	40-140			
Octadecane (C18)	2.3	0.2	mg/kg wet	2.500		93	40-140			
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		88	40-140			
Tetradecane (C14)	2.2	0.2	mg/kg wet	2.500		87	40-140			
Total Petroleum Hydrocarbons	31.8	10.0	mg/kg wet	35.00		91	40-140			
Triacontane (C30)	2.4	0.2	mg/kg wet	2.500		95	40-140			
Surrogate: O-Terphenyl	*4.89*		mg/kg wet	*5.000*		*98*	*40-140*			
LCS Dup										
Decane (C10)	1.6	0.2	mg/kg wet	2.500		65	40-140	17	25	
Docosane (C22)	2.4	0.2	mg/kg wet	2.500		98	40-140	0.4	25	
Dodecane (C12)	1.8	0.2	mg/kg wet	2.500		74	40-140	10	25	
Eicosane (C20)	2.4	0.2	mg/kg wet	2.500		94	40-140	1	25	
Hexacosane (C26)	2.5	0.2	mg/kg wet	2.500		99	40-140	0.7	25	
Hexadecane (C16)	2.2	0.2	mg/kg wet	2.500		86	40-140	3	25	
Hexatriacontane (C36)	2.6	0.2	mg/kg wet	2.500		104	40-140	0.6	25	
Nonadecane (C19)	2.2	0.2	mg/kg wet	2.500		89	40-140	0.5	25	
Nonane (C9)	1.3	0.2	mg/kg wet	2.500		51	30-140	18	25	
Octacosane (C28)	2.4	0.2	mg/kg wet	2.500		96	40-140	0.2	25	
Octadecane (C18)	2.3	0.2	mg/kg wet	2.500		93	40-140	0.3	25	
Tetracosane (C24)	2.2	0.2	mg/kg wet	2.500		89	40-140	0.6	25	
Tetradecane (C14)	2.0	0.2	mg/kg wet	2.500		81	40-140	8	25	
Total Petroleum Hydrocarbons	30.5	10.0	mg/kg wet	35.00		87	40-140	4	25	
Triacontane (C30)	2.4	0.2	mg/kg wet	2.500		96	40-140	0.3	25	
Surrogate: O-Terphenyl	*4.77*		mg/kg wet	*5.000*		*95*	*40-140*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8151A Chlorinated Herbicides										
Batch DL11350 - 3546										
Blank										
2,4,5-T	ND	0.010	mg/kg wet							
2,4,5-T [2C]	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex)	ND	0.010	mg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	0.010	mg/kg wet							
2,4-D	ND	0.047	mg/kg wet							
2,4-D [2C]	ND	0.047	mg/kg wet							
2,4-DB	ND	0.048	mg/kg wet							
2,4-DB [2C]	ND	0.048	mg/kg wet							
Dalapon	ND	0.046	mg/kg wet							
Dalapon [2C]	ND	0.046	mg/kg wet							
Dicamba	ND	0.009	mg/kg wet							
Dicamba [2C]	ND	0.009	mg/kg wet							
Dichlorprop	ND	0.047	mg/kg wet							
Dichlorprop [2C]	ND	0.047	mg/kg wet							
Dinoseb	ND	0.048	mg/kg wet							
Dinoseb [2C]	ND	0.048	mg/kg wet							
MCPA	ND	2.32	mg/kg wet							
MCPA [2C]	ND	2.32	mg/kg wet							
MCPP	ND	2.35	mg/kg wet							
MCPP [2C]	ND	2.35	mg/kg wet							
Surrogate: DCAA	*0.194*		mg/kg wet	*0.2000*		*97*	*30-150*			
Surrogate: DCAA [2C]	*0.181*		mg/kg wet	*0.2000*		*90*	*30-150*			
LCS										
2,4,5-T	0.014	0.010	mg/kg wet	0.01900		72	40-140			
2,4,5-T [2C]	0.014	0.010	mg/kg wet	0.01900		76	40-140			
2,4,5-TP (Silvex)	0.014	0.010	mg/kg wet	0.01900		76	40-140			
2,4,5-TP (Silvex) [2C]	0.015	0.010	mg/kg wet	0.01900		78	40-140			
2,4-D	0.160	0.047	mg/kg wet	0.1880		85	40-140			
2,4-D [2C]	0.132	0.047	mg/kg wet	0.1880		70	40-140			
2,4-DB	0.174	0.048	mg/kg wet	0.1900		92	40-140			
2,4-DB [2C]	0.159	0.048	mg/kg wet	0.1900		84	40-140			
Dalapon	0.344	0.046	mg/kg wet	0.4550		76	40-140			
Dalapon [2C]	0.363	0.046	mg/kg wet	0.4550		80	40-140			
Dicamba	0.013	0.009	mg/kg wet	0.01880		70	40-140			
Dicamba [2C]	0.015	0.009	mg/kg wet	0.01880		78	40-140			
Dichlorprop	0.185	0.047	mg/kg wet	0.1880		99	40-140			
Dichlorprop [2C]	0.156	0.047	mg/kg wet	0.1880		83	40-140			
Dinoseb	0.011	0.048	mg/kg wet	0.09500		11	10-100			
Dinoseb [2C]	0.014	0.048	mg/kg wet	0.09500		15	10-100			
MCPA	16.5	2.32	mg/kg wet	18.60		89	40-140			
MCPA [2C]	15.8	2.32	mg/kg wet	18.60		85	40-140			
MCPP	15.5	2.35	mg/kg wet	18.80		82	40-140			
MCPP [2C]	16.9	2.35	mg/kg wet	18.80		90	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8151A Chlorinated Herbicides										
Batch DL11350 - 3546										
Surrogate: DCAA	*0.198*		mg/kg wet	*0.2000*		*99*	*30-150*			
Surrogate: DCAA [2C]	*0.182*		mg/kg wet	*0.2000*		*91*	*30-150*			
LCS Dup										
2,4,5-T	0.013	0.010	mg/kg wet	0.01900		68	40-140	6	30	
2,4,5-T [2C]	0.013	0.010	mg/kg wet	0.01900		70	40-140	8	30	
2,4,5-TP (Silvex)	0.013	0.010	mg/kg wet	0.01900		70	40-140	8	30	
2,4,5-TP (Silvex) [2C]	0.014	0.010	mg/kg wet	0.01900		74	40-140	5	30	
2,4-D	0.148	0.047	mg/kg wet	0.1880		79	40-140	8	30	
2,4-D [2C]	0.123	0.047	mg/kg wet	0.1880		65	40-140	7	30	
2,4-DB	0.164	0.048	mg/kg wet	0.1900		86	40-140	6	30	
2,4-DB [2C]	0.149	0.048	mg/kg wet	0.1900		78	40-140	6	30	
Dalapon	0.320	0.046	mg/kg wet	0.4550		70	40-140	7	30	
Dalapon [2C]	0.340	0.046	mg/kg wet	0.4550		75	40-140	7	30	
Dicamba	0.012	0.009	mg/kg wet	0.01880		66	40-140	6	30	
Dicamba [2C]	0.014	0.009	mg/kg wet	0.01880		72	40-140	8	30	
Dichlorprop	0.176	0.047	mg/kg wet	0.1880		94	40-140	5	30	
Dichlorprop [2C]	0.148	0.047	mg/kg wet	0.1880		79	40-140	5	30	
Dinoseb	0.011	0.048	mg/kg wet	0.09500		12	10-100	7	30	
Dinoseb [2C]	0.015	0.048	mg/kg wet	0.09500		16	10-100	5	30	
MCPA	15.4	2.32	mg/kg wet	18.60		83	40-140	7	30	
MCPA [2C]	15.2	2.32	mg/kg wet	18.60		82	40-140	3	30	
MCPP	14.8	2.35	mg/kg wet	18.80		79	40-140	5	30	
MCPP [2C]	15.8	2.35	mg/kg wet	18.80		84	40-140	7	30	
Surrogate: DCAA	*0.184*		mg/kg wet	*0.2000*		*92*	*30-150*			
Surrogate: DCAA [2C]	*0.168*		mg/kg wet	*0.2000*		*84*	*30-150*			
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Blank										
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.167	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.167	mg/kg wet							
2,4-Dichlorophenol	ND	0.167	mg/kg wet							
2,4-Dimethylphenol	ND	0.167	mg/kg wet							
2,4-Dinitrophenol	ND	0.667	mg/kg wet							
2,4-Dinitrotoluene	ND	0.167	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.167	mg/kg wet							
2-Methylnaphthalene	ND	0.167	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.333	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	1.67	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.167	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.167	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachloroethane	ND	0.167	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	0.667	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.52*		mg/kg wet	*3.333*		*75*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Surrogate: 2,4,6-Tribromophenol	*3.31*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.73*		mg/kg wet	*5.000*		*75*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.41*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2-Fluorophenol	*3.29*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.70*		mg/kg wet	*3.333*		*81*	*30-130*			
Surrogate: Phenol-d6	*3.80*		mg/kg wet	*5.000*		*76*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.90*		mg/kg wet	*3.333*		*87*	*30-130*			
LCS										
1,2,4-Trichlorobenzene	2.28	0.333	mg/kg wet	3.333		68	40-140			
1,2-Dichlorobenzene	2.20	0.333	mg/kg wet	3.333		66	40-140			
1,3-Dichlorobenzene	2.05	0.333	mg/kg wet	3.333		61	40-140			
1,4-Dichlorobenzene	2.23	0.167	mg/kg wet	3.333		67	40-140			
2,4,5-Trichlorophenol	2.19	0.333	mg/kg wet	3.333		66	30-130			
2,4,6-Trichlorophenol	2.13	0.167	mg/kg wet	3.333		64	30-130			
2,4-Dichlorophenol	2.22	0.167	mg/kg wet	3.333		67	30-130			
2,4-Dimethylphenol	2.64	0.167	mg/kg wet	3.333		79	30-130			
2,4-Dinitrophenol	2.64	0.667	mg/kg wet	3.333		79	30-130			
2,4-Dinitrotoluene	2.42	0.167	mg/kg wet	3.333		73	40-140			
2,6-Dinitrotoluene	2.34	0.333	mg/kg wet	3.333		70	40-140			
2-Chloronaphthalene	2.26	0.333	mg/kg wet	3.333		68	40-140			
2-Chlorophenol	2.48	0.167	mg/kg wet	3.333		74	30-130			
2-Methylnaphthalene	2.39	0.167	mg/kg wet	3.333		72	40-140			
2-Methylphenol	2.43	0.333	mg/kg wet	3.333		73	30-130			
2-Nitrophenol	2.25	0.333	mg/kg wet	3.333		68	30-130			
3,3´-Dichlorobenzidine	1.65	0.333	mg/kg wet	3.333		49	40-140			
3+4-Methylphenol	4.73	0.667	mg/kg wet	6.667		71	30-130			
4-Bromophenyl-phenylether	2.35	0.333	mg/kg wet	3.333		70	40-140			
4-Chloroaniline	1.78	0.333	mg/kg wet	3.333		53	40-140			
4-Nitrophenol	1.95	1.67	mg/kg wet	3.333		58	30-130			
Acenaphthene	2.55	0.333	mg/kg wet	3.333		76	40-140			
Acenaphthylene	2.22	0.333	mg/kg wet	3.333		67	40-140			
Acetophenone	2.69	0.667	mg/kg wet	3.333		81	40-140			
Aniline	1.48	1.67	mg/kg wet	3.333		45	40-140			
Anthracene	2.54	0.333	mg/kg wet	3.333		76	40-140			
Azobenzene	2.58	0.333	mg/kg wet	3.333		77	40-140			
Benzo(a)anthracene	2.77	0.333	mg/kg wet	3.333		83	40-140			
Benzo(a)pyrene	2.49	0.167	mg/kg wet	3.333		75	40-140			
Benzo(b)fluoranthene	2.73	0.333	mg/kg wet	3.333		82	40-140			
Benzo(g,h,i)perylene	2.67	0.333	mg/kg wet	3.333		80	40-140			
Benzo(k)fluoranthene	2.34	0.333	mg/kg wet	3.333		70	40-140			
bis(2-Chloroethoxy)methane	2.28	0.333	mg/kg wet	3.333		68	40-140			
bis(2-Chloroethyl)ether	2.66	0.167	mg/kg wet	3.333		80	40-140			
bis(2-chloroisopropyl)Ether	2.41	0.167	mg/kg wet	3.333		72	40-140			
bis(2-Ethylhexyl)phthalate	2.58	0.333	mg/kg wet	3.333		77	40-140			
Butylbenzylphthalate	2.60	0.333	mg/kg wet	3.333		78	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Chrysene	2.63	0.167	mg/kg wet	3.333		79	40-140			
Dibenzo(a,h)Anthracene	2.77	0.167	mg/kg wet	3.333		83	40-140			
Dibenzofuran	2.43	0.333	mg/kg wet	3.333		73	40-140			
Diethylphthalate	2.64	0.333	mg/kg wet	3.333		79	40-140			
Dimethylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140			
Di-n-butylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140			
Di-n-octylphthalate	2.66	0.333	mg/kg wet	3.333		80	40-140			
Fluoranthene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Fluorene	2.65	0.333	mg/kg wet	3.333		80	40-140			
Hexachlorobenzene	2.58	0.167	mg/kg wet	3.333		77	40-140			
Hexachlorobutadiene	2.50	0.333	mg/kg wet	3.333		75	40-140			
Hexachloroethane	2.50	0.167	mg/kg wet	3.333		75	40-140			
Indeno(1,2,3-cd)Pyrene	2.70	0.333	mg/kg wet	3.333		81	40-140			
Isophorone	2.32	0.333	mg/kg wet	3.333		70	40-140			
Naphthalene	2.31	0.333	mg/kg wet	3.333		69	40-140			
Nitrobenzene	2.48	0.333	mg/kg wet	3.333		74	40-140			
N-Nitrosodimethylamine	1.75	0.333	mg/kg wet	3.333		52	40-140			
Pentachlorophenol	2.07	0.667	mg/kg wet	3.333		62	30-130			
Phenanthrene	2.42	0.333	mg/kg wet	3.333		72	40-140			
Phenol	2.19	0.333	mg/kg wet	3.333		66	30-130			
Pyrene	2.65	0.333	mg/kg wet	3.333		79	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.64*		mg/kg wet	*3.333*		*79*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.94*		mg/kg wet	*5.000*		*79*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.06*		mg/kg wet	*5.000*		*81*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.72*		mg/kg wet	*3.333*		*82*	*30-130*			
Surrogate: 2-Fluorophenol	*3.69*		mg/kg wet	*5.000*		*74*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.94*		mg/kg wet	*3.333*		*88*	*30-130*			
Surrogate: Phenol-d6	*4.15*		mg/kg wet	*5.000*		*83*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.93*		mg/kg wet	*3.333*		*88*	*30-130*			
LCS Dup										
1,2,4-Trichlorobenzene	2.13	0.333	mg/kg wet	3.333		64	40-140	7	30	
1,2-Dichlorobenzene	2.13	0.333	mg/kg wet	3.333		64	40-140	3	30	
1,3-Dichlorobenzene	1.94	0.333	mg/kg wet	3.333		58	40-140	6	30	
1,4-Dichlorobenzene	2.14	0.167	mg/kg wet	3.333		64	40-140	4	30	
2,4,5-Trichlorophenol	2.08	0.333	mg/kg wet	3.333		63	30-130	5	30	
2,4,6-Trichlorophenol	1.99	0.167	mg/kg wet	3.333		60	30-130	6	30	
2,4-Dichlorophenol	2.09	0.167	mg/kg wet	3.333		63	30-130	6	30	
2,4-Dimethylphenol	2.42	0.167	mg/kg wet	3.333		73	30-130	8	30	
2,4-Dinitrophenol	2.57	0.667	mg/kg wet	3.333		77	30-130	3	30	
2,4-Dinitrotoluene	2.35	0.167	mg/kg wet	3.333		71	40-140	3	30	
2,6-Dinitrotoluene	2.27	0.333	mg/kg wet	3.333		68	40-140	3	30	
2-Chloronaphthalene	2.10	0.333	mg/kg wet	3.333		63	40-140	7	30	
2-Chlorophenol	2.39	0.167	mg/kg wet	3.333		72	30-130	3	30	
2-Methylnaphthalene	2.23	0.167	mg/kg wet	3.333		67	40-140	7	30	
2-Methylphenol	2.28	0.333	mg/kg wet	3.333		68	30-130	6	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
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Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
2-Nitrophenol	2.14	0.333	mg/kg wet	3.333		64	30-130	5	30	
3,3´-Dichlorobenzidine	1.56	0.333	mg/kg wet	3.333		47	40-140	6	30	
3+4-Methylphenol	4.43	0.667	mg/kg wet	6.667		66	30-130	7	30	
4-Bromophenyl-phenylether	2.18	0.333	mg/kg wet	3.333		65	40-140	8	30	
4-Chloroaniline	1.58	0.333	mg/kg wet	3.333		47	40-140	12	30	
4-Nitrophenol	1.99	1.67	mg/kg wet	3.333		60	30-130	2	30	
Acenaphthene	2.37	0.333	mg/kg wet	3.333		71	40-140	7	30	
Acenaphthylene	2.09	0.333	mg/kg wet	3.333		63	40-140	6	30	
Acetophenone	2.53	0.667	mg/kg wet	3.333		76	40-140	6	30	
Aniline	1.35	1.67	mg/kg wet	3.333		41	40-140	9	30	
Anthracene	2.38	0.333	mg/kg wet	3.333		71	40-140	6	30	
Azobenzene	2.38	0.333	mg/kg wet	3.333		72	40-140	8	30	
Benzo(a)anthracene	2.60	0.333	mg/kg wet	3.333		78	40-140	6	30	
Benzo(a)pyrene	2.30	0.167	mg/kg wet	3.333		69	40-140	8	30	
Benzo(b)fluoranthene	2.42	0.333	mg/kg wet	3.333		72	40-140	12	30	
Benzo(g,h,i)perylene	2.47	0.333	mg/kg wet	3.333		74	40-140	8	30	
Benzo(k)fluoranthene	2.25	0.333	mg/kg wet	3.333		67	40-140	4	30	
bis(2-Chloroethoxy)methane	2.14	0.333	mg/kg wet	3.333		64	40-140	6	30	
bis(2-Chloroethyl)ether	2.51	0.167	mg/kg wet	3.333		75	40-140	6	30	
bis(2-chloroisopropyl)Ether	2.25	0.167	mg/kg wet	3.333		67	40-140	7	30	
bis(2-Ethylhexyl)phthalate	2.44	0.333	mg/kg wet	3.333		73	40-140	6	30	
Butylbenzylphthalate	2.44	0.333	mg/kg wet	3.333		73	40-140	6	30	
Chrysene	2.47	0.167	mg/kg wet	3.333		74	40-140	6	30	
Dibenzo(a,h)Anthracene	2.54	0.167	mg/kg wet	3.333		76	40-140	9	30	
Dibenzofuran	2.27	0.333	mg/kg wet	3.333		68	40-140	7	30	
Diethylphthalate	2.52	0.333	mg/kg wet	3.333		76	40-140	4	30	
Dimethylphthalate	2.40	0.333	mg/kg wet	3.333		72	40-140	5	30	
Di-n-butylphthalate	2.37	0.333	mg/kg wet	3.333		71	40-140	6	30	
Di-n-octylphthalate	2.49	0.333	mg/kg wet	3.333		75	40-140	7	30	
Fluoranthene	2.33	0.333	mg/kg wet	3.333		70	40-140	5	30	
Fluorene	2.52	0.333	mg/kg wet	3.333		76	40-140	5	30	
Hexachlorobenzene	2.38	0.167	mg/kg wet	3.333		71	40-140	8	30	
Hexachlorobutadiene	2.34	0.333	mg/kg wet	3.333		70	40-140	6	30	
Hexachloroethane	2.35	0.167	mg/kg wet	3.333		71	40-140	6	30	
Indeno(1,2,3-cd)Pyrene	2.41	0.333	mg/kg wet	3.333		72	40-140	11	30	
Isophorone	2.17	0.333	mg/kg wet	3.333		65	40-140	7	30	
Naphthalene	2.18	0.333	mg/kg wet	3.333		66	40-140	5	30	
Nitrobenzene	2.36	0.333	mg/kg wet	3.333		71	40-140	5	30	
N-Nitrosodimethylamine	1.67	0.333	mg/kg wet	3.333		50	40-140	5	30	
Pentachlorophenol	1.98	0.667	mg/kg wet	3.333		59	30-130	5	30	
Phenanthrene	2.28	0.333	mg/kg wet	3.333		68	40-140	6	30	
Phenol	2.06	0.333	mg/kg wet	3.333		62	30-130	6	30	
Pyrene	2.47	0.333	mg/kg wet	3.333		74	40-140	7	30	
Surrogate: 1,2-Dichlorobenzene-d4	*2.40*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.56*		mg/kg wet	*5.000*		*71*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11022 - 3546										
Surrogate: 2-Chlorophenol-d4	*3.71*		mg/kg wet	*5.000*		*74*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.44*		mg/kg wet	*3.333*		*73*	*30-130*			
Surrogate: 2-Fluorophenol	*3.32*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.67*		mg/kg wet	*3.333*		*80*	*30-130*			
Surrogate: Phenol-d6	*3.75*		mg/kg wet	*5.000*		*75*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.61*		mg/kg wet	*3.333*		*78*	*30-130*			
Batch DL11313 - 3546										
Blank										
1,2,4-Trichlorobenzene	ND	0.333	mg/kg wet							
1,2-Dichlorobenzene	ND	0.333	mg/kg wet							
1,3-Dichlorobenzene	ND	0.333	mg/kg wet							
1,4-Dichlorobenzene	ND	0.167	mg/kg wet							
2,4,5-Trichlorophenol	ND	0.333	mg/kg wet							
2,4,6-Trichlorophenol	ND	0.167	mg/kg wet							
2,4-Dichlorophenol	ND	0.167	mg/kg wet							
2,4-Dimethylphenol	ND	0.167	mg/kg wet							
2,4-Dinitrophenol	ND	0.667	mg/kg wet							
2,4-Dinitrotoluene	ND	0.167	mg/kg wet							
2,6-Dinitrotoluene	ND	0.333	mg/kg wet							
2-Chloronaphthalene	ND	0.333	mg/kg wet							
2-Chlorophenol	ND	0.167	mg/kg wet							
2-Methylnaphthalene	ND	0.167	mg/kg wet							
2-Methylphenol	ND	0.333	mg/kg wet							
2-Nitrophenol	ND	0.333	mg/kg wet							
3,3´-Dichlorobenzidine	ND	0.333	mg/kg wet							
3+4-Methylphenol	ND	0.667	mg/kg wet							
4-Bromophenyl-phenylether	ND	0.333	mg/kg wet							
4-Chloroaniline	ND	0.333	mg/kg wet							
4-Nitrophenol	ND	1.67	mg/kg wet							
Acenaphthene	ND	0.333	mg/kg wet							
Acenaphthylene	ND	0.333	mg/kg wet							
Acetophenone	ND	0.667	mg/kg wet							
Aniline	ND	1.67	mg/kg wet							
Anthracene	ND	0.333	mg/kg wet							
Azobenzene	ND	0.333	mg/kg wet							
Benzo(a)anthracene	ND	0.333	mg/kg wet							
Benzo(a)pyrene	ND	0.167	mg/kg wet							
Benzo(b)fluoranthene	ND	0.333	mg/kg wet							
Benzo(g,h,i)perylene	ND	0.333	mg/kg wet							
Benzo(k)fluoranthene	ND	0.333	mg/kg wet							
bis(2-Chloroethoxy)methane	ND	0.333	mg/kg wet							
bis(2-Chloroethyl)ether	ND	0.167	mg/kg wet							
bis(2-chloroisopropyl)Ether	ND	0.167	mg/kg wet							
bis(2-Ethylhexyl)phthalate	ND	0.333	mg/kg wet							

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11313 - 3546										
Butylbenzylphthalate	ND	0.333	mg/kg wet							
Chrysene	ND	0.167	mg/kg wet							
Dibenzo(a,h)Anthracene	ND	0.167	mg/kg wet							
Dibenzofuran	ND	0.333	mg/kg wet							
Diethylphthalate	ND	0.333	mg/kg wet							
Dimethylphthalate	ND	0.333	mg/kg wet							
Di-n-butylphthalate	ND	0.333	mg/kg wet							
Di-n-octylphthalate	ND	0.333	mg/kg wet							
Fluoranthene	ND	0.333	mg/kg wet							
Fluorene	ND	0.333	mg/kg wet							
Hexachlorobenzene	ND	0.167	mg/kg wet							
Hexachlorobutadiene	ND	0.333	mg/kg wet							
Hexachloroethane	ND	0.167	mg/kg wet							
Indeno(1,2,3-cd)Pyrene	ND	0.333	mg/kg wet							
Isophorone	ND	0.333	mg/kg wet							
Naphthalene	ND	0.333	mg/kg wet							
Nitrobenzene	ND	0.333	mg/kg wet							
N-Nitrosodimethylamine	ND	0.333	mg/kg wet							
Pentachlorophenol	ND	0.667	mg/kg wet							
Phenanthrene	ND	0.333	mg/kg wet							
Phenol	ND	0.333	mg/kg wet							
Pyrene	ND	0.333	mg/kg wet							
Surrogate: 1,2-Dichlorobenzene-d4	*2.51*		mg/kg wet	*3.333*		*75*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*3.89*		mg/kg wet	*5.000*		*78*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*3.59*		mg/kg wet	*5.000*		*72*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.40*		mg/kg wet	*3.333*		*72*	*30-130*			
Surrogate: 2-Fluorophenol	*3.32*		mg/kg wet	*5.000*		*66*	*30-130*			
Surrogate: Nitrobenzene-d5	*2.66*		mg/kg wet	*3.333*		*80*	*30-130*			
Surrogate: Phenol-d6	*3.67*		mg/kg wet	*5.000*		*73*	*30-130*			
Surrogate: p-Terphenyl-d14	*2.84*		mg/kg wet	*3.333*		*85*	*30-130*			
LCS										
1,2,4-Trichlorobenzene	2.43	0.333	mg/kg wet	3.333		73	40-140			
1,2-Dichlorobenzene	2.42	0.333	mg/kg wet	3.333		73	40-140			
1,3-Dichlorobenzene	2.28	0.333	mg/kg wet	3.333		69	40-140			
1,4-Dichlorobenzene	2.47	0.167	mg/kg wet	3.333		74	40-140			
2,4,5-Trichlorophenol	2.54	0.333	mg/kg wet	3.333		76	30-130			
2,4,6-Trichlorophenol	2.43	0.167	mg/kg wet	3.333		73	30-130			
2,4-Dichlorophenol	2.50	0.167	mg/kg wet	3.333		75	30-130			
2,4-Dimethylphenol	2.85	0.167	mg/kg wet	3.333		86	30-130			
2,4-Dinitrophenol	3.09	0.667	mg/kg wet	3.333		93	30-130			
2,4-Dinitrotoluene	2.69	0.167	mg/kg wet	3.333		81	40-140			
2,6-Dinitrotoluene	2.64	0.333	mg/kg wet	3.333		79	40-140			
2-Chloronaphthalene	2.49	0.333	mg/kg wet	3.333		75	40-140			
2-Chlorophenol	2.77	0.167	mg/kg wet	3.333		83	30-130			
2-Methylnaphthalene	2.61	0.167	mg/kg wet	3.333		78	40-140			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11313 - 3546										
2-Methylphenol	2.69	0.333	mg/kg wet	3.333		81	30-130			
2-Nitrophenol	2.50	0.333	mg/kg wet	3.333		75	30-130			
3,3´-Dichlorobenzidine	1.58	0.333	mg/kg wet	3.333		47	40-140			
3+4-Methylphenol	5.46	0.667	mg/kg wet	6.667		82	30-130			
4-Bromophenyl-phenylether	2.61	0.333	mg/kg wet	3.333		78	40-140			
4-Chloroaniline	1.48	0.333	mg/kg wet	3.333		44	40-140			
4-Nitrophenol	2.33	1.67	mg/kg wet	3.333		70	30-130			
Acenaphthene	2.80	0.333	mg/kg wet	3.333		84	40-140			
Acenaphthylene	2.46	0.333	mg/kg wet	3.333		74	40-140			
Acetophenone	2.90	0.667	mg/kg wet	3.333		87	40-140			
Aniline	1.51	1.67	mg/kg wet	3.333		45	40-140			
Anthracene	2.80	0.333	mg/kg wet	3.333		84	40-140			
Azobenzene	2.89	0.333	mg/kg wet	3.333		87	40-140			
Benzo(a)anthracene	3.02	0.333	mg/kg wet	3.333		90	40-140			
Benzo(a)pyrene	2.70	0.167	mg/kg wet	3.333		81	40-140			
Benzo(b)fluoranthene	2.96	0.333	mg/kg wet	3.333		89	40-140			
Benzo(g,h,i)perylene	2.88	0.333	mg/kg wet	3.333		86	40-140			
Benzo(k)fluoranthene	2.61	0.333	mg/kg wet	3.333		78	40-140			
bis(2-Chloroethoxy)methane	2.51	0.333	mg/kg wet	3.333		75	40-140			
bis(2-Chloroethyl)ether	2.93	0.167	mg/kg wet	3.333		88	40-140			
bis(2-chloroisopropyl)Ether	2.66	0.167	mg/kg wet	3.333		80	40-140			
bis(2-Ethylhexyl)phthalate	2.84	0.333	mg/kg wet	3.333		85	40-140			
Butylbenzylphthalate	2.84	0.333	mg/kg wet	3.333		85	40-140			
Chrysene	2.87	0.167	mg/kg wet	3.333		86	40-140			
Dibenzo(a,h)Anthracene	2.99	0.167	mg/kg wet	3.333		90	40-140			
Dibenzofuran	2.67	0.333	mg/kg wet	3.333		80	40-140			
Diethylphthalate	2.96	0.333	mg/kg wet	3.333		89	40-140			
Dimethylphthalate	2.82	0.333	mg/kg wet	3.333		85	40-140			
Di-n-butylphthalate	2.79	0.333	mg/kg wet	3.333		84	40-140			
Di-n-octylphthalate	2.97	0.333	mg/kg wet	3.333		89	40-140			
Fluoranthene	2.70	0.333	mg/kg wet	3.333		81	40-140			
Fluorene	2.93	0.333	mg/kg wet	3.333		88	40-140			
Hexachlorobenzene	2.87	0.167	mg/kg wet	3.333		86	40-140			
Hexachlorobutadiene	2.71	0.333	mg/kg wet	3.333		81	40-140			
Hexachloroethane	2.73	0.167	mg/kg wet	3.333		82	40-140			
Indeno(1,2,3-cd)Pyrene	2.89	0.333	mg/kg wet	3.333		87	40-140			
Isophorone	2.55	0.333	mg/kg wet	3.333		76	40-140			
Naphthalene	2.53	0.333	mg/kg wet	3.333		76	40-140			
Nitrobenzene	2.75	0.333	mg/kg wet	3.333		82	40-140			
N-Nitrosodimethylamine	2.04	0.333	mg/kg wet	3.333		61	40-140			
Pentachlorophenol	2.38	0.667	mg/kg wet	3.333		71	30-130			
Phenanthrene	2.71	0.333	mg/kg wet	3.333		81	40-140			
Phenol	2.49	0.333	mg/kg wet	3.333		75	30-130			
Pyrene	2.89	0.333	mg/kg wet	3.333		87	40-140			
Surrogate: 1,2-Dichlorobenzene-d4	*2.80*		mg/kg wet	*3.333*		*84*	*30-130*			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11313 - 3546										
Surrogate: 2,4,6-Tribromophenol	*4.25*		mg/kg wet	*5.000*		*85*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.34*		mg/kg wet	*5.000*		*87*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.93*		mg/kg wet	*3.333*		*88*	*30-130*			
Surrogate: 2-Fluorophenol	*4.03*		mg/kg wet	*5.000*		*81*	*30-130*			
Surrogate: Nitrobenzene-d5	*3.10*		mg/kg wet	*3.333*		*93*	*30-130*			
Surrogate: Phenol-d6	*4.42*		mg/kg wet	*5.000*		*88*	*30-130*			
Surrogate: p-Terphenyl-d14	*3.10*		mg/kg wet	*3.333*		*93*	*30-130*			
LCS Dup										
1,2,4-Trichlorobenzene	2.40	0.333	mg/kg wet	3.333		72	40-140	1	30	
1,2-Dichlorobenzene	2.35	0.333	mg/kg wet	3.333		70	40-140	3	30	
1,3-Dichlorobenzene	2.16	0.333	mg/kg wet	3.333		65	40-140	5	30	
1,4-Dichlorobenzene	2.40	0.167	mg/kg wet	3.333		72	40-140	3	30	
2,4,5-Trichlorophenol	2.41	0.333	mg/kg wet	3.333		72	30-130	5	30	
2,4,6-Trichlorophenol	2.35	0.167	mg/kg wet	3.333		71	30-130	3	30	
2,4-Dichlorophenol	2.37	0.167	mg/kg wet	3.333		71	30-130	5	30	
2,4-Dimethylphenol	2.78	0.167	mg/kg wet	3.333		83	30-130	2	30	
2,4-Dinitrophenol	3.02	0.667	mg/kg wet	3.333		91	30-130	2	30	
2,4-Dinitrotoluene	2.62	0.167	mg/kg wet	3.333		79	40-140	2	30	
2,6-Dinitrotoluene	2.49	0.333	mg/kg wet	3.333		75	40-140	6	30	
2-Chloronaphthalene	2.34	0.333	mg/kg wet	3.333		70	40-140	6	30	
2-Chlorophenol	2.64	0.167	mg/kg wet	3.333		79	30-130	5	30	
2-Methylnaphthalene	2.50	0.167	mg/kg wet	3.333		75	40-140	4	30	
2-Methylphenol	2.55	0.333	mg/kg wet	3.333		77	30-130	5	30	
2-Nitrophenol	2.46	0.333	mg/kg wet	3.333		74	30-130	2	30	
3,3´-Dichlorobenzidine	1.51	0.333	mg/kg wet	3.333		45	40-140	4	30	
3+4-Methylphenol	5.17	0.667	mg/kg wet	6.667		78	30-130	5	30	
4-Bromophenyl-phenylether	2.41	0.333	mg/kg wet	3.333		72	40-140	8	30	
4-Chloroaniline	1.58	0.333	mg/kg wet	3.333		47	40-140	7	30	
4-Nitrophenol	2.25	1.67	mg/kg wet	3.333		67	30-130	4	30	
Acenaphthene	2.66	0.333	mg/kg wet	3.333		80	40-140	5	30	
Acenaphthylene	2.35	0.333	mg/kg wet	3.333		71	40-140	4	30	
Acetophenone	2.78	0.667	mg/kg wet	3.333		83	40-140	4	30	
Aniline	1.46	1.67	mg/kg wet	3.333		44	40-140	4	30	
Anthracene	2.66	0.333	mg/kg wet	3.333		80	40-140	5	30	
Azobenzene	2.69	0.333	mg/kg wet	3.333		81	40-140	7	30	
Benzo(a)anthracene	2.87	0.333	mg/kg wet	3.333		86	40-140	5	30	
Benzo(a)pyrene	2.60	0.167	mg/kg wet	3.333		78	40-140	4	30	
Benzo(b)fluoranthene	2.74	0.333	mg/kg wet	3.333		82	40-140	8	30	
Benzo(g,h,i)perylene	2.76	0.333	mg/kg wet	3.333		83	40-140	4	30	
Benzo(k)fluoranthene	2.59	0.333	mg/kg wet	3.333		78	40-140	0.5	30	
bis(2-Chloroethoxy)methane	2.39	0.333	mg/kg wet	3.333		72	40-140	5	30	
bis(2-Chloroethyl)ether	2.86	0.167	mg/kg wet	3.333		86	40-140	3	30	
bis(2-chloroisopropyl)Ether	2.50	0.167	mg/kg wet	3.333		75	40-140	6	30	
bis(2-Ethylhexyl)phthalate	2.74	0.333	mg/kg wet	3.333		82	40-140	4	30	
Butylbenzylphthalate	2.72	0.333	mg/kg wet	3.333		82	40-140	4	30	

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
8270D Semi-Volatile Organic Compounds										
Batch DL11313 - 3546										
Chrysene	2.73	0.167	mg/kg wet	3.333		82	40-140	5	30	
Dibenzo(a,h)Anthracene	2.84	0.167	mg/kg wet	3.333		85	40-140	5	30	
Dibenzofuran	2.54	0.333	mg/kg wet	3.333		76	40-140	5	30	
Diethylphthalate	2.81	0.333	mg/kg wet	3.333		84	40-140	5	30	
Dimethylphthalate	2.67	0.333	mg/kg wet	3.333		80	40-140	6	30	
Di-n-butylphthalate	2.64	0.333	mg/kg wet	3.333		79	40-140	6	30	
Di-n-octylphthalate	2.87	0.333	mg/kg wet	3.333		86	40-140	3	30	
Fluoranthene	2.59	0.333	mg/kg wet	3.333		78	40-140	4	30	
Fluorene	2.78	0.333	mg/kg wet	3.333		83	40-140	5	30	
Hexachlorobenzene	2.70	0.167	mg/kg wet	3.333		81	40-140	6	30	
Hexachlorobutadiene	2.58	0.333	mg/kg wet	3.333		77	40-140	5	30	
Hexachloroethane	2.58	0.167	mg/kg wet	3.333		77	40-140	6	30	
Indeno(1,2,3-cd)Pyrene	2.69	0.333	mg/kg wet	3.333		81	40-140	7	30	
Isophorone	2.43	0.333	mg/kg wet	3.333		73	40-140	5	30	
Naphthalene	2.42	0.333	mg/kg wet	3.333		73	40-140	5	30	
Nitrobenzene	2.59	0.333	mg/kg wet	3.333		78	40-140	6	30	
N-Nitrosodimethylamine	1.94	0.333	mg/kg wet	3.333		58	40-140	5	30	
Pentachlorophenol	2.27	0.667	mg/kg wet	3.333		68	30-130	5	30	
Phenanthrene	2.54	0.333	mg/kg wet	3.333		76	40-140	7	30	
Phenol	2.38	0.333	mg/kg wet	3.333		71	30-130	4	30	
Pyrene	2.75	0.333	mg/kg wet	3.333		83	40-140	5	30	
Surrogate: 1,2-Dichlorobenzene-d4	*2.70*		mg/kg wet	*3.333*		*81*	*30-130*			
Surrogate: 2,4,6-Tribromophenol	*4.10*		mg/kg wet	*5.000*		*82*	*30-130*			
Surrogate: 2-Chlorophenol-d4	*4.24*		mg/kg wet	*5.000*		*85*	*30-130*			
Surrogate: 2-Fluorobiphenyl	*2.80*		mg/kg wet	*3.333*		*84*	*30-130*			
Surrogate: 2-Fluorophenol	*3.87*		mg/kg wet	*5.000*		*77*	*30-130*			
Surrogate: Nitrobenzene-d5	*3.02*		mg/kg wet	*3.333*		*91*	*30-130*			
Surrogate: Phenol-d6	*4.33*		mg/kg wet	*5.000*		*87*	*30-130*			
Surrogate: p-Terphenyl-d14	*3.03*		mg/kg wet	*3.333*		*91*	*30-130*			
Classical Chemistry										
Batch DL11320 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	4.0	2.0	mg/kg	100.3		4	0.68-5.41			
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			
Batch DL11341 - General Preparation										
Blank										
Reactive Cyanide	ND	2.0	mg/kg							
Reactive Sulfide	ND	2.0	mg/kg							
LCS										
Reactive Cyanide	4.1	2.0	mg/kg	100.3		4	0.68-5.41			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Quality Control Data

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Classical Chemistry										
Batch DL11341 - General Preparation										
Reactive Sulfide	ND	2.0	mg/kg	10.00		0	0-44			
Batch DL11369 - General Preparation										
Blank										
Conductivity	ND	5	umhos/cm							
LCS										
Conductivity	1320		umhos/cm	1412		94	90-110			
Batch DL11433 - General Preparation										
Reference										
Flashpoint	81		°F	81.00		100	97.9-102.1			

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation ESS Laboratory Work Order: 21L0422

Notes and Definitions

PT	Pentachlorophenol tailing factor > 2.
>	Greater than.
BT	Benzidine tailing factor >2.
CD-	Continuing Calibration %Diff/Drift is below control limit (CD-).
CD+	Continuing Calibration %Diff/Drift is above control limit (CD+).
D	Diluted.
D+	Relative percent difference for duplicate is outside of criteria (D+).
EL	Elevated Method Reporting Limits due to sample matrix (EL).
ICV-	Initial Calibration Verification recovery is below lower control limit (ICV-).
ICV+	Initial Calibration Verification recovery is above upper control limit (ICV+).
#	Modified result
P	Percent difference between primary and confirmation results exceeds 40% (P).
Z17	Temperature is within 23 +/-2 ºC.
Q	Calibration required quadratic regression (Q).
S-	Surrogate recovery(ies) below lower control limit (S-).
U	Analyte included in the analysis, but not detected
XH	Peaks found in the retention time window for MCPP did not confirm by GC/MS.
Z-09	ND
Z-10	Soil pH measured in water at 21.2 ºC.
Z-10a	Soil pH measured in water at 21.3 ºC.
Z-10b	Soil pH measured in water at 21.4 ºC.
Z-10c	Soil pH measured in water at 21.5 ºC.
Z-10d	Soil pH measured in water at 21.6 ºC.
LC	Lower value is used due to matrix interferences (LC).
ND	Analyte NOT DETECTED at or above the MRL (LOQ), LOD for DoD Reports, MDL for J-Flagged Analytes
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
MRL	Method Reporting Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DL	Detection Limit
I/V	Initial Volume
F/V	Final Volume
§	Subcontracted analysis; see attached report
1	Range result excludes concentrations of surrogates and/or internal standards eluting in that range.
2	Range result excludes concentrations of target analytes eluting in that range.
3	Range result excludes the concentration of the C9-C10 aromatic range.
Avg	Results reported as a mathematical average.
NR	No Recovery
[CALC]	Calculated Analyte
SUB	Subcontracted analysis; see attached report
RL	Reporting Limit

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation
ESS Laboratory Work Order: 21L0422

EDL	Estimated Detection Limit
MF	Membrane Filtration
MPN	Most Probable Number
TNTC	Too numerous to Count
CFU	Colony Forming Units

CERTIFICATE OF ANALYSIS

Client Name: GEI Consultants, Inc.
Client Project ID: Parcel P3 Environmental Remediation

ESS Laboratory Work Order: 21L0422

ESS LABORATORY CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

Rhode Island Potable and Non Potable Water: LAI00179
http://www.health.ri.gov/find/labs/analytical/ESS.pdf

Connecticut Potable and Non Potable Water, Solid and Hazardous Waste: PH-0750
http://www.ct.gov/dph/lib/dph/environmental_health/environmental_laboratories/pdf/OutofStateCommercialLaboratories.pdf

Maine Potable and Non Potable Water, and Solid and Hazardous Waste: RI00002
http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/partners/labCert.shtml

Massachusetts Potable and Non Potable Water: M-RI002
http://public.dep.state.ma.us/Labcert/Labcert.aspx

New Hampshire (NELAP accredited) Potable and Non Potable Water, Solid and Hazardous Waste: 2424
http://des.nh.gov/organization/divisions/water/dwgb/nhelap/index.htm

New York (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: 11313
http://www.wadsworth.org/labcert/elap/comm.html

New Jersey (NELAP accredited) Non Potable Water, Solid and Hazardous Waste: RI006
http://datamine2.state.nj.us/DEP_OPRA/OpraMain/pi_main?mode=pi_by_site&sort_order=PI_NAMEA&Select+a+Site:=58715

Pennsylvania: 68-01752
http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

Shipped/Delivered Via: ESS Courier

ESS Project ID: 21L0422
Date Received: 12/10/2021
Project Due Date: 12/17/2021
Days for Project: 5 Day

1. Air bill manifest present? No
   Air No.: NA
2. Were custody seals present? No
3. Is radiation count <100 CPM? Yes
4. Is a Cooler Present? Yes
   Temp: 3.2 Iced with: Ice
5. Was COC signed and dated by client? Yes
6. Does COC match bottles? Yes
7. Is COC complete and correct? Yes
8. Were samples received intact? Yes
9. **Were labs informed about short holds & rushes?** Yes / No / (NA)
10. Were any analyses received outside of hold time? Yes / (No) TD 12/10/21

11. Any Subcontracting needed? Yes / (No)
    ESS Sample IDs:
    Analysis:
    TAT:
12. Were VOAs received? Yes / (No)
    a. Air bubbles in aqueous VOAs? Yes / No
    b. Does methanol cover soil completely? Yes / No / NA

13. Are the samples properly preserved? (Yes) / No
    a. If metals preserved upon receipt: Date: Time: By:
    b. Low Level VOA vials frozen: Date: Time: By:

Sample Receiving Notes:

14. Was there a need to contact Project Manager? Yes / (No)
    a. Was there a need to contact the client? Yes / (No)
    Who was contacted? Date: Time: By:

Sample Number	Container ID	Proper Container	Air Bubbles Present	Sufficient Volume	Container Type	Preservative	Record pH (Cyanide and 608 Pesticides)
1	240961	Yes	N/A	Yes	8 oz jar	NP	
1	240962	Yes	N/A	Yes	8 oz jar	NP	
2	240963	Yes	N/A	Yes	8 oz jar	NP	
2	240964	Yes	N/A	Yes	8 oz jar	NP	
2	241001	Yes	N/A	Yes	8 oz jar	NP	
3	240965	Yes	N/A	Yes	8 oz jar	NP	
3	240966	Yes	N/A	Yes	8 oz jar	NP	
4	240967	Yes	N/A	Yes	8 oz jar	NP	
4	240968	Yes	N/A	Yes	8 oz jar	NP	
5	240969	Yes	N/A	Yes	8 oz jar	NP	
5	240970	Yes	N/A	Yes	8 oz jar	NP	
6	240971	Yes	N/A	Yes	8 oz jar	NP	
6	240972	Yes	N/A	Yes	8 oz jar	NP	
7	240973	Yes	N/A	Yes	8 oz jar	NP	
7	240974	Yes	N/A	Yes	8 oz jar	NP	
8	240975	Yes	N/A	Yes	8 oz jar	NP	

ESS Laboratory Sample and Cooler Receipt Checklist

Client: GEI Consultants, Inc. - TB

ESS Project ID: 21L0422

Date Received: 12/10/2021

8	240976	Yes	N/A	Yes	8 oz jar	NP
9	240977	Yes	N/A	Yes	8 oz jar	NP
9	240978	Yes	N/A	Yes	8 oz jar	NP
9	241002	Yes	N/A	Yes	8 oz jar	NP
10	240979	Yes	N/A	Yes	8 oz jar	NP
10	240980	Yes	N/A	Yes	8 oz jar	NP
11	240981	Yes	N/A	Yes	8 oz jar	NP
11	240982	Yes	N/A	Yes	8 oz jar	NP
11	241003	Yes	N/A	Yes	8 oz jar	NP
12	240983	Yes	N/A	Yes	8 oz jar	NP
12	240984	Yes	N/A	Yes	8 oz jar	NP
13	240985	Yes	N/A	Yes	8 oz jar	NP
13	240986	Yes	N/A	Yes	8 oz jar	NP
14	240987	Yes	N/A	Yes	8 oz jar	NP
14	240988	Yes	N/A	Yes	8 oz jar	NP
15	240989	Yes	N/A	Yes	8 oz jar	NP
15	240990	Yes	N/A	Yes	8 oz jar	NP
16	240991	Yes	N/A	Yes	8 oz jar	NP
16	240992	Yes	N/A	Yes	8 oz jar	NP
17	240993	Yes	N/A	Yes	8 oz jar	NP
17	240994	Yes	N/A	Yes	8 oz jar	NP
18	240995	Yes	N/A	Yes	8 oz jar	NP
18	240996	Yes	N/A	Yes	8 oz jar	NP
19	240997	Yes	N/A	Yes	8 oz jar	NP
19	240998	Yes	N/A	Yes	8 oz jar	NP
20	240999	Yes	N/A	Yes	8 oz jar	NP
20	241000	Yes	N/A	Yes	8 oz jar	NP

2nd Review

Were all containers scanned into storage/lab? Initials TB

Are barcode labels on correct containers? Yes / No

Are all Flashpoint stickers attached/container ID # circled? Yes / No / NA

Are all Hex Chrome stickers attached? Yes / No / NA

Are all QC stickers attached? Yes / No / NA

Are VOA stickers attached if bubbles noted? Yes / No / NA

Completed By: Taylor Davis Date & Time: 12/10/21 1851

Reviewed By: [signature] Date & Time: 12/10/21 1913

Chain-of-Custody Record

Laboratory: ESS

Laboratory Job # (Lab use only) 210422

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman

781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman

labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: (YES) NO

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: (MA) 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are (Method 1 S-1 and GW-2/GW-3) Circle if GW-1 is required.

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	Preservative	Analysis: VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE		Sample Specific Remarks
							MEOH	H20	NA	NA	NA	NA	NA	NA	NA			
1	2101938-B401-(0-5)	12/9/2021	0801	Soil	2	JES			X	X	X	X	X	X				
2	2101938-B402-(0-5)	12/9/2021	0816	Soil	3	JES			X	X	X	X	X	X	X			
3	2101938-B403-(0-5)	12/9/2021	0831	Soil	2	JES			X	X	X	X	X	X				
4	2101938-B404-(0-5)	12/9/2021	0846	Soil	2	JES			X	X	X	X	X	X				
5	2101938-B405-(0-5)	12/9/2021	0901	Soil	2	JES			X	X	X	X	X	X				
6	2101938-B406-(0-5)	12/9/2021	0916	Soil	2	JES			X	X	X	X	X	X				
7	2101938-B407-S1-(0-5)	12/9/2021	0931	Soil	2	JES			X	X	X	X	X	X				
8	2101938-B407-S2-(5-10)	12/9/2021	0946	Soil	2	JES			X	X	X	X	X	X				
9	2101938-B408-(0-5)	12/9/2021	1001	Soil	3	JES			X	X	X	X	X	X	X			
10	2101938-B409-(0-5)	12/9/2021	1101	Soil	2	JES			X	X	X	X	X	X				
11	2101938-B410-S1-(0-5)	12/9/2021	1116	Soil	3	JES			X	X	X	X	X	X	X			
12	2101938-B410-S2-(5-10)	12/9/2021	1131	Soil	2	JES			X	X	X	X	X	X				

Sample Handling

Samples Field Filtered: YES NO (NA)

Sampled Shipped With Ice: (YES) NO

	Date	Time	
Relinquished by sampler: (signature) 1.	12/9/21	1630	GEI Fridge
Relinquished by sampler: (signature) 2. Fridge	12/10/21	3:02	Received by: (signature) 2.
Relinquished by: (signature) 3.	12/10/21	15:02	Received by: (signature) 3.
Relinquished by: (signature) 4. 12/10/21	12/10/21	15:32	Received by: (signature) 4.
Relinquished by: (signature) 5.	Date :	Time:	Received by: (signature) 5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____

2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Run TCLP Lead if 20x Rule exceeded

Run CRVI if total Cr exceeds 100 mg/kg

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

3.2ice

Chain-of-Custody Record

Laboratory: ESS

Laboratory Job # (Lab use only) 210422

GEI Consultants
400 Unicorn Park Drive
Woburn, MA 01801
PH: 781.721.4000

Project Information

Project Name: Parcel P3 Environmental Remediation

Project Number: 2103938

Project Location: Boston, MA

Project Manager: Ryan Hoffman
781-721-4091 rhoffman@geiconsultants.com

Send Report to: Ryan Hoffman
labdata@geiconsultants.com

MCP PRESUMPTIVE CERTAINTY AND MCP ANALYTICAL METHODS REQUIRED: (YES) NO

STATE AND FEDERAL REGULATORY REQUIREMENTS/REPORT LIMITS

State/Federal Program: (MA) 401WQC Other _____ NH RI CT NY ME

MA MCP Criteria are Method 1 S-1 and GW-2/GW-3. Circle if GW-1 is required.

Sample Handling: Samples Field Filtered YES NO (NA)

Sampled Shipped With Ice (YES) NO

Lab Sample Number	GEI Sample ID	Collection Date	Collection Time	Matrix	No. of Bottles	Sampler(s) Initials	Preservative: MEOH	H20	NA	NA	NA	NA	NA	NA	NA	Sample Specific Remarks
							Analysis: VOC HIGH	VOC LOW	SVOCS	TPH	PCBs	RCRA 8 METALS	TCLP LEAD	CONDUCTIVITY, CORROSIVITY, IGNITABILITY, REACTIVITY	PESTICIDE/HERBICIDE	
13	2101938-B411-S1-(0-5)	12/9/2021	0801	Soil	2	JES			X	X	X	X	X	X		
14	2101938-B411-S2-(5-10)	12/9/2021	0816	Soil	2	JES			X	X	X	X	X	X	X	
15	2101938-B412-S1-(0-5)	12/9/2021	0831	Soil	2	JES			X	X	X	X	X	X		
16	2101938-B412-S2-(5-10)	12/9/2021	0846	Soil	2	JES			X	X	X	X	X	X		
17	2101938-B413-S1-(0-5)	12/9/2021	0901	Soil	2	JES			X	X	X	X	X	X		
18	2101938-B413-S2-(5-10)	12/9/2021	0916	Soil	2	JES			X	X	X	X	X	X		
19	2101938-B414-S1-(0-5)	12/9/2021	0931	Soil	2	JES			X	X	X	X	X	X		
20	2101938-B414-S2-(5-10)	12/9/2021	0946	Soil	2	JES			X	X	X	X	X	X		

	Date	Time	
Relinquished by sampler: (signature) 1.	12/9/21	1630	GEI Fridge
Relinquished by sampler: (signature) 2. Fridge	Date: 12/10/21	Time: 3:02	Received by: (signature) 2.
Relinquished by: (signature) 3.	Date: 12/10/21	Time: 15:02	Received by: (signature) 3.
Relinquished by: (signature) 4. 12/10/21	Date: 12/10/21	Time: 17:32	Received by: (signature) 4.
Relinquished by: (signature) 5.	Date:	Time:	Received by: (signature) 5.

Turnaround Time (Business days):

5-Day X 4-Day ____ 3-Day ____
2-Day ____ 1-Day ____ Other ____

Before submitting rush turnaround samples, you **must** notify the laboratory to confirm that the TAT can be achieved.

Additional Requirements/Comments/Remarks:

Run TCLP Lead if 20x rule exceeded
Run CRVI if Cr exceeds 100 mg/kg

Sample Matrix Abbreviations: SO = Soil GW = Groundwater SW = Surface Water SD = Sediment CO = Concrete PC = Paint Chip CLK = Caulk

3. Ice

Appendix E

Construction Specifications

SECTION 011130

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY OF WORK

A. A Massachusetts Department of Environmental Protection (MassDEP) disposal site identified by Release Tracking Numbers (RTNs) 3-15009 and linked 3-36365 is located at the site related to the presence of contaminants in soil and groundwater. The Work shall be performed under the Massachusetts Contingency Plan (MCP) and a Release Abatement Measure (RAM) Plan to be prepared by the Engineer.

B. Employees who will potentially be in direct contact with soil must conduct the work in accordance with the Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120, as implemented through the Contractor's Health and Safety Plan (HASP). Such employees must be Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour trained and enrolled in a medical monitoring program.

C. It is anticipated that work will be performed in Personnel Protection Level D. This includes hard hat, safety glasses, hearing protection, gloves, and work boots. If the Contractor determines that a level of protection higher than Level D is required, the Contractor's personnel will stop work and notify the Owner and Engineer. When approved by the Owner and the Engineer, the Contractor will take the necessary steps outlined in the Contractor's Health and Safety Plan (HASP) and recommence work.

D. The scope of work includes, but is not necessarily limited to the following:
   1. Installing and maintaining erosion and sedimentation controls.
   2. Clearing and grubbing.
   3. Soil treatment and stabilization for proper off-site disposal.
   4. Excavating a lead hot spot in soil.
   5. Excavating portions of a soil mound.
   6. Handling, stockpiling, segregating, storing, loading, reusing, recycling, disposing, transporting, and tracking of excavated soil.
   7. Backfilling following excavation.
   8. Finish grading following backfilling.
   9. Seeding following backfilling and grading.

END OF SECTION

SECTION 013529

HEALTH AND SAFETY

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all SECTIONS within DIVISION 1 - GENERAL REQUIREMENTS, which are hereby made a part of this section of Specifications.

1.2 DESCRIPTION OF WORK

A. This Section describes personnel protection requirements as required for soil and groundwater management work at the Site. Materials with varying concentrations of oil and hazardous material (OHM) may be encountered during excavation and material handling at the Site.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

1. Section 310000 – EARTHWORK
2. Section 311100 – SITE CLEARING
3. Section 312000 – EXCAVATED MATERIALS MANAGEMENT
4. Section 312500 – EROSION AND SEDIMENTATION CONTROLS

1.4 HEALTH AND SAFETY REQUIREMENTS

A. Construction site safety is the sole responsibility of the Contractor.

B. A Massachusetts Department of Environmental Protection (MassDEP) disposal site identified by Release Tracking Numbers (RTNs) 3-15009 and linked 3-36365 is located at the site related to the presence of contaminants in soil and groundwater. The Work shall be performed under the Massachusetts Contingency Plan (MCP) and a Release Abatement Measure (RAM) Plan to be prepared by the Engineer.

C. Employees who will potentially be in direct contact with soil must conduct the work in accordance with the Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120, as implemented through the Contractor's Health and Safety Plan (HASP). Such employees must be Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour trained and enrolled in a medical monitoring program.

D. It is anticipated that work will be performed in Personnel Protection Level D. This includes hard hat, safety glasses, hearing protection, gloves, and work boots. If the Contractor determines that a level of protection higher than Level D is required, the Contractor's personnel will stop work and notify the Owner and Engineer. When approved by the Owner and the Engineer, the Contractor will take the necessary steps outlined in the Contractor's HASP and recommence work.

E. The rights and remedies of the Owner provided in the Specifications are in addition to any other rights and remedies proved by law or under this Contract.

F. In the event there is a conflict between the requirements contained in the OSHA Health and Safety Codes and Standards, the U.S. Department of Labor Construction Health and Safety Codes and Standards, promulgated under Section 108 of the Contract Work Hours and Safety Act (40 U.S.C. 327 et seq.), as amended, the more stringent requirement will prevail.

G. Examine all Drawings and Sections of the Specifications for requirements and provisions of the work that this Section affects.

1.5 APPLICABLE REGULATIONS

A. Comply with applicable health and safety regulations, including but not limited to:

1. "United States OSHA Code of Federal Regulations 29 CFR 1910.120 for Hazardous Waste operations (HAZWOPER).
2. U.S. Environmental Protection Agency (EPA) Executive orders 1440.2 and 1440.3.
3. OSHA Guidance Manual for Hazardous Waste Site Activities, DHHS/NIOSH Pub. No. 85 115, 10/85.
4. 29 CFR 1926: Safety and Health Requirements for Construction, OSHA.
5. EPA/625/9-85/006, Protection of Health and Safety at Hazardous Waste Sites: An Overview.
6. 454 CMR 10, Massachusetts Division of Labor and Industry.
7. 105 CMR 670.0000 and 441 CMR 21.00 (Right to Know).
8. 310 CMR 40.0000 (MCP).
9. City of Boston guidelines.

B. Conduct the Work in compliance with the above regulations and policies as well as any changes or addenda to the same as set forth prior to the completion of work.

C. Comply with all applicable regulations, this Specification, and recognized standards and regulatory practices. The Owner will not be responsible at any time for the Contractor's violation of any applicable, local state, or federal regulations, or endangerment to laborers or others.

1.6 INFORMATIONAL SUBMITTALS

A. Within 15 days of receiving notice to proceed, submit a Contractor's HASP for encountering OHM including exposure monitoring and prevention methods, and emergency response procedures. Include the name, title, and affiliation of the Contractor's designated Health and Safety Officer. The HASP will be prepared by a qualified professional and comply with the requirements of 29 CFR 1910.120 and all other applicable regulations, including, but not limited to those listed in Section 1.5A.

B. Prior to beginning work submit one completed Safety Data Sheet (SDS) for each material as required by Federal Standards No. 313E (Material Safety Data, Transportation Safety Data and Disposal Date for Hazardous Materials Furnished to Government Activities, revised July 2014). Follow the information on the SDS to assure safe use, handling, storage, and environmentally acceptable disposal of hazardous materials. Maintain a complete set of SDSs on site.

C. Accident Reporting: Submit a copy of each accident report that the Contractor or Subcontractors submits to their insurance carriers to the Owner within 7 calendar days of date of the accident.

PART 2 - PRODUCTS

2.1 PERSONAL PROTECTIVE EQUIPMENT

A. Provide Personal Protective Equipment (PPE) for all Contractor and Subcontractor personnel in accordance with the Contractor's HASP. Delays in the Work due to inability to provide PPE as site conditions require shall be at no additional cost to the Owner.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. Designate an on-site, full-time Health and Safety Officer who will be responsible for implementing and enforcing the HASP.

B. Conduct daily Site Safety meetings.

C. Conduct work to prevent any on-site employee or others who may be in the general vicinity from exposure to conditions that are unsanitary, hazardous, or dangerous to health and safety, as determined under Construction Safety and Health Standards promulgated by the Secretary of Labor under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.) as amended. Construction Safety and Health Standards promulgated by the Secretary of Labor may be obtained from the regional or area office of the OSHA of the U.S. Department of Labor.

D. Immediately correct violations of the health and safety requirements contained in the Specifications or Standards referenced above. Notification of violations noted by the Owner may be verbal or written. Failure of the Owner to provide notification of health and safety violations does not relieve the Contractor from responsibility for conformance with the regulations and the safety of personnel and property.

E. If the Contractor fails to promptly correct violations of the health and safety standards and requirements noted by the Owner, the Owner will issue an order to stop all or part of the Work. When satisfactory corrective action is taken, an order to resume work will be issued. The Contractor shall not be entitled to any extension of time, or to any claim for damage or additional compensation because of either the notification of a violation or the stop work order.

F. Maintain an accurate record of, and report to the Owner immediately, all cases of death and, within 2 hours, all cases of occupational diseases or traumatic injury to employees or the public involved, and property damage incident to performance of work under this Contract. Report using OSHA Form 300, Log of Work-Related Injuries and Illnesses.

3.2 PERIMETER AIR MONITORING

A. During soil management activities, the Engineer will monitor dust levels at the perimeter of the limits of work to ensure levels are below the specified threshold concentrations.

B. The thresholds concentrations for the Site perimeter are:

Fugitive Emission Type	**Alert Level**	**Action Level**
Particulates (dust) less than 10 microns (PM-10)	100 micrograms per cubic meter ($\mu g/m^3$) (15-minute average)	150 $\mu g/m^3$ (15-minute average)

C. The Contractor shall control dust as described in Section 312000 – Excavated Materials Management.

END OF SECTION

SECTION 310000

EARTHWORK

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Excavating lead hot spot.
   2. Excavating portions of soil mound.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 013529 – HEALTH AND SAFETY
   2. Section 311100 – SITE CLEARING
   3. Section 312000 – EXCAVATED MATERIALS MANAGEMENT
   4. Section 312219 – FINISH GRADING
   5. Section 312500 – EROSION AND SEDIMENTATION CONTROLS

1.3 EXISTING CONDITIONS

A. Site Information:
   1. Existing conditions are shown on Sheet 1 – Existing Conditions Plan and Sheet 1A – Existing Conditions Work Area) Plan.
   2. Subsurface explorations have been performed at the project site (refer to GEI's Soil Characterization Report, incorporated by reference). The subsurface explorations were performed primarily for use in evaluating soil conditions and collecting samples for disposal characterization and are included for the convenience of the Contractor. Use and interpretation of these data for purposes of the work shall be the responsibility of the Contractor. Subsoil conditions are not to be considered as accurate for any times or locations other than the specific time and location of each of the explorations.
   3. The Contractor may perform additional test pits and other explorations at no cost to Owner.

B. Existing Utilities:
   1. Locate existing underground utilities in areas of work. Provide adequate means of support and protection during earthwork operations.
   2. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

PART 2 - PRODUCTS
(Not applicable to work in this section.)

PART 3 - EXECUTION

3.1 GENERAL

A. Protect existing structures, utilities, sidewalks, pavements, and other facilities from damage by equipment, settlement, undermining, washout, and other hazards created by earthwork operations. Remove and replace existing structures, utilities, sidewalks, pavements, and other facilities damaged by the Contractors work at no cost to the Owner.

B. Perform excavation work in compliance with OSHA guidelines and regulations.

3.2 EXCAVATION

A. Excavation is to the approximately limits shown on Sheet 2 - Excavation Plan regardless of character of materials and obstructions encountered and shall be understood to include rock, earth, fill, foundations, pavements, curbs, piping, and debris.

B. Material Storage: Segregate and stockpile excavated materials until required for off-site disposal in accordance with Section 312000 Excavated Materials Management.

3.3 GRADING

A. Grade the Site as shown on the Sheet 3 – Final Grading Plan. Final grades must be within +/- 1 inches of the design grades at any point across the Site.

3.4 PROTECTION AND REPAIR

A. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.

END OF SECTION

SECTION 311100

SITE CLEARING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all SECTIONS within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this section of Specifications.

1.2 DESCRIPTION

A. Provide labor, materials, and equipment necessary to complete the work of this Section.

1.3 SCOPE OF WORK

A. Scope of work includes, but is not necessarily limited to the following:
   1. Clearing and grubbing across Work Area (per Sheet 1A).

1.4 Related Work

A. Related work specified in other Sections:
   1. Section 310000 – EARTHWORK
   2. Section 312000 – EXCAVATED MATERIALS MANAGEMENT
   3. Section 312500 – EROSION AND SEDIMENTATION CONTROLS

1.5 EXAMINATION OF SITE AND DOCUMENTS

A. It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of a lack of knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation of the site.

B. Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period and formed his own conclusions as to the full requirements of the work involved.

PART 2 - PRODUCTS
(Not applicable to work of this section.)

PART 3 - EXECUTION

3.1 SITE CLEARING

A. General: Remove trees, shrubs, grass and other vegetation, or obstructions interfering with excavation. Remove such items elsewhere on site or premises as specifically indicated. Removal includes digging out stumps in their entirety and grubbing roots to at least 6 inches below existing grades.

B. Carefully and cleanly cut roots and branches of existing trees outside the work area, where such roots and branches obstruct excavation.

3.2 DISPOSAL OF WASTE MATERIALS

A. Removal from Owner's Property: Remove waste materials from site for disposal. Waste materials shall include but not be limited to timber, brush, refuse, stumps, roots, vines, debris and other objectionable matter.
   1. Burning of cleared and grubbed materials, or other fires for any reason will not be permitted.
   2. No rubbish or debris of any kind shall be buried on site.

3.3 STOCKPILING

A. The Contractor is responsible for all construction, protection, movement, and maintenance of stockpiles, if stockpiling is required. Coordinate these requirements with those of Section 312000 – Excavated Materials Management.

END OF SECTION

SECTION 312000

EXCAVATED MATERIALS MANAGEMENT

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all SECTIONS within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this section of Specifications.

1.2 DESCRIPTION OF WORK

A. This Section describes the handling, stockpiling, segregating, storing, loading, reusing, recycling, disposing, transporting, and tracking of excavated material. Materials with varying concentrations of oil and hazardous materials (OHM) will be encountered during excavation and material handling. Other buried debris, including metal, asphalt, brick, and concrete may also be encountered during work and will be managed in accordance with this Section.

B. Operations under this Section will be subject to the requirements of the Engineer.

C. Off-site transportation and disposal of excess soil, excavated rubble, and excavated debris including documentation requirements and restrictions for off-site transport and reuse, recycling, or disposal of excavated material are described in this Section. The Contractor will propose off-site disposal facilities for approval by the Engineer and Owner.

D. The Engineer has conducted a soil pre-characterization program to classify the excavated material for purposes of on-site reuse or off-site reuse, recycling, or disposal. The Engineer has prepared a Soil Characterization Report, dated February 28, 2022. A summary of the soil disposal categories and estimated soil quantities are in the Soil Characterization Report and in Paragraph 1.2F of this Section.

E. The Property is a Massachusetts Department of Environmental Protection (MassDEP) disposal site identified by Release Tracking Numbers (RTNs) 3-15009 and linked 3-36365 due to contaminants in soil and groundwater. The Work shall be performed under the Massachusetts Contingency Plan (MCP) and a Release Abatement Measure (RAM) Plan prepared by the Engineer.

F. Estimated soil volume for excavation and tonnage for transport and disposal include (using a 1.6 conversion factor):

SOIL CATEGORY	ESTIMATED CUBIC YARDS	ESTIMATED TONNAGE
Category B - Reuse as Unlined Landfill Cover in Massachusetts Note: This soil will remain on site as backfill in lead hot spot excavation.	250	400
Category D - Recycling at Asphalt Batch Plant	200	320

SOIL CATEGORY	ESTIMATED CUBIC YARDS	ESTIMATED TONNAGE
Category F-1 – On-Site Treatment of Hazardous Waste and Disposal in Out-of-State Landfill as Non-Hazardous Waste	250	400
TOTAL	**700**	**1,120**

G. Perimeter air monitoring requirements are described in this Section.

H. Material treatment stabilization are described in this Section.

I. Minimum equipment decontamination requirements are described in this Section. Contingent upon the type and extent of OHM encountered during excavation, in the opinion of the Engineer, the Contractor will be responsible for furnishing, operating, and maintaining equipment decontamination for the duration of excavation and material management work.

J. Examine all Drawings and Sections of the Specifications for requirements and provisions of the work that this Section affects.

K. Comply with all applicable regulations, rules, laws, and ordinances of the Commonwealth of Massachusetts, and all other authorities having jurisdiction including, but not limited to the U.S. Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (MassDEP), and the City of Boston. Provide without additional costs to the Owner, all labor, materials, equipment and services necessary to comply with such requirements.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
1. Section 012200 – UNIT PRICE
2. Section 013529 – HEALTH AND SAFETY
3. Section 310000 – EARTHWORK
4. Section 311100 – SITE CLEARING
5. Section 312500 – EROSION AND SEDIMENTATION CONTROLS

1.4 APPLICABLE REGULATIONS

A. Work covered by this Section is subject to regulations and policies including, but not limited to:
1. “Massachusetts Contingency Plan” (MCP), 310 CMR 40.0000.
2. “Massachusetts Hazardous Waste Regulations,” 310 CMR 30.00.
3. “Solid Waste Management Facility Regulations,” 310 CMR 19.00.
4. “Site Assignment Regulation for Solid Waste Facilities,” 310 CMR 16.0000.
5. “Ambient Air Quality Standards,” 310 CMR 6.00.
6. “Resource Conservation and Recovery Act,” 40 CFR 261-262.
7. “Hazardous Waste Operations Emergency Response,” Federal Occupational Safety and Health Act (OSHA), 29 CFR 1910.120.
8. “Interim Remediation Waste Management Policy for Petroleum Contaminated Soils,” MassDEP Bureau of Waste Site Cleanup Policy No. WSC-94-400, dated April 1994.

9. "Construction of Buildings in Contaminated Areas," MassDEP Bureau of Waste Site Cleanup Policy No. WSC-00-425, dated January 2000.
10. "Reuse and Disposal of Contaminated Soils at Landfills," MassDEP Bureau of Waste Site Cleanup Prevention Policy No. COMM-97-001, dated August 15, 1997.
11. "MassDEP Similar Soils Provision Guidance," MassDEP Bureau of Waste Site Cleanup Guidance No. WSC#13-500, dated October 2, 2013.
12. "Interim Policy on the Re-use of Soil for Large Reclamation Projects," MassDEP Bureau of Waste Site Cleanup Prevention Policy No. COMM-15-01, dated August 28, 2015.

B. Conduct the Work in Compliance with the above regulations and policies as well as any changes or addenda to the same as set forth prior to the completion of Work.

C. Adhere to the regulations, guidance, these Specifications, and recognized standard and regulatory practices. Storage, handling, transport, and off-site reuse, recycling, or disposal of excavated materials shall be in accordance with laws, codes, ordinances, and regulations of Federal, State, and Municipal authorities having jurisdiction. The Owner and Engineer will not be responsible at any time for the Contractor's violation of any applicable local, state, or federal regulations, or endangerment of laborers or others.

1.5 SUBMITTALS

A. Within 15 days of receiving notice to proceed, submit an Excavated Materials Management (EMM) Plan. Excavation activity will not start until the entire EMM Plan is approved by the Engineer. Allow 5 business days for Engineer's review of EMM Plan. Include in the EMM Plan:
1. Proposed stockpile locations (if any) and secondary containment provisions.
2. Sequencing of excavation work.
3. Procedures for segregating, stockpiling, and loading of excavated material.
4. Location, design, and operating plan for decontamination areas. Include method of recording volume of discharge or disposal of decontamination water.
5. Control measures for dust and stormwater runoff.
6. Description of truck liners and covers that will prevent leakage and dust blow off during transport of excavated material.
7. Name, location, and classification of the proposed reuse, recycling, and disposal facilities for all classes of material described in Paragraph 3.3 of this Section. Include a copy of the facilities' permit (if applicable), acceptance criteria, and required sampling frequency and parameters for characterization for acceptance. Include written confirmation from the reuse, recycling, or disposal facility that they will accept the material if it meets their requirements. The Owner reserves the right to reject any proposed disposal location, at no additional cost to the Owner.
8. Name, address, and license number of hauler who will transport material.

B. Submit at the end of each day, excavated material and stockpile tracking information for each day, as specified in Paragraph 3.6A of this Section.

C. Submit records of decontamination water discharge and/or disposal if generated.

D. Submit within 10 business days after transport off-site, completed shipping records signed by the transporter and receiving location for all excavated materials transported off-site and include copies of the receiving facility's weight slips.

E. Along with each Application for Payment, submit comprehensive tracking logs and weight slips for each category of material transported, indicating the receiving facility's certified scale weight.

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide all employees of the Contractor and the Subcontractor(s) with personal protective equipment and protective clothing consistent with the levels of protection required for this work as indicated in the Contractor's Health and Safety Plan (HASP).

2.2 STORAGE OF STOCKPILED SOIL

A. Provide a minimum 6-mil-thick polyethylene sheeting to completely cover the stockpile. If required by the Engineer, provide a minimum 6-mil-thick polyethylene sheeting underneath soil stockpile. Stockpile sheeting shall be UV resistant, cold crack resistant to -40 degrees Fahrenheit, and free of holes and foreign matter.

B. Provide secondary containment such as berms or hay bales to prevent sediment in runoff from leaving the soil stockpile.

C. Provide 55-gallon Massachusetts Department of Transportation (MassDOT)-approved drums, or equivalent, suitable for the storage and transport of OHM.

2.3 DECONTAMINATION

A. Provide a temporary, low pressure water system for decontamination of tools and equipment including clean water supply tank, water, hoses, and brushes, which the Contractor shall use to decontaminate tools and equipment at the end of every day of excavation of OHM-impacted and potentially OHM-impacted materials, and before tools and equipment leave the Site. Connection to potable water supply is acceptable with written permission of the connection’s owner/operator. Decontamination water from low-pressure system shall be recharged on-site in the location of the excavation for OHM-impacted materials, or otherwise collected and legally disposed of in accordance with Paragraph 3.7 of this Section. In the absence of evidence of OHM, assume decontamination water will be recharged on-site unless Owner approves off-site disposal.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. Perform this Work in accordance with these Specifications prepared by the Engineer.

B. Provide all permits required for work described in this Section.

C. Immediately notify the Engineer of visible stains or unnatural odor of any excavated material, or if oil or potentially hazardous material is encountered.

D. Direct load and transport off-site all excavated material unless stockpiling is authorized by Engineer.

E. Provide storm water runoff controls in accordance with Sections 310000 – Earthwork and 312500 – Erosion and Sedimentation Controls.

F. Provide dust and storm water control measures.

G. Implement control measures as required by the Specifications to prevent discharge of stockpiled material to storm drains and sewers. Control measures may include, but are not limited to

temporary berms, hay bales, and temporary covers. Remove control measures upon completion of work.

3.2 DELINEATION SAMPLING

A. Provide personnel and equipment to assist the Engineer in performing field testing or collecting samples, if requested.

3.3 EXCAVATED MATERIAL CLASSIFICATION SYSTEM

A. The Engineer has classified excavated material for purposes of off-site reuse, recycling, or disposal based on the results of the laboratory chemical analyses and/or field testing. The Engineer may re-classify previously classified material based on additional characterization. The Owner may at any time reclassify material that has been classified by the Engineer, without additional expense to the Owner other than the additional cost for disposal. The classifications for off-site reuse, recycling, or disposal are:
   1. Construction/Demolition Debris: Construction/Demolition Debris is excavated or otherwise buried material that is suitable for disposal at a state regulated facility. Construction/ Demolition Debris may include asphalt, brick, concrete, rock, steel, unpreserved wood, etc. incidental to excavation. Dispose of Construction/Demolition Debris off site at a state regulated facility.
   2. Category A – Restricted Reuse (<RCS-1 Material): Category A materials are excavated materials with concentrations of OHM below the reportable concentrations for soil category S-1 (RCS-1) as identified in 310 CMR 40.0000, and not containing visual evidence of contamination such as coal ash or wood ash. Reuse Category A excavated materials off site at a location subject to the soil reuse provisions identified in 310 CMR 40.0032(3) and MassDEP Similar Soils Provision Guidance No. WSC#13-500, or reuse on site at the discretion of the Engineer.
   3. Category B – Reuse as Unlined Landfill Cover in Massachusetts: Category B materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at an unlined landfill in Massachusetts. Reuse Category B excavated materials as landfill daily cover at an unlined Massachusetts landfill.
   4. Category C – Reuse as Lined Landfill Cover in Massachusetts: Category C materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for use as daily cover material at a lined landfill in Massachusetts. Reuse Category C excavated materials as landfill daily cover at a lined Massachusetts landfill.
   5. Category D – Recycling at Asphalt Batch Plant: Category D materials are excavated materials with concentrations of OHM and physical characteristics that meet the acceptance criteria for recycling by asphalt batching. Recycle Category D excavated materials by asphalt batching at an in-state or out-of-state facility.
   6. Category E – Disposal in Out-of-State Landfill as Non-Hazardous Waste: Category E materials are excavated materials with concentrations of OHM and physical characteristics that do not meet the acceptance criteria for Massachusetts landfill daily cover. This category includes material that has been treated to reduce toxicity characteristic leachate procedure (TCLP) metal concentrations to levels that are not considered to be a characteristic hazardous waste. Dispose of Category E excavated materials as non-hazardous waste in an out-of-state lined landfill.
   7. Category F-1 – On-site Treatment of Hazardous Waste and Disposal in Out-of-State Landfill as Non-Hazardous Waste: Category F-1 materials are excavated materials that are considered a characteristic hazardous waste and that can feasibly be treated on site prior to disposal. This category includes material with TCLP concentrations greater than those acceptable for disposal as non-hazardous waste. If treated, the material will be re-classified and disposed of as Category E.

8. Category F-2 – Disposal at Hazardous Waste Landfill: Category F-2 materials are excavated materials with concentrations of OHM that do not meet the acceptance criteria for the reuse, recycling, or disposal options described above. This category includes excavated materials that are considered a listed or characteristic hazardous waste, including material with TCLP metal concentrations greater than those levels acceptable for disposal as Category E. Dispose of Category F-2 excavated materials as Resource Conservation and Recovery Act (RCRA) hazardous waste in an out-of-state lined landfill.

3.4 STOCKPILING

A. Store all excavated materials on site or load directly onto a truck for off-site transport.

B. Provide the Engineer access to perform headspace analyses, field testing, or other testing. Provide personnel and equipment to assist the Engineer with such analyses or testing.

C. Segregate excavated materials as recommended by the Engineer. Maintain separate stockpiles as necessary to segregate materials, or as recommended by the Engineer.

D. Disposal of material that is OHM-impacted as a result of careless handling or use of unauthorized procedures shall be at the Contractor's expense. This includes mixing soil from separate stockpiles with different reuse, recycling, or disposal requirements. Delays of Work resulting from temporary storage of excavated material, regardless of field classification by the Engineer, shall be at no additional cost to the Owner.

E. Stockpile materials in accordance with all regulatory requirements. Stockpile excavated material separately based on the anticipated reuse on site, disposal location or based on information and/or field testing performed by the Engineer. At a minimum, separate excavated material with visible stains or unnatural odor indicative of OHM from material that does not exhibit these characteristics. For all soil follow the guidelines below:
   1. If requested by the Engineer, place the first lift of material on a 6-mil-thick, polyethylene barrier placed over the existing ground surface. Place stockpile(s) in bermed areas where storm water runoff is diverted from the stockpile(s).
   2. Cover the stockpile(s) with 6-mil-thick polyethylene when not in use. Secure the cover in place with sandbags or equivalent to prevent dust blow-off and to withstand wind and rain.
   3. Install hay bales around the stockpile(s).
   4. Clearly label stockpile(s) according to references on the material tracking sheet, as defined in Paragraph 3.6A of this Section.
   5. Wet soils stockpiled in the Materials Management Area(s) must be drained or dewatered prior to off-site transport such that no free liquid is present. The addition of bulking or other drying agents is not permitted. Stockpile wet soils on polyethylene sheeting. Drained or dewatered liquid may be recharged on site if approved by the Engineer.

F. Do not remove stockpiled material until the materials have been sampled and tested (if necessary), and approved for off-site reuse, recycling, or disposal by the Engineer.

3.5 MATERIAL TREATMENT STABILIZATION

A. Treat/stabilize excavated material to reduce TCLP metal concentrations.
   1. Provide qualifications of treatment/stabilization subcontractor.
   2. Submit plan for treatment/stabilization including proposed technology, dose, and application method.
   3. Perform treatment/stabilization of material in-situ.
   4. Perform post-treatment stabilization testing to confirm effectiveness.

3.6 OFF-SITE TRANSPORT AND REUSE, RECYCLING, OR DISPOSAL

A. Prepare all documentation required for off-site reuse, recycling, or disposal of excavated materials based on information provided by the Engineer and Owner, except Licensed Site Professional (LSP) Opinion letters, MassDEP Bills of Lading (BOLs), and Material Shipping Records (MSRs), which will be prepared by the Engineer.
   1. Category A soil will be transported off-site using an MSR.
   2. Category B, C, D, E, and F-1 soil will be transported off-site using a BOL.
   3. Category F-2 soil will be transported off-site using a hazardous waste manifest.

B. The Owner will sign shipping documents as the designated generator for all material that is reused, recycled, or disposed of offsite.

C. Load and transport all excess excavated material directly to the receiving facility unless stockpiling is authorized by Engineer.

D. Person(s) transporting the excavated materials shall be licensed and permitted to transport such material in state(s) having jurisdiction. Trailers used for transport shall have covers to prevent dust fly off.

E. Dewater excavated materials prior to transport to prevent free water from developing during transport.

F. Transport excavated materials to a reuse, recycling or disposal location that is not under pending or active enforcement action by a state or federal agency, and in accordance with Paragraph 3.3 of this Section.

3.7 DECONTAMINATION

A. Decontaminate tools and equipment used for site work, at a minimum, at the end of each day and prior to tools and equipment leaving the site, including a truck wheel wash if required by the opinion of the Engineer. Decontaminate all tools, heavy machinery, and excavating and hauling equipment used during excavation, stockpiling, and re-handling of excavated material. Decontaminate by hosing down tools, equipment, and machinery using the low-pressure water system and brushes specified in Paragraph 2.3A of this Section to remove material. In the absence of evidence of OHM, decontamination water shall be discharged into recharge pits. Alternatively, decontamination water can be disposed of legally off site with Owner’s approval.

3.8 DUST CONTROL

A. During soil management activities, the Engineer will monitor dust levels at the perimeter of the limits of work to ensure levels are below the specified threshold concentrations.

B. The thresholds concentrations for the Site perimeter are provided in Section 013529 – HEALTH AND SAFETY.

C. Control dust particles, aerosols, and gaseous byproducts from construction activities and processing and preparation of materials at all times including weekends, holidays, and outside of normal work hours when Work is not in progress. Maintain excavations, stockpiles within or outside the Work area free from particulates that could cause the action levels in these Specifications to be exceeded, or could result in a hazard or nuisance.

D. Modify or enhance dust suppression as required by the Engineer if on-site monitoring indicates exceedances of the action levels.

E. Cover all trucks transporting soil prior to leaving the site.

3.9 UNFORESEEN SITE CONDITIONS

A. In the event that contaminated soil is discovered or any other condition is encountered in the field that warrants MassDEP notification or emergency response action(s), the Contractor shall immediately notify the Owner and Engineer. The Contractor shall not notify the MassDEP or other regulatory agency under any circumstances. All notifications will be made by the Owner or Engineer
   1. If the Owner is required to perform an Immediate Response Action (IRA) at the Site due to MassDEP reportable conditions of contamination that have not previously been documented, the Contractor shall conduct all MassDEP-approved IRA activities in accordance with MassDEP's specific conditions.
   2. The Engineer will provide the Contractor with written correspondence listing the specific requirements of the IRA with which the Contractor shall comply. Excavation of soil will be limited to that which is necessary to complete the proposed activity unless otherwise directed by the Engineer.

PART 4 - COMPENSATION

4.1 METHOD OF MEASUREMENT

A. Transport and disposal of excavated material not being reused on site will be measured by the weight (in tons) of each category of material transported, as indicated by the receiving facility's certified scale weight. No separate payment will be made for the handling, stockpiling, or storing of excavated material.

B. Treatment and stabilization of material to reduce TCLP metal concentrations will be measured by the weight (in tons) of material transported, as indicated by the receiving facility's certified scale weight.

4.2 PAYMENT

A. Payment for transport and disposal of excavated material will be paid on a unit price basis. No separate payment will be made for the excavating, handling, stockpiling, segregating, storing, loading, or tracking of excavated material.

B. Payment for treatment and stabilization of material to reduce TCLP metal concentrations will be paid on a unit price basis.

END OF SECTION

SECTION 312219

FINISH GRADING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Finish grading following excavation.

2. Removal of all stumps, root balls, and stones with any dimension greater than 2 inches in length.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:

1. Section 013529 – HEALTH AND SAFETY
2. Section 312000 – EXCAVATED MATERIALS MANAGEMENT
3. Section 312500 – EROSION AND SEDIMENTATION CONTROLS
4. Section 329216 – SEEDING

PART 2 - PRODUCTS
(Not applicable to work of this section.)

PART 3 - EXECUTION

3.1 GRADING

A. Grade the Site as shown on the Contract Drawings, particularly Sheet 3 – Final Grading Plan. Final grades must be within +/- 1 inches of the design grades at any point across the Site.

B. Eliminate uneven areas and low spots. Grade soils to match existing into contours at site boundaries with smooth transitions between changes in elevations.

C. Do not undermine or destabilize existing structures when performing the grading work.

D. Remove debris, roots, branches, and stones with any dimension greater than 2 inches in length.

E. Scarify surface to depth of one inch where seed is scheduled. Scarify in areas where equipment used for hauling and spreading soil has compacted subsoil.

3.2 PROTECTION

A. Protect existing structures, fences, sidewalks, utilities, paving, guard rails, and gates.

B. Relocate any sections of the chain like fence back to its original position at the conclusion of the work.

END OF SECTION

SECTION 312500

EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all SECTIONS within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this section of Specifications.

1.2 DESCRIPTION OF WORK

A. This Section describes the installation and maintenance of erosion and sedimentation controls.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:
   1. Section 310000 – EARTHWORK
   2. Section 311100 – SITE CLEARING
   3. Section 312000 – EXCAVATED MATERIALS MANAGEMENT

1.4 SUBMITTALS

A. Within 5 calendar days, prior to ordering silt sacks and haybales and silt fence, submit representative samples, source, and/or or product information (as requested) to the Engineer for selection and approval. Do not order materials until Engineer’s approval has been obtained. Delivered materials must closely match the approved samples.

PART 2 - PRODUCTS

2.1 GENERAL

A. Provide all employees of the Contractor and the Subcontractor(s) with personal protective equipment and protective clothing consistent with the levels of protection required for this work as indicated in the Contractor's Health and Safety Plan (HASP).

2.2 SILT FENCE

A. Use a woven, polypropylene, ultraviolet resistant silt fence material.

2.3 HAYBALES

A. Use rectangular shaped bales of hay weighing at least forty pounds (40lbs) per bale, free of primary noxious weed seeds.

2.4 WOODEN STAKES

A. Use 1-inch-square wood, 3-foot-long stakes, two stakes per haybale.

2.5 SILT SACK

A. Silt sack: Inlet protection for catch basins within paved areas manufactured from specially designed woven polypropylene geotextile and sewn by a double needle machine using high strength nylon thread.

B. Inlet protection will be manufactured to fit the opening of the catch basin or drop inlet and will have the following features: two straps attached at the bottom to facilitate the emptying of inlet protection; lifting loops as an integral part of the system to lift inlet protection from the basin; and a restraining cord approximately halfway up the sack to keep the sides away from the catch basin walls. The restraining cord is also a visual means of indicating when the silt sack should be emptied.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. Pre-Installation Examination: Examine previous work, related work, and conditions under which this work is to be performed and notify Engineer in writing of all deficiencies and conditions detrimental to the proper completion of this work. Beginning work means Contractor accepts previous work and conditions.

B. Install erosion protection prior to any mobilization of equipment to the Site. Silt fence and haybales shall be installed around the perimeter of the property.

C. Erosion controls on top of soil consist of haybales and silt fence with stakes.

D. Erosion controls on top of pavement consist of haybales and silt fence without stakes.

E. Erosion controls in catch basins and inlets in paved areas consist of silt sacks.

F. Layout and Approval: Layout haybales and silt fence and obtain Engineer’s approval before excavation begins. Make revisions and adjustments as directed.

G. Install inlet protection in accordance with the manufacturer's instructions. Install inlet protection in catch basins in within the Work Area and immediately adjacent areas.

END OF SECTION

SECTION 329216

SEEDING

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
   1. Seeding following excavation and grading.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
   1. Section 013529 – HEALTH AND SAFETY
   2. Section 312000 – EXCAVATED MATERIALS MANAGEMENT
   3. Section 312500 – EROSION AND SEDIMENTATION CONTROLS
   4. Section 312219 – FINISH GRADING

1.3 QUALITY ASSURANCE

A. Provide seed mixtures in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging. Maintain all mixtures in separate containers clearly identified at all times.

1.4 STORAGE AND PROTECTION

A. Maintain seed mixture in sealed containers. Seed in damaged packaging is not acceptable.

PART 2 - PRODUCTS

2.1 SEED MIXTURE

A. Grass seed mixture shall be compatible with existing growing conditions and vegetation.

PART 3 - EXECUTION

3.1 PREPARATION

A. Soil base shall be prepared to receive seeding, in accordance with Section 312219 – Finish Grading.

3.2 SEEDING

A. Apply seed at recommended rate evenly in two intersecting directions. Rake in lightly.

B. Do not seed areas in excess of that which can be mulched on same day.

C. Do not sow immediately following rain, when ground is not moist, or during windy periods.

D. Roll seeded area with roller not exceeding 112 pounds.

E. Immediately following seeding and compacting, apply mulch to a minimum thickness of 1/8 inch.

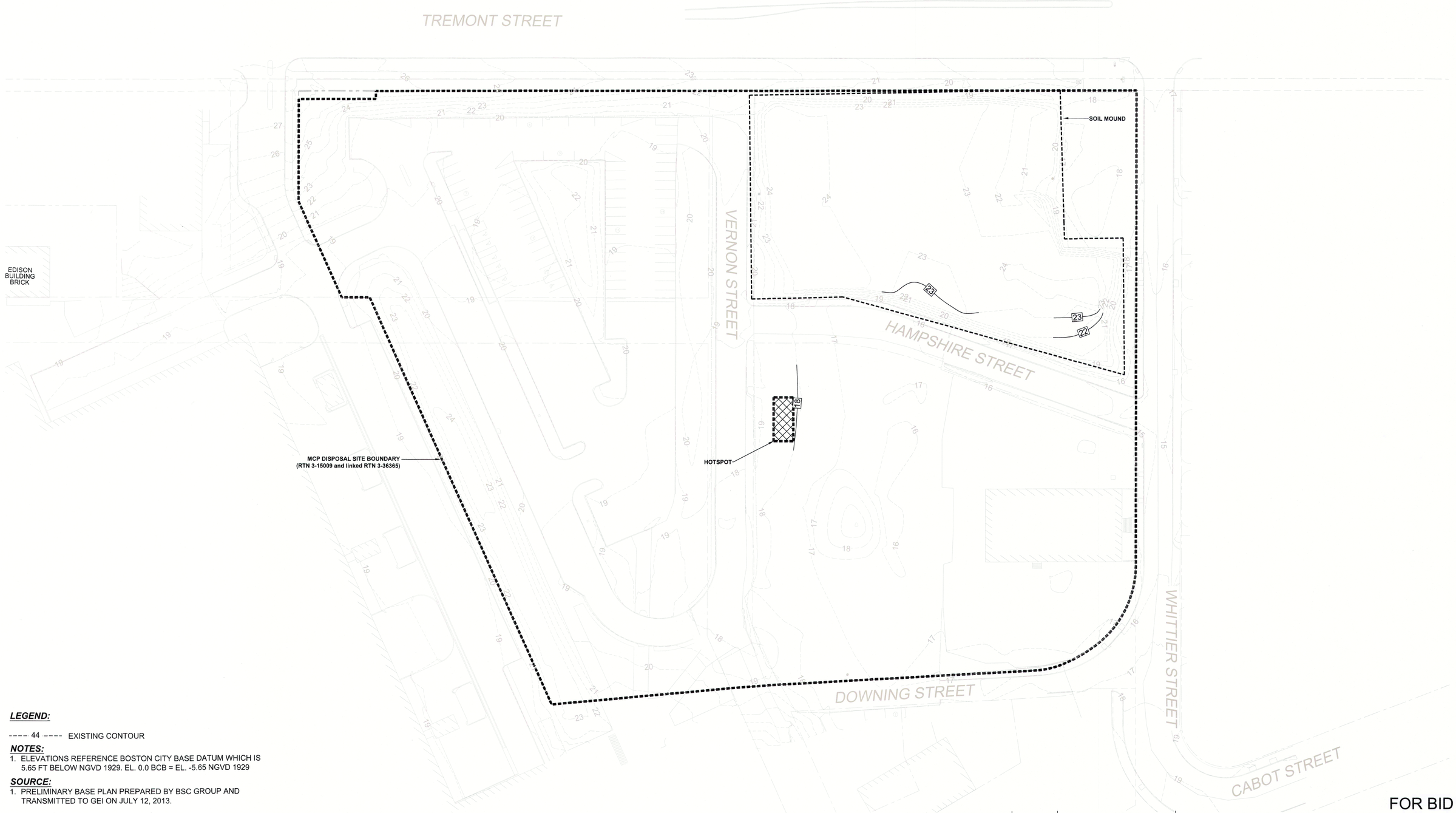
F. Apply water with a fine spray immediately after each area has been or mulched. Saturate to 4 inches of soil.

3.3 SEED PROTECTION

A. Identify seeded areas with stakes and string around area periphery.

B. Maintain and water seeded area to establish adequate growth of vegetation. Maintain initial planting for a minimum of two months after seeding. Reseed as required to establish permanent growth.

END OF SECTION



LEGEND:

---- 44 ---- EXISTING CONTOUR

NOTES:

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SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

0 40 80
SCALE: 1" = 40'

FOR BID

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

ILEEN GLADSTONE
CIVIL
34655
REGISTERED
PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
8/25/22

Designed:	RSH
Drawn:	JES
Checked:	RSH
Approved:	ISG
P.E. No:	34655
GEI Project	2103938

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BOSTON PLANNING & REDEVELOPMENT AGENCY
22 DRYDOCK AVENUE
SUITE 201
BOSTON, MA 02210

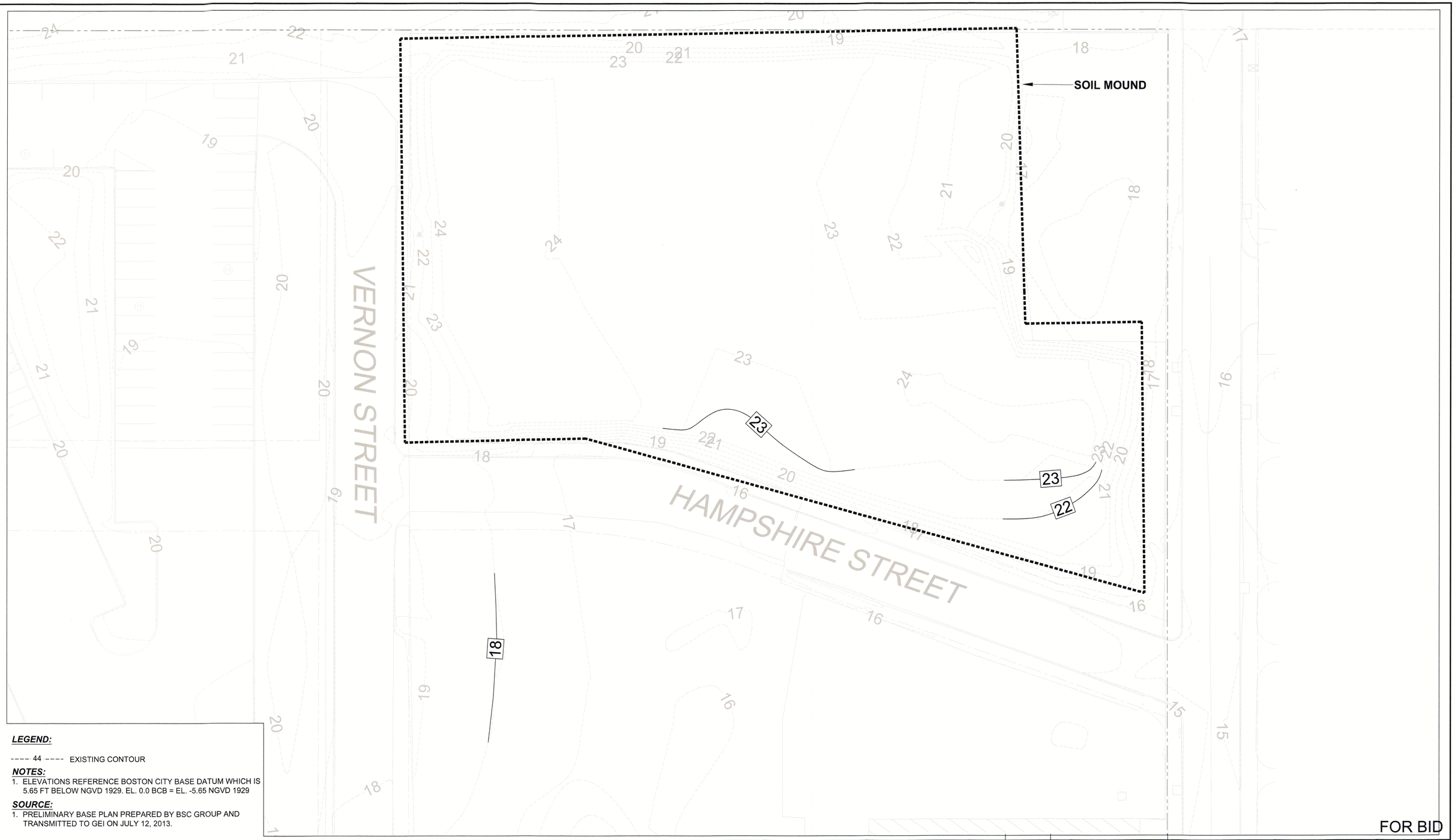
PARCEL P3 ENVIRONMENTAL REMEDIATION

PARCEL P3: TREMONT & WHITTIER STREETS
PARCEL 902980100
BOSTON (ROXBURY), MASSACHUSETTS

NO	DATE	ISSUE/REVISION	APP
0	8/8/2022	FOR BID	

SHEET NAME
EXISTING CONDITIONS PLAN

SHEET NO.
1 OF 3



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---- 44 ---- EXISTING CONTOUR

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1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

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SCALE: 1" = 20'

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Attention:
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If this scale bar does not measure 1" then drawing is not original scale.

COMMONWEALTH OF MASSACHUSETTS
ILEEN S. GLADSTONE
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No. 34655
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8/3/22

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SUITE 201
BOSTON, MA 02210

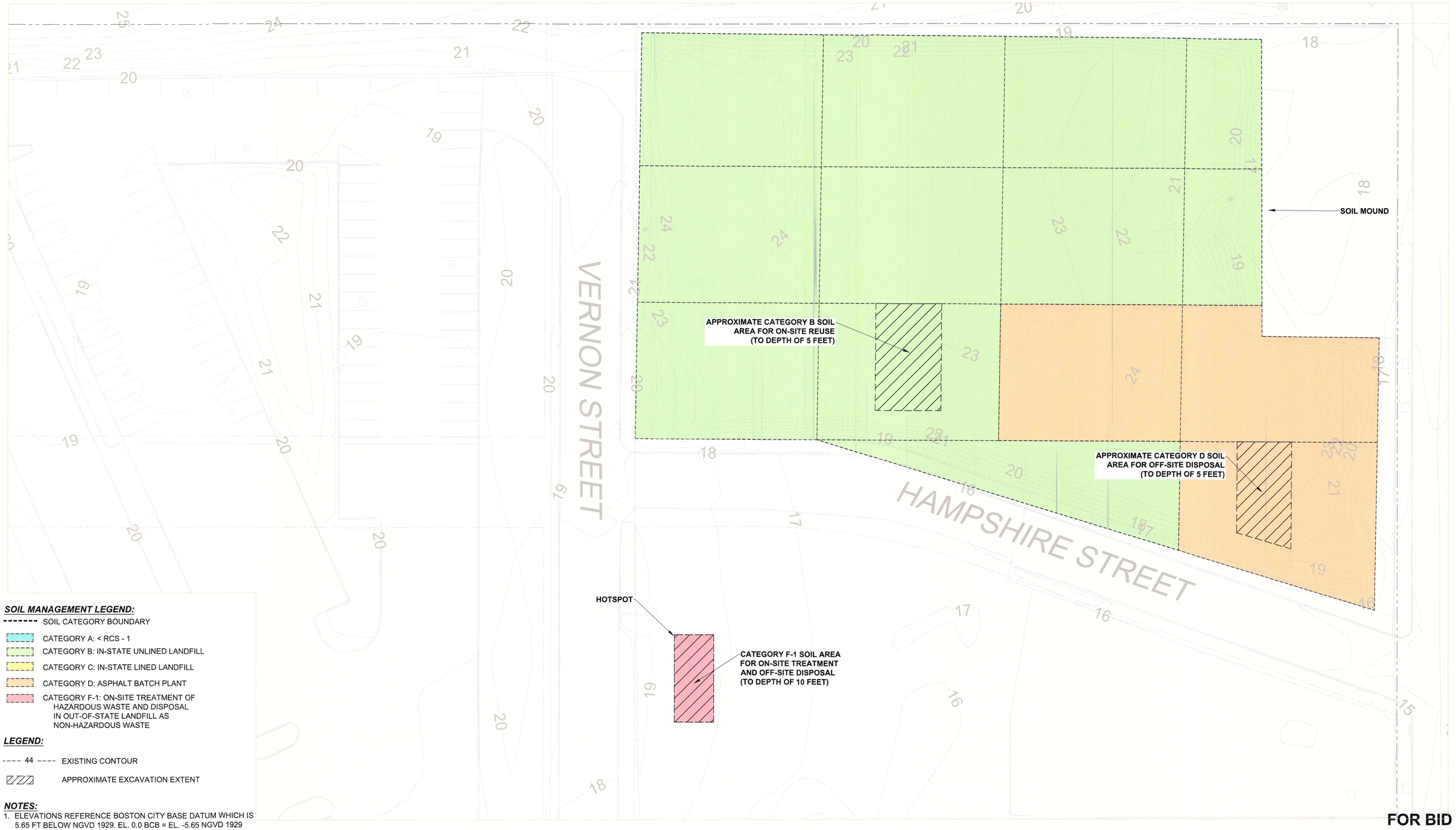
PARCEL P3 ENVIRONMENTAL REMEDIATION

PARCEL P3: TREMONT & WHITTIER STREETS
PARCEL 902980100
BOSTON (ROXBURY), MASSACHUSETTS

NO	DATE	ISSUE/REVISION	APP
0	8/8/2022	FOR BID	

SHEET NAME
EXISTING CONDITIONS (WORK AREA) PLAN

SHEET NO.
1A OF 3



SOIL MANAGEMENT LEGEND:

- SOIL CATEGORY BOUNDARY
- CATEGORY A: < RCS - 1
- CATEGORY B: IN-STATE UNLINED LANDFILL
- CATEGORY C: IN-STATE LINED LANDFILL
- CATEGORY D: ASPHALT BATCH PLANT
- CATEGORY F-1: ON-SITE TREATMENT OF HAZARDOUS WASTE AND DISPOSAL IN OUT-OF-STATE LANDFILL AS NON-HAZARDOUS WASTE

LEGEND:

- 44 EXISTING CONTOUR
- APPROXIMATE EXCAVATION EXTENT

NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

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SCALE: 1" = 20'

FOR BID

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

COMMONWEALTH OF MASSACHUSETTS
ILEEN GLADSTONE CIVIL NO. 34655 REGISTERED PROFESSIONAL ENGINEER
8/8/2022

Designed:	RSH
Drawn:	JES
Checked:	RSH
Approved:	ISG
P.E. No:	34655
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BOSTON, MA, 02210

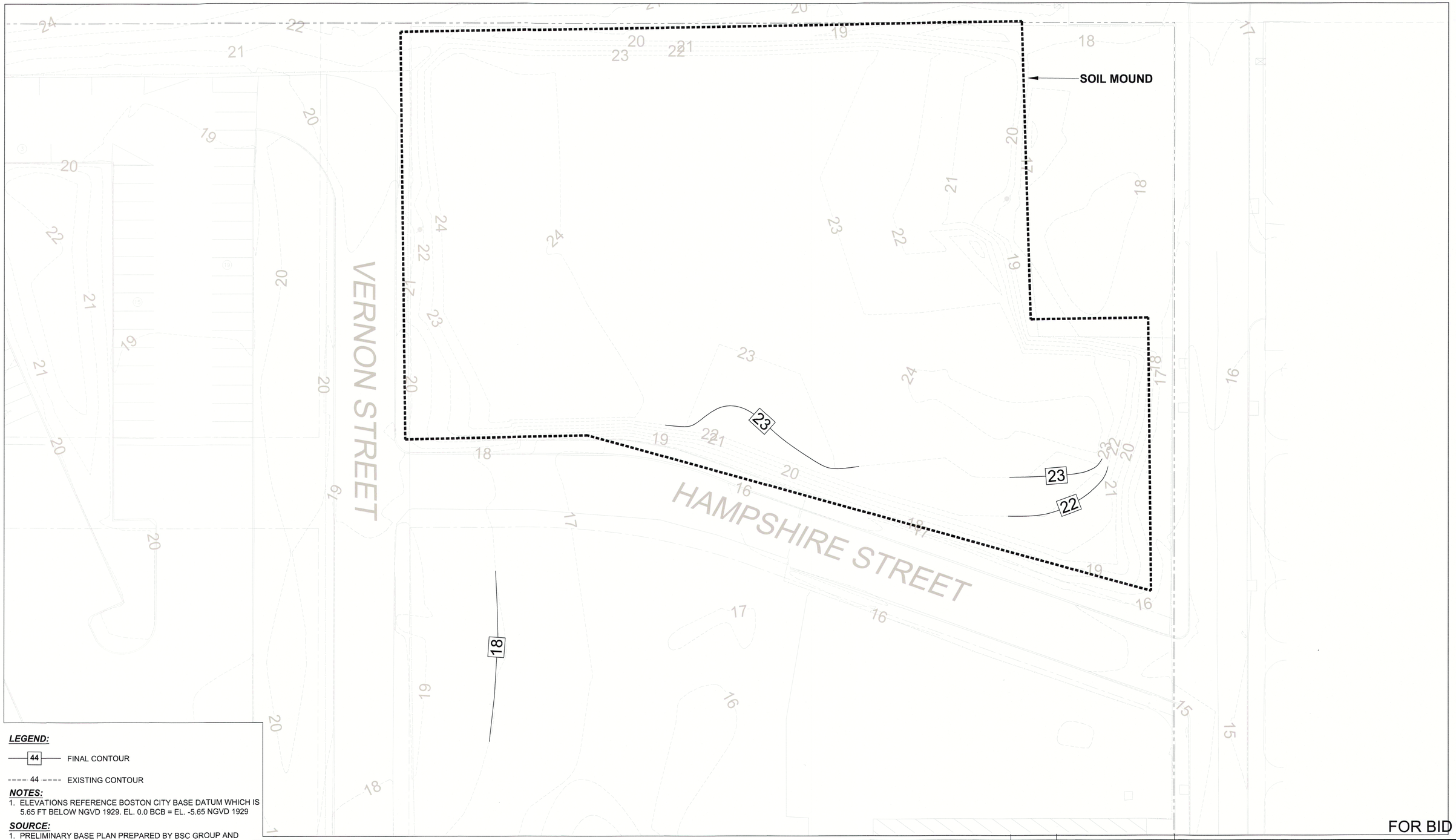
PARCEL P3 ENVIRONMENTAL REMEDIATION

PARCEL P3: TREMONT & WHITTIER STREETS
PARCEL 902980100
BOSTON (ROXBURY), MASSACHUSETTS

NO	DATE	ISSUE/REVISION	APP
0	8/8/2022	FOR BID	

SHEET NAME
EXCAVATION PLAN

SHEET NO.
2 OF 3



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44 FINAL CONTOUR

---- 44 ---- EXISTING CONTOUR

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SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

0 20 40
SCALE: 1" = 20'

FOR BID

Attention:
0 1"
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COMMONWEALTH OF MASSACHUSETTS
EILEEN M. BLADSTONE
CIVIL
No. 34655
REGISTERED PROFESSIONAL ENGINEER
8/25/22

Designed:	RSH
Drawn:	JES
Checked:	RSH
Approved:	ISG
P.E. No:	34655
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SUITE 201
BOSTON, MA 02210

PARCEL P3 ENVIRONMENTAL REMEDIATION

PARCEL P3: TREMONT & WHITTIER STREETS
PARCEL 902980100
BOSTON (ROXBURY), MASSACHUSETTS

NO	DATE	ISSUE/REVISION	APP
0	8/8/2022	FOR BID	

SHEET NAME
FINAL GRADING PLAN

SHEET NO.
3 OF 3

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Appendix F

Remedial Additives Plan

Remedial Additives Plan

This Remedial Additives Plan was prepared to support a Release Abatement Measure (RAM), per 310 CMR 40.0444. The objective of applying Remedial Additives as part of the RAM is to treat TCLP lead contaminated soils via stabilization. TCLP lead contaminated soils are within the Lead Hot Spot shown in Fig. 2. Additional similar soil could be identified during future assessment for the remainder of the excavations for the project.

Surrounding Receptors

The Site is in a mixed commercial and residential area of Boston, Massachusetts.

Proposed Treatment and Remedial Additive Application

Approximately 250 cubic yards of TCLP lead-contaminated soil (leachable lead greater than 5 milligrams per liter [mg/L]) may be treated prior to excavation and off-site disposal. Additional soil sampling may be performed to further delineate the area of this soil and to minimize the amount of soil to be managed as hazardous waste. If the soil is treated, a proprietary reagent will be applied (approximately 2% to 7% by weight) to the affected soil and mixed with the bucket of an excavator. The TCLP lead-contaminated soil layer is between at least 5 to 7 feet below ground surface but the zone of treatment will be between 0 and 10 feet below ground surface. The mixing zone will be sprayed with water to suppress dust and to activate reagents. The Remedial Additive is expected to be applied only once.

Current Soil Conditions

Soil at the Site consists of shallow fill underlain by organic soil. The treatment zone is expected to be entirely within the shallow fill interval. Laboratory analyses indicated that lead and polycyclic aromatic hydrocarbons were detected in the soil at concentrations greater than the applicable MCP RCS-1 values. The TCLP lead concentration in one soil sample (8.3 mg/L at boring B211) is greater than the hazardous waste threshold of 5 mg/L.

Current Groundwater Conditions

Groundwater at the Site contains low levels of VOCs, PAHs, and some metals. Lead was not detected above the laboratory reporting limit. Groundwater is present at depths ranging from approximately 8 to 13 feet at the Site, which is mostly below the anticipated treatment zone. No mounding analysis was performed to evaluate effects of the Remedial Additive on the groundwater table. The Remedial Additive is a dry powder to be mixed into soil and wetted with water.

Post-Application Soil Monitoring

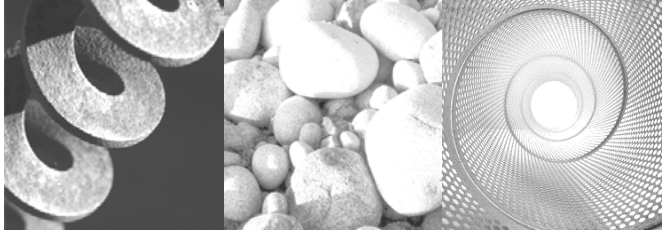
After the Remedial Additive is applied, confirmatory samples will be collected to evaluate the effectiveness of the treatment. Additional Remedial Additive will be applied if TCLP lead concentrations need to be further reduced.

Post-Application Groundwater Monitoring

Groundwater is present at depths ranging from approximately 8 to 13 feet at the Site, which is mostly below the anticipated treatment zone. Treated soil will be removed very soon after confirming the effectiveness of the treatment. Consequently, monitoring of groundwater conditions and hydraulic control are not necessary during application of the Remedial Additive.

Appendix G

Perimeter Air Monitoring Plan



GEI Consultants

Consulting
Engineers and
Scientists

MassDEP RTNs 3-15009 and 3-36365

Perimeter Air Monitoring Plan

Parcel P3 Environmental Remediation
Boston (Roxbury), Massachusetts

Submitted to:
Boston Planning & Development Agency
22 Drydock Avenue, Suite 201
Boston, MA 02210

Submitted by:
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
781-721-4000

March 30, 2023
Project 2103839

Ryan S. Hoffman, P.G., LSP
Senior Project Manager

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

Table of Contents

Executive Summary

GEI Consultants, Inc. (GEI) has prepared this Perimeter Air Monitoring Plan (PAMP) on behalf of the Boston Planning & Development Agency (BPDA) for perimeter ambient air monitoring during the cleanup and disposal of contaminated soil at the site at the intersection of Tremont Street and Whittier Street in Boston, Massachusetts (the Site). The Site is subject to the requirements of the Massachusetts Contingency Plan (MCP)

The approach of the perimeter ambient air monitoring is to conduct real-time monitoring for particulates (i.e., dust) at the perimeter. The purpose of the PAMP is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses) from potential airborne contaminant releases as a direct result of remedial work activities. GEI will conduct continuous air monitoring at two (2) locations along the perimeter of the Site during ground intrusive activities that result in management of contaminated soil.

Alert levels and action levels are concentrations that trigger implementation of measures to mitigate conditions. This PAMP defines an alert level that triggers early warning of particulate concentrations that are approaching the action level. The particulate alert level will be set at 100 micrograms per cubic meter (ug/m^3) and the particulate action level will be set at 150 ug/m^3. This alert level is intended to initiate notification to the project team and mitigation response actions before the action level is reached. An alert level does not suggest the existence of a health hazard but serves instead as a screening tool to trigger measures to assist in minimizing potential off-site transport of particulates during ground intrusive remedial activities.

The project team consists of the BPDA, GEI, and the contractor. GEI's responsibilities include air monitoring. In the case of an alert level or action level exceedance, GEI will inform the contractor. The contractor will implement mitigation control measures to abate the emissions and reduce ambient air levels below the alert level or action level.

1. Introduction

GEI Consultants, Inc. (GEI) has prepared this Perimeter Air Monitoring Plan (PAMP) on behalf of the Boston Planning & Development Agency (BPDA) for perimeter ambient air monitoring during the cleanup and disposal of contaminated soil at the site at the intersection of Tremont Street and Whittier Street in Boston, Massachusetts (the Site). The Site is subject to the requirements of the Massachusetts Contingency Plan (MCP). The purpose of the PAMP is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses) from potential airborne contaminant releases as a direct result of remedial work activities. Real-time perimeter ambient air monitoring will be conducted at two (2) locations along the perimeter of the Site for particulates (i.e., dust). GEI will also conduct pre-construction baseline monitoring of particulates prior to any remedial activity, which will establish background concentrations and help confirm the appropriateness of the alert and action levels.

1.1 Site History

The Site was generally industrial in the late 19th and early 20th century; a health center was constructed on the eastern portion in 1933. After that, portions were used for a junk yard, a tavern, and a paved parking lot.

1.2 Site Description

The Site is approximately 334,546 square feet or 7.7 acres. The Site is bounded by Tremont Street to the north, Whittier Street to the east, Downing Street to the south, and an unnamed road to the west that accesses the parking lots behind the Madison Park High School. Additionally, Vernon Street bisects the eastern and western portions of the Site. In the eastern portion of the Site, an undeveloped road, formerly Hampshire Street, bisects the Site north of the former Whittier Street Health Center (WSHC) building (Fig. 1).

The former WSHC, a vacant, four-story brick building, is on the southeast portion of the Site (Fig. 1, east of Vernon Street and south of Hampshire Street). The building is surrounded by pavement, which is in poor condition and a fence. A large, artificial mound, approximately 5 to 10 feet above the surrounding pavement, except for the northeast corner, which is landscaped and at normal grade, is on the northeast portion of the Site (Fig. 1, east of Vernon Street and north of Hampshire Street). The mound is mixed soil and debris including metal, concrete, and brick debris, tires, and trash. This area is entirely unpaved and is surrounded by a fence.

The western portion of the Site (Fig. 1, west of Vernon Street) is primarily paved asphalt parking lots, which are in good condition. In this area there are also some landscaped areas and a small community garden (Whittier Community Garden) with raised planter beds.

1.3 Planned Remediation Activities

The planned remedial activities include targeted excavation and off-site disposal of lead contaminated soil which is considered a "hot spot" under the MCP, and a portion of an approximately 10,000 cubic yard soil mound. The lead contaminated soil in the hot spot area is within approximately 5 to 7 feet of the ground surface. The lead hot spot is estimated to be approximately 250 cubic yards. This soil will require on-site treatment of leachable lead to de-characterize the soil as hazardous waste prior to disposal at an out-of-state lined landfill as non-hazardous waste.

The soil mound is estimated to be approximately 10,000 cubic yards. As part of this project, the most highly contaminated soil in the mound (approximately 200 cubic yards) will be disposed of with a grant from the MassDevelopment's Brownfields Redevelopment Fund.

Dust generated, if any, during activities will be controlled by conventional methods such as spraying with water. Specific dust mitigation techniques are discussed further in Section 3.3.

1.4 Air Monitoring Approach

Continuous real-time air monitoring for particulates (dust) will be conducted at the perimeter of the Site during ground intrusive activities that result in management of contaminated soil.

The objectives of this PAMP are as follows:

- Provide an early warning system to alert appropriate personnel that concentration of particulates (i.e. dust) in ambient air are approaching alert levels or action levels due to Site remedial activities.
- Provide details for a Site contingency plan designed to reduce the off-site migration of particulates in ambient air that are above alert levels or action levels due to Site remedial activities.
- Evaluate whether mitigation control measures to abate air emissions are effective in reducing ambient air concentrations below alert levels and/or action levels.
- Develop and document a permanent record that includes a database of air monitoring results and other pertinent information.

2. Air Monitoring Procedures

2.1 Continuous Monitoring

An air monitoring system will be employed for continuous monitoring of particulates. The system will consist of two perimeter, air monitoring stations. GEI will note when alert and/or action levels are approached and will notify the contractor to implement engineering controls. It is anticipated that the stations will be located as shown on Fig. 1, however final locations of stations will be selected based on contractor Site layout.

Each air monitoring station contains the following or equivalent:

- Station enclosure
- DustTrak™ aerosol particulate monitor, or equivalent

Site-specific, risk-based Acceptable Ambient Air Concentrations (AACs) for dust were derived, as further described in Section 2.1.1. The Site-specific Acceptable AACs in dust are above 150 micrograms per cubic meter (ug/m^3), which is the EPA National Ambient Air Quality Standard (NAAQS) for PM_{10} for a 24-hour averaging period. Accordingly, employing the daily NAAQS dust **action level of 150 ug/m^3** will be protective of potential dust exposure outside the Site (Table 1). This standard is based on potential adverse health impacts due to the inhalation of particulates in this size range. An **alert level of 100 ug/m^3** will be sufficient as an early warning system (Table 1).

2.1.1 Action Level Derivation

Polycyclic aromatic hydrocarbons (PAHs) and lead are the primary compounds of concern (COCs) in soil planned for excavation as part of the project. Acceptable AACs for PAHs and lead in particulates were evaluated to protect nearby receptors from potential exposure to PAHs and lead in dust. In accordance with "Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration" (MassDEP 1997), an Acceptable AAC was developed for benzo(a)pyrene to be protective of "worst cast" PAH compounds for the evaluation of carcinogenic effects and non-carcinogenic effects, respectively. An Acceptable AAC was also developed for lead. Maximum concentrations of other chemicals detected in soil within the planned excavation area were below the applicable Method 1 S-1 soil standards, therefore; exposure to these chemicals via particulates is unlikely to be a significant exposure pathway and Acceptable AACs were not derived.

The Acceptable AACs for particulates were derived based on an assumed 8-hour workday, for 5 days per week, for a project duration of one month. A summary of the calculated particulate AACs are in Table 2. The derivation parameters for the particulate AACs are presented in Appendix A.

The calculated particulate AACs are as follows:

- Benzo(a)pyrene = 170 ug/m^3 (0.170 milligrams per cubic meter [mg/m^3])
- Lead = 190 ug/m^3 (0.190 mg/m^3)

These Acceptable AACs are above the dust action level set at 150 ug/m^3 (0.150 mg/m^3), which is the USEPA NAAQS for PM_{10} for a 24-hour averaging period. Accordingly, employing the daily NAAQS dust action level of 150 ug/m^3 will be protective of potential exposure outside the Site.

2.1.2 Particulate Monitoring

Particulate concentrations (dust) will be monitored at each of the two perimeter monitoring stations on a continuous basis. Concentrations will be logged in an on-board data logger available for download, and a GEI field representative will manually record concentrations approximately every 30 minutes. A particulate monitor equipped with an impactor that selects particles less than 10 micrometers in size (PM_{10}) will be used to monitor dust. The system can integrate monitoring results over a period of 15 minutes for comparison to the alert level and action level.

2.1.3 Visible Dust Observation

In addition to continuous particulate monitoring, fugitive dust migration will be visually assessed throughout remediation activities.

2.2 Pre-Construction Baseline Monitoring

Pre-construction baseline monitoring will be conducted for one day prior to remedial activities to establish pre-construction background concentrations of particulates. The baseline monitoring will be performed at the monitoring stations prior to construction. Baseline monitoring will be performed during a time that will be representative of the anticipated construction schedule.

3. Mitigation Plan

Alert levels specified in this PAMP will trigger early warning of particulates approaching the action levels. These alert levels are intended to initiate mitigation response actions before action levels are reached. Both the alert levels and the action levels are summarized in Table 1. As a conservative measure, alert levels were set below the action level.

3.1 Communication

The project team consists of the BPDA, GEI, and the contractor. GEI's responsibilities include air monitoring per this PAMP. In the case of an alert level or action level exceedance, GEI will inform the contractor. The contractor will implement mitigation control measures to abate the emissions and reduce levels to below the alert level or action level. Potential mitigation control measures are summarized in Section 3.2.3.

3.2 Particulate Response

The dust action level was set at 150 ug/m^3, which is the USEPA NAAQS for PM_{10} for a 24-hour averaging period. This standard is based on potential adverse health impacts due to the inhalation of particulates in this size range. The alert level was set at 100 ug/m^3.

If the concentration of particulates at the downwind perimeter of the Site exceeds the alert level of 100 ug/m^3 above upwind background conditions for the 15-minute average and is attributable to Site remediation activity, or if airborne dust is observed leaving the Site, then dust mitigation techniques will be employed. GEI will notify the contractor. The contractor will immediately implement mitigation control measures to abate the emissions and reduce levels to below the alert level. Work will continue with dust mitigation techniques provided that the downwind particulate concentration does not exceed the action level of 150 ug/m^3 above the upwind background conditions, and provided that no visible dust is migrating from the Site.

If, after implementation of dust mitigation techniques, the concentration of particulates at the downwind perimeter of the Site persist at levels in excess of 150 ug/m^3 above the upwind background conditions and are attributable to Site remediation activity, work will be stopped and activities will be re-evaluated. GEI will notify the contractor. The contractor will immediately implement additional mitigation control measures to abate the emissions and reduce levels to below the action level. Work will resume if dust mitigation measures and/or other controls are successful in reducing the downwind particulate concentrations to below 150 ug/m^3 above the upwind background conditions and preventing visible dust migration.

3.3 Specific Dust Mitigation Techniques

The contractor may utilize the following techniques to mitigate dust if particulate action levels are exceeded:

- Live-loading soils to the extent feasible, rather than temporarily stockpiling soils.
- Covering containers.
- Covering stockpiles with 6-mil thick polyethylene sheeting.
- Spraying misted water on site to prevent dust formation. Water should be applied as warranted, depending on meteorological conditions.
- Sequencing work to minimize open excavation areas.
- Temporarily suspending excavation activities.
- Reducing construction equipment traffic and/or speed.

4. Quality Assurance

GEI will maintain a log of air monitoring activities completed each day including calibration (if warranted), monitoring, maintenance, any equipment malfunctions, and alert level and action level exceedances.

5. Data Management and Reporting

All readings will be recorded and be available for review. The forms will be used to document equipment calibration (if warranted), supplemental periodic monitoring results, and reporting.

A daily summary sheet will be filled out that will summarize any alert level or action level exceedances and responses taken. A weekly air monitoring summary memorandum will be transmitted each week to BPDA that describes the previous week's air monitoring activities, any alert level or action level exceedances and responses taken the previous week and will include a summary table of maximum daily PM_{10} results for the previous week.

After the completion of remedial activities, an air monitoring summary report will be prepared. The report will summarize air monitoring data collected during the project, alert level and action level exceedances noted, and responses taken during remedial activities.

6. Health and Safety

GEI will perform activities in accordance with GEI's project-specific Health and Safety Plan (HASP) for the Site. The contractor will perform their activities in accordance with their HASP. Work zone air monitoring will be conducted separately by the contractor for protection of contractor personnel.

References

MassDEP. 1997. Real-Time Air Monitoring at Construction and Remediation Sites to Estimate Risks of Contaminated Dust Migration. October, 1997.

Tables

Table 1. Alert Levels, Action Levels, and Mitigation Control Measures

Boston Planning & Development Agency

Parcel P3 Environmental Remediation

Boston, Massachusetts

Air Monitoring Parameter	Monitoring Location	Alert Level	Alert Level Mitigation Control Measures	Action Level	Action Level Mitigation Control Measures
Particulate Matter	Perimeter	**100 ug/m^3** above upwind concentrations, or visible dust leaving the site	-Determine if the alert level is attributable to site activity, then -Apply dust suppression	**150 ug/m^3** above upwind concentrations, or visible dust leaving the site	-Determine if the action level is attributable to site activity, then -Apply dust suppression -Temporarily halt work activities -Continue work if downwind PM-10 particulate levels return to 150 ug/m3 or less above upwind concentration and no visual dust leaving site

Table 2. Acceptable Ambient Air Concentrations

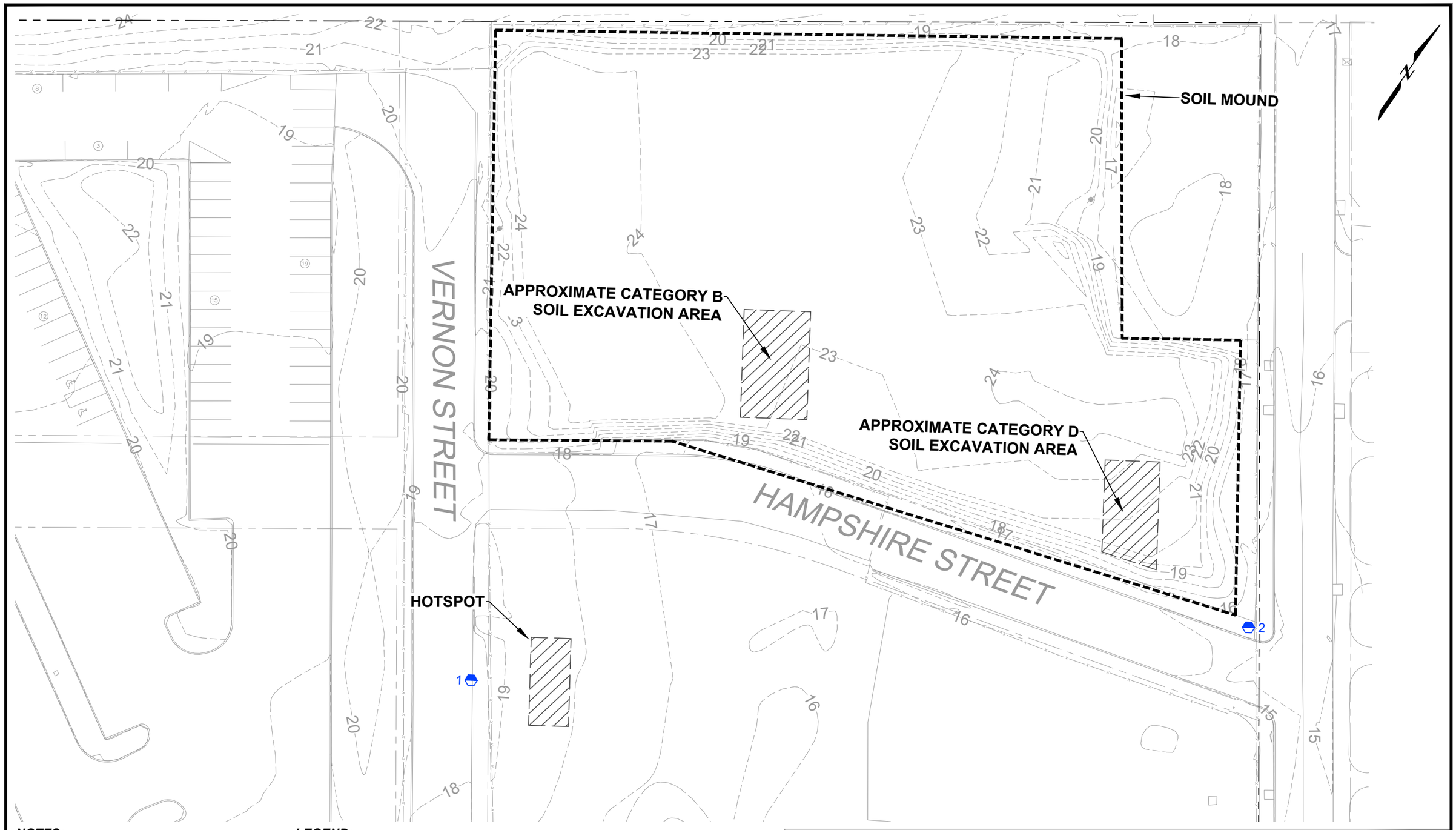
Boston Planning & Development Agency
Parcel P3 Environmental Remediation
Boston, Massachusetts

Perimeter 8-hour TWA Acceptable Ambient Air Concentrations (AACs)	
Contaminant of Concern	**Acceptable AAC**
Benzo(a)pyrene	170 ug/m^3
Lead	190 ug/m^3

General Notes:

1. ug/m^3 = micrograms per cubic meter
2. See Section 2 and Appendix A of Perimeter Air Monitoring Plan for the derivation of AACs.
3. Benzo(a)pyrene is used as a conservative proxy for polycyclic aromatic hydrocarbons (PAHs).

Figure



NOTES:

1. ELEVATIONS REFERENCE BOSTON CITY BASE DATUM WHICH IS 5.65 FT BELOW NGVD 1929. EL. 0.0 BCB = EL. -5.65 NGVD 1929.

SOURCE:

1. PRELIMINARY BASE PLAN PREPARED BY BSC GROUP AND TRANSMITTED TO GEI ON JULY 12, 2013.

LEGEND:

PROPOSED AIR MONITORING STATION

0 40 80

SCALE: 1" = 40'

Perimeter Air Monitoring Plan
Parcel P-3, Tremont & Whittier Streets
Boston (Roxbury), Massachusetts

Boston Planning & Redevelopment Agency
Boston, Massachusetts

GEI Consultants

SITE PLAN

Project 2103938 | March 2023 | Fig. 1

SMALLEY, JEREMY B:\Working\BOSTON PLANNING & DEV AGENCY (AKA BRA)\2103938 Parcel P3 Environmental Remediation\00_CAD\Figures\PAMP\2103938-01.dwg - 2/17/2022

Appendix A

Derivation of Particulate AACs

Parcel P-3 Perimeter Air Monitoring Plan **Calculation of Benzo(a)pyrene Dust Action Level**
Boston (Roxbury), Massachusetts

EXP1NC	**Absorption through GI**			**EXP1NC**	**EXP1C**
				2.93E-06 m3/kg-day	3.44E-09 m3/kg-day
Respirable Dust Concentration (OHMsoil)	20	mg/kg	Average of eight highest concentrations (range = 7 to 39 ppm)		
Ventilation Rate VR)	3	L/min	1-2 year old light exertion		
Fraction PM10 Ingested	1.5	unitless			
Relative Absorption Factor (RAF)	1	unitless			
Exposure Frequency (EF)	1	events/day			
Exposure Duration (ED)	8	hours/event			
Exposure Period (EP)	22	days	5 days/week for 1 month		
Conversion Factor 1 (C1)	1.00E-03	m3/L			
Conversion Factor 2 (C2)	60	min/hour			
Body Weight (BW)	10.8	kg	2-year old female child		
Averaging Period (AP)	30	days	1 month		
Conversion Factor 3 (C3)	1.00E+06	mg/kg			
Averaging Period Cancer (AP)	25550	days			

EXP2NC	**Absorption through lungs**			**EXP2NC**	**EXP2C**
				2.35E-06 unitless	2.76E-06 ug/mg
Respirable Dust Concentration (OHMsoil)	20	mg/kg			
Fraction PM10 Inhaled	0.5	unitless			
Exposure Frequency (EF)	1	events/day			
Exposure Duration (ED)	8	hours/event			
Exposure Period (EP)	22	days	5 days/week for 1 month		
Conversion Factor 4 (C4)	4.00E-02	days/hour			
Conversion Factor 5 (C5)	1.00E-06	kg/mg			
Averaging Period (AP)	30	days	1 month		
Conversion Factor	1000	ug/mg			
Averaging Period Cancer (AP)	25550	days			

Toxicity Values			**Noncancer Action Level PM10 (mg/m3)**	**Cancer Action Level PM10 (mg/m3)**
Oral RfD	3.00E-04	mg/kg-day		
Inhalation RfC	2.00E-06	mg/m3	0.17	32.33
Slope Factor	7.30E+00	per mg/kg-day		
Unit Risk	2.10E-03	per ug/m3		
			NAAQS=0.15	
Hazard Index (HI)	0.2			
Excess Lifetime Cancer Risk (ELCR)	1.00E-06			

Parcel P-3 Perimeter Air Monitoring Plan **Calculation of Lead Dust Action Level**
Boston (Roxbury), Massachusetts

				EXP1NC	**EXP1C**
EXP1NC	**Absorption through GI**			3.62E-04 m3/kg-day	4.25E-07 m3/kg-day
Respirable Dust Concentration (OHMsoil)	4937	mg/kg	Average of six highest concentrations (range = 1,200 to 13,000 ppm)		
Ventilation Rate VR)	3	L/min	1-2 year old light exertion		
Fraction PM10 Ingested	1.5	unitless			
Relative Absorption Factor (RAF)	0.5	unitless	MADEP		
Exposure Frequency (EF)	1	events/day			
Exposure Duration (ED)	8	hours/event			
Exposure Period (EP)	22	days	5 days per week for 1 month		
Conversion Factor 1 (C1)	1.00E-03	m3/L			
Conversion Factor 2 (C2)	60	min/hour			
Body Weight (BW)	10.8	kg	2-year old female child		
Averaging Period (AP)	30	days	1 month		
Conversion Factor 3 (C3)	1.00E+06	mg/kg			
Averaging Period Cancer (AP)	25550	days			

				EXP2NC	**EXP2C**
EXP2NC	**Absorption through lungs**			5.79E-04 unitless	6.80E-04 ug/mg
Respirable Dust Concentration (OHMsoil)	4937	mg/kg			
Fraction PM10 Inhaled	0.5	unitless			
Exposure Frequency (EF)	1	events/day			
Exposure Duration (ED)	8	hours/event			
Exposure Period (EP)	22	days	5 days per week for 1 month		
Conversion Factor 4 (C4)	4.00E-02	days/hour			
Conversion Factor 5 (C5)	1.00E-06	kg/mg			
Averaging Period (AP)	30	days	1 month		
Conversion Factor	1000	ug/mg			
Averaging Period Cancer (AP)	25550	days			

				Noncancer Action Level	**Cancer Action Level**
Toxicity Values				**PM10 (mg/m3)**	**PM10 (mg/m3)**
Oral RfD	7.50E-04	mg/kg-day	MADEP	0.19	#DIV/0!
Inhalation RfC	1.00E-03	mg/m3	MADEP		
Slope Factor		per mg/kg-day	IRIS		
Unit Risk		per ug/m3	IRIS	NAAQS=0.15	

Hazard Index (HI)	0.2
Excess Lifetime Cancer Risk (ELCR)	1.00E-06