GEOTECHNICAL REPORT

Geotechnical Engineering Services

P-259 P-8A Aircraft Apron Expansion Design Part A
Naval Air Station Whidbey Island
Oak Harbor, Washington
N44255-11-D-6004 Task Order No. 0008
Notkin Project No. 214024

for
The United States Navy and
Notkin Mechanical Engineers

February 18, 2015

GeoEngineers
Earth Science + Technology

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GEOENGINEERS

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INTRODUCTION

This report presents the results of GeoEngineers' subsurface explorations and geotechnical evaluation for the Design Part A components of the P-259 P-8A Aircraft Apron Expansion project at Naval Air Station Whidbey Island (NASWI) near Oak Harbor, Washington. The proposed project site is shown relative to surrounding physical features on the Vicinity Map (Figure 1) and the Site and Exploration Plan (Figures 2A and 2B).

The purposes of this geotechnical engineering report are to evaluate subsurface conditions at the site and to provide design recommendations for the planned improvements to be used by the project team for developing a construction package (drawings and specifications).

Our services were completed in general accordance with the Scope of Architect-Engineer Services (SAES) dated April 4, 2014, professional services consultant agreement N44255-11-D-6004/0008, between Notkin Mechanical Engineers and GeoEngineers dated April 29, 2014. Our specific scope of services included:

- Reviewing previous geotechnical reports and boring logs prepared for projects in the site vicinity;
- Completing additional borings to characterize the subsurface conditions at the site;
- Completing geotechnical and environmental laboratory testing on selected soil samples obtained from the explorations;
- Subcontract Falling Weight Deflectometer (FWD) pavement testing of the eastern margin of the existing apron and design of pavements for the apron expansion;
- Developing geotechnical engineering design recommendations for the project; and
- Preparing this geotechnical engineering report.

PROJECT DESCRIPTION

Our understanding of the project is based on information provided by Notkin Mechanical Engineers, the United States Navy, and other members of the design team through project correspondence and information shared during the project kick-off meeting and Design Charrette. The Design Part A components of the project consist of several elements, including an aircraft apron expansion and rinse facility, a liquid oxygen (LOX) plant, and a Sonobuoy issue/storage facility. The components originally included a hangar, which has been removed from the project.

The aircraft apron is being expanded to the northeast to provide additional parking for the new P8-A aircraft. Significant grading and fill placement is required for the expansion.

The LOX plant and Sonobuoy issue/storage facility are currently planned as pre-engineered metal buildings with differential settlement tolerances of up to ¾-inch between building columns. Slab loads of up to 150 pounds per square foot (psf) and 400 psf are expected for the LOX plant and Sonobuoy issue/storage facility, respectively. It is possible that the LOX plant may be designed as a concrete masonry unit (CMU) building, in which case tolerable differential settlements will be reduced to ½-inch.

The hangar was removed from the project scope after GeoEngineers' explorations and lab testing were complete. The boring logs and lab testing results are presented in the appendices for reference. No engineering recommendations for the hangar are presented as part of this report.

FIELD EXPLORATIONS AND LABORATORY TESTING

Field Explorations

The subsurface soil and groundwater conditions at the site were evaluated by drilling 20 borings. The borings, designated GEI-1A-14 through GEI-20A-14, were completed to depths of 19 to 50½ feet below existing site grades. The borings were completed on May 19 through 23, 2014, using track- and trailer-mounted, continuous-flight, hollow-stem auger drilling equipment.

The locations of the explorations completed for this project are presented on the Site and Exploration Plan, Figures 2A and 2B. Details of the field exploration program and logs of the explorations are presented in Appendix A.

Laboratory Testing

Soil samples were obtained during the drilling and taken to GeoEngineers' laboratory for further evaluation. Selected samples were tested for the determination of moisture content, fines content (material passing the U.S. No. 200 sieve), grain size distribution, Atterberg limits (plasticity characteristics) and consolidation. The tests were performed in general accordance with test methods of ASTM International (ASTM). A description of the laboratory testing and the test results are presented in Appendix B.

Based on field screening completed on soil samples obtained from the borings, no visual evidence of soil contamination was observed. Chemical analytical testing was completed on soil samples obtained from the borings and composite samples from the drill cuttings. The chemical analytical test results are included in Appendix E.

Falling Weight Deflectometer (FWD) Testing

Subcontracted FWD non-destructive pavement testing was completed in the eastern margin of the existing apron to evaluate the performance and condition of the existing apron pavement and to assess the stiffness and variability of the subgrade soils adjacent to the planned apron expansion. The results of the FWD testing are presented in Appendix D.

PREVIOUS STUDIES

As part of this evaluation, GeoEngineers reviewed available geotechnical reports completed as part of previous studies for projects located in the vicinity of the project area. The approximate locations of the previous explorations are shown on the Site and Exploration Plan (Figures 2A and 2B). The reviewed geotechnical information includes the logs of multiple standard penetration test (SPT) borings from 1953 to 2013 completed for the geotechnical design of the indoor wash rack, the TOC-MTOC building and other buildings, and roads and parking areas in the vicinity of the proposed improvements for this project. The boring logs from these studies are presented in Appendix C.

SITE CONDITIONS

Setting

The project site is located at NASWI near Oak Harbor, Washington, as shown in Figure 1. The air station is situated in Clover Valley, which is a low, relatively flat valley that drains to Puget Sound to the west and Dugualla Bay to the east.

Geology

Published geologic information for the project vicinity includes a Washington State Department of Natural Resources geologic map of the north Whidbey Island area (Dragovich et al., 2005). Mapped soils in the project vicinity consist of near-shore (beach) deposits, saltwater marsh deposits, glaciomarine drift and glacially consolidated deposits. There are also areas of man-made fill associated with the airfield runways and other site development.

Near-shore deposits generally consist of mud and sand tidal flat materials, with organic material and shells in areas. The saltwater marsh deposits generally consist of organic-rich silt and mud with layers of peat. The near-shore and saltwater marsh deposits have been uplifted above sea level at NASWI. Glaciomarine drift generally consists of soft to stiff clay with variable silt, sand, and gravel content and occasional trace organic material and shell fragments. The glacially consolidated deposits typically consist of medium dense to very dense sand and gravel with varying silt content.

Surface Conditions

Apron Expansion Area

The apron expansion portion of the project site is located to the northeast and northwest of the existing apron. The apron expansion area also includes a grassy area to the northwest of the existing apron and southeast of the Delta taxiway. The area near the existing apron is partially developed, with asphalt pavement and grass and fill soil immediately adjacent to the existing apron. Various support structures are also present within 200 feet of the existing apron. Further to the northeast of the apron is a primarily undeveloped area with tall grass. Utilities present in the site vicinity consist of buried power, communication, water, storm drain, abandoned utilities, and a fuel line in the undeveloped grass area. The layout of the existing site features is depicted in the Site and Exploration Plan, Figures 2A and 2B.

Subsurface Conditions

Soil Conditions – Apron Expansion

Borings GEI-6A-14 through GEI-18A-14, with the exception of GEI-13A-14, were drilled in the apron expansion area. Three general soil types (topsoil or fill, glaciomarine drift, and glacially consolidated deposits) were encountered.

Topsoil, reworked glaciomarine drift, or fill up to 5 feet thick was present near the surface in each of the apron expansion borings, with the exception of GEI-14A-14 and GEI-15A-14. The near-surface soils are typically soft to medium stiff silt or clay with variable amounts of sand and organic materials. A relic topsoil soil layer was observed 2½ feet below the ground surface (bgs) in borings GEI-9A-14 and GEI-10A-14.

Asphalt concrete pavement was present at the ground surface near borings GEI-14A-14 and GEI-15A-14. In borings GEI-14A-14 and GEI-15A-14, the asphalt concrete varied from 2 to 4½ inches thick and was underlain by 6 to 6½ inches of portland cement concrete.

Very soft to medium stiff peat and organic silt was encountered below fill soils in borings GEI-15A-14 and GEI-16A-14 and varied between 2½ to 4 feet thick.

Glaciomarine drift, varying between 7 and 20 feet thick, was encountered below the near-surface soils in most borings, and beneath the peat and organic silt layer in borings GEI-15A-14 and GEI-16A-14. The glaciomarine drift observed in the borings generally consists of very soft to medium stiff clay with variable sand and gravel content. The glaciomarine drift in this area is typically soft to medium stiff from nearer to the surface and grades to very soft with depth.

Glacially consolidated deposits, consisting of medium dense to very dense silty sand and sandy silt with gravel, were observed below the glaciomarine drift in each of the borings except GEI-15A-14 and GEI-17A-14. Glacially consolidated deposits were encountered at depths varying from 12 feet bgs in boring GEI-11A-14 to 29 feet bgs in boring GEI-16A-14 and extending to the depths explored. Occasional cobbles and boulders are frequently encountered in glacially consolidated deposits in the Puget Sound region and should be anticipated at this site.

Soil Conditions – LOX Plant

Boring GEI-13A-14 was drilled in the vicinity of the proposed LOX plant. Fill consisting of silty sand fill was encountered from the surface to an approximate depth of 5 feet. Glaciomarine drift, consisting of medium stiff to very soft clay with variable sand, gravel and sand lenses, was encountered below the fill soils to a depth of approximately 23 feet. Below the glaciomarine drift, medium dense glacially consolidated sand was encountered to the depth explored.

Soil Conditions – Sonobuoy Issue/Storage Facility

Borings GEI-19A-14 and GEI-20A-14 were drilled in the vicinity of the proposed Sonobuoy issue/storage facility. Sand with silt and occasional gravel was encountered at the surface of both borings. Organic silt with sand, representative of a relic topsoil layer was encountered in boring GEI-19A-14 underlying the fill soil. Glaciomarine drift was encountered underlying the fill soils in boring GEI-20A-14 and underlying the relic topsoil in boring GEI-19A-14 and extended to depths of 18 to 20 feet. Glacially consolidated silty sand and gravel was encountered underlying the glaciomarine drift and extended to the depths explored.

Groundwater Conditions

Groundwater was observed in each of the borings completed for this study. Monitoring wells were installed in borings GEI-4A-14, GEI-8A-14 and GEI-10A-14. Groundwater levels were monitored with unvented transducers placed in each of these monitoring wells. The data collected from the transducers is presented in Appendix A as Figures A-22 through A-24 The water levels presented in the figures and summarized in Table 1 were observed during the monitoring period that covered late May 2014 to mid-January 2015.

TABLE 1. GROUNDWATER MONITORING WELL SUMMARY

Monitoring Well ID	Measured Water Level Depth Below Top of Casing (ft)	Measured Water Level Elevation (ft)
GEI-4A-14	2.33 to 3.33	7.6 to 6.6
GEI-8A-14	1.8 to 5.3	12.3 to 8.8
GEI-10A-14	0.4 to -0.27*	10.8 to 11.7

* Indicates water level measured above the top of casing elevation.

The low-permeability clay soils present in the site vicinity result in a perched groundwater condition during extended periods of wet weather. Therefore, we anticipate that shallow perched groundwater is present within 0 to 4 feet of the existing ground surfaces. The water level observed at GEI-10A-14 is representative of the ponded water at the surface and not an artesian condition. Artesian groundwater was not encountered in our borings at this site but has been encountered at other sites nearby in the underlying glacially consolidated sand deposits.

CONCLUSIONS AND RECOMMENDATIONS

General

In our opinion, construction of the apron expansion, LOX plant, Sonobuoy issue/facility and the other planned improvements is geotechnically feasible. The primary geotechnical considerations for the project are summarized below:

- Settlement analyses completed for the planned apron expansion indicate that no preloading is required prior to constructing the apron pavements. Where new fill is placed to meet planned pavement subgrade elevations, apron pavement construction should not commence until four weeks after final placement of the fill to the pavement subgrade elevation in order to allow for most of the consolidation settlement of the moderately compressible native soils to occur. Apron pavement construction may occur immediately after subgrade preparation in areas where the planned pavement subgrade elevation is located at or below existing grades.
- A woven stabilization fabric should be placed between the prepared subgrade and structural fill placed to support the apron expansion. The woven stabilization fabric will provide separation between the native soils and the pavement subbase materials and will enhance the performance of the pavement.
- The new apron pavement section is recommended to consist of 15 inches of jointed plain (unreinforced) portland cement concrete over 4 inches of asphalt concrete base course over 12 inches of aggregate base course. Portland cement concrete pavement materials should comply with the requirements of the Unified Facility Guide Specifications (UFGS) 32.13.11 *Concrete Pavement for Airfields and Other Heavy-Duty Pavements*. Asphalt concrete pavement materials should comply with the requirements of the UFGS 32 12 15.13 *Hot-Mix Asphalt Airfield Paving*. The main gear wheel loading for the P-8A aircraft, which is the dominant aircraft in the design aircraft mix, is significantly larger (36 percent) than the main gear wheel loading for the P-3 aircraft that currently uses the existing apron adjacent to the apron expansion area. This is the primary factor in the difference in the proposed apron expansion pavement section (15 inches thick) and the existing apron section (11 inches thick).

- The site is underlain by soft clay (glaciomarine drift) that is moderately compressible. Settlement analyses completed for the planned LOX and Sonobuoy building loading/locations indicate that it is feasible to support the planned buildings on shallow foundations and maintain settlement tolerances without pre-loading the site.
- The planned Sonobuoy and LOX buildings will be lightly to moderately loaded single-story buildings. The planned buildings may be supported on shallow spread footings and a slab-on-grade or on a structural mat foundation with thickened edges, where necessary. The footings/structural mat foundation and/or slab-on-grade should be founded on at least 2 feet of structural fill to provide uniform support. For foundations bearing on at least 2 feet of structural fill, the foundations can be designed for an allowable bearing pressure of 2 kips per square foot (ksf). For design of the structural mat foundation, a subgrade modulus of 15 pounds per cubic inch (pci) can be assumed for preliminary design.
- Slabs-on-grade should bear on a 2-foot minimum thickness layer of structural fill consisting of 18 inches of imported gravel borrow capped with 6 inches of capillary break material consisting of open graded crushed rock.
- The planned buildings should be constructed with perimeter foundation drains.
- Most of the on-site soils generally contain a high percentage of fines and are highly moisture-sensitive. Site subgrades will not support construction traffic even during periods of dry weather. Working from existing paved surfaces or construction of a building pad should be considered by the contractor to facilitate construction.
- Due to the high fines content and shallow groundwater, the on-site native soils are not suitable for infiltration of stormwater.

These geotechnical concerns and other considerations are discussed in greater detail, and conclusions and recommendations for the geotechnical aspects of the project are presented in the following sections.

Earthquake Engineering

Seismicity

The Puget Sound area is located near the convergent continental boundary known as the Cascadia Subduction Zone (CSZ), which extends from mid-Vancouver Island to Northern California. The CSZ is the zone where the westward advancing North American Plate is overriding the subducting Juan de Fuca Plate. The interaction of these two plates results in two potential seismic source zones: (1) the Benioff source zone, and (2) the CSZ interplate source zone. A third seismic source zone, referred to as the shallow crustal source zone, is associated with the north-south compression resulting from northerly movement of the Sierra Nevada block of the North American Plate.

The Benioff zone is characterized as being capable of generating earthquakes up to magnitude 7.5. The Olympia 1949 (M = 7.1), the Seattle 1965 (M = 6.5) and the Nisqually 2001 (M = 6.8) earthquakes are considered to be Benioff zone earthquakes. The recurrence interval for large earthquakes originating from the Benioff source zone is believed to be shorter than for the shallow crustal and CSZ source zones; on average, damaging Benioff zone earthquakes in Western Washington occur every 30 years or so.

The CSZ is considered as being capable of generating earthquakes of magnitude 8 to magnitude 9. No earthquakes on the CSZ have been instrumentally recorded; however, through the geologic record and

historical records of tsunamis in Japan, it is believed that the most recent CSZ event occurred in the year 1700. Recurrence intervals for CSZ interplate earthquakes are thought to be on the order of 400 to 600 years.

Shallow crustal earthquakes occur within the North American Plate to depths up to 15 miles. Shallow earthquakes in the Puget Sound region are expected to have durations ranging up to 60 seconds. Four magnitude 7 or greater known shallow crustal earthquakes have occurred in the last 1,100 years in the Cascadia region; two of these occurred on Vancouver Island and two in Western Washington. There are four shallow crustal faults with known or suspected Quaternary displacements within the general project area, including the Devils Mountain Fault (1.5 miles north), Strawberry Point Fault (1.6 miles south), Utsalady Point Fault (3 miles south) and Southern Whidbey Island Fault (15 miles south).

Seismic Hazards

We evaluated the site for seismic hazards including liquefaction, lateral spreading and fault rupture. Our evaluation indicates the site soils have a low potential for liquefaction and, therefore, also have a low risk of liquefaction-induced ground disturbance including lateral spreading. Mapped faults are located within 1½ miles of the site; however, because there are no mapped faults in the immediate vicinity of the site, our opinion is that there is a low risk of fault displacement resulting in ground rupture at the surface.

2012 IBC/UFC 3-301-01 Seismic Design Information

The site is best classified as Site Class E in accordance with the 2013 Unified Facilities Criteria (UFC) 3-301-01, which references the American Society of Civil Engineers (ASCE) 7-10 code. The 2012 International Building Code (IBC) is also based on the criteria from ASCE 7-10. The site-specific design spectra parameters for site class, short period spectral response acceleration (S_S), 1-second period spectral response acceleration (S_1), and seismic coefficients F_A and F_V are presented in the Table 2. Note that the S_S and S_1 values in the table are for Site Class B. The F_A and F_V values modify the parameters to the recommended Site Class E.

TABLE 2. 2012 IBC/ UFC 3-301-01/ASCE 7-10 PARAMETERS

2012 IBC/ UFC-3-301-01/ASCE 7-10 Parameters	Value
Site Class	E
Short Period Spectral Response Acceleration, S_S (percent g)	130
1-Second Period Spectral Response Acceleration, S_1 (percent g)	51
Seismic Coefficient, F_A	0.9
Seismic Coefficient, F_V	2.4

Apron Expansion Considerations

Construction of the apron expansion will result in new fill placement up to approximately 11-feet thick. In order to evaluate the settlement resulting from placement of the new fill and apron pavement section, settlement analyses were completed using the software program Settle3D by Rocscience (Version 3.007). The program completes a one-dimensional consolidation analysis, and the name refers to the graphics and visualization capabilities of the program, not the analysis method.

The settlement analyses were completed using soil parameters determined through geotechnical laboratory testing completed on discrete soil samples obtained from explorations completed for this study. The settlement analyses were validated by estimating the settlement response of the preload fills placed as part of the Consolidated Fuels Facility project, located near the apron expansion area. The settlement response predicted for the preloads constructed and surveyed for the Consolidated Fuels Facility project were close to the measured values and validated the analyses for the apron expansion. Additionally, the time-rate of settlement measured during the Consolidated Fuels Facility preloads indicate that settlements will occur relatively quickly (on the order of four weeks or less).

The settlement analyses for the apron expansion indicate that the placement of fill to the pavement subgrade elevation will result in up to ¾ inch of settlement, with the largest settlements located in the area where the existing drainage ditch will be filled (where the thickest fill will be placed). We anticipate that most of this settlement will occur within four weeks of placement. The addition of the concrete pavement section will result in approximately ¼ inch of additional settlement. Areas where the aircraft permanently park could experience an additional ⅛ to ¼ inch of settlement.

We recommend the following be implemented during construction of the apron:

- Strip and grub the upper 1 foot of soil from the existing surface prior to placement of structural fill.
- Where existing asphalt or concrete pavements are present below the planned pavement subgrade elevation, these pavements may be left in place. Where the existing pavements conflict with the new pavement section (that is, are located above the planned pavement subgrade elevation), the existing pavements should be removed.
- Construction of the apron expansion will require demolition/removal of the existing LOX and Sonobuoy buildings and appurtenant structures. Concrete for the existing buildings should be removed from the site along with other construction debris. Existing utilities should be removed from the apron expansion footprint and re-routed, as necessary. Existing utility trenches and excavation remaining after removal of foundation elements should be backfilled with properly compacted structural fill. Abandoned, below-grade utilities should be removed; alternatively, below-grade utilities can be abandoned in place by completely filling the conduits with lean concrete.
- After the completion of stripping/grubbing and demolition/removal of the existing buildings/utilities present in the apron expansion area, the grade should be cut or filled to approximately 16 inches below the planned pavement subgrade elevation (except where existing pavements are present below the planned pavement subgrade elevation). New fill should consist of properly compacted structural fill consisting of gravel borrow as outlined in the Earthwork section, below. If peat, topsoil or other organic-rich soils are present, these materials should be removed and replaced with structural fill.
- Once the cut/fill is completed to achieve a grade located 16 inches below the planned pavement subgrade elevation, a woven geotextile stabilization fabric (Minimum 315 pound Grab Tensile Strength, WSDOT 9-33.2[1] Table 3) should be placed over the prepared subgrade.
- Above the woven geotextile fabric (or existing pavement where present) as recommended in the Earthwork section below, the structural fill should consist of crushed surfacing base course per 2014 Washington State Department of Transportation (WSDOT) Standard Specification Section 9-03.9(3),

- No preloading of the apron expansion is required.
- Where more than 2 foot of new fill is placed to meet planned pavement subgrade elevations, apron pavement construction should not commence until four weeks after final placement of the fill to the pavement subgrade elevation in order to allow for most of the consolidation settlement of the moderately compressible native soils to occur.
- Apron pavement construction may occur immediately after subgrade preparation in areas where the planned pavement subgrade elevation is located at or below existing grades.

Apron Expansion Pavement Design

Subcontracted FWD non-destructive pavement testing was completed in the eastern margin of the existing apron to evaluate the performance/condition of the existing apron pavement and to assess the stiffness and variability of the subgrade soils adjacent to the planned apron expansion. The results of the FWD testing are included in the Pavement Design Report prepared by Pavement Services, Inc., under subcontract to GeoEngineers. The Pavement Design Report is presented in Appendix D.

Using the FWD data for native soils, portland cement concrete pavement sections were designed by Pavement Services, Inc., under subcontract to GeoEngineers using mechanistic design methods contained within the Pavement Computer Assisted Structural Engineering (PCASE) Program version 2.09.02 design software. The details of the pavement design are also presented in the Pavement Design Report prepared by Pavement Services, Inc., and presented in Appendix D.

The new apron pavement section is recommended to consist of:

- 15 inches of jointed plain (unreinforced) portland cement concrete,
- 4 inches of asphalt concrete base course,
- 12 inches of crushed surfacing base course, and
- woven geotextile stabilization fabric (Minimum 315 pound Grab Tensile Strength, WSDOT 9-33.2[1] Table 3).

Portland cement concrete pavement materials should comply with the requirements of the UFGS 32.13.11 “Concrete Pavement for Airfields and Other Heavy-Duty Pavements”. Asphalt concrete pavement materials should comply with the requirements of the UFGS 32 12 15.13 “Hot-Mix Asphalt Airfield Paving”.

The main gear wheel loading for the P-8A aircraft, which is the dominant aircraft in the design aircraft mix, is significantly larger (36 percent) than the main gear wheel loading for the P-3 aircraft which currently uses the existing apron adjacent to the apron expansion area. This is the primary factor in the difference in the proposed apron expansion pavement section (15 inches thick) and the existing apron section (11 inches thick).

Replacement Panel Considerations

We understand that several isolated panels within the exiting apron will be removed and replaced for electrical improvements. We recommend that the section for the replacement panels consist entirely of

concrete for constructability considerations. The replacement panels should consist of 19 inches of Portland cement concrete over a compacted and approved subgrade.

Shallow Foundations

We recommend that the proposed Sonobuoy and LOX buildings be supported on shallow foundations, provided that the footings are placed on a minimum 2-foot-thick structural fill pad as recommended in the Earthwork section of this report and as discussed below. The foundations may consist of either discrete shallow foundations (column or perimeter strip footings) or a structural mat foundation with thickened edges, where necessary.

We recommend that the structural fill extend a minimum of 2 feet below the footing/structural mat foundation subgrade elevation. If excessively soft or organic-rich soils (peat or topsoil) are exposed at subgrade level, additional excavation and replacement with structural fill may be required. The structural fill zone should extend a minimum distance of 2 feet beyond the edges of the footing. A licensed geotechnical engineer should evaluate the soils exposed in the footing excavations before placement of structural fill to confirm that the footing subgrade is acceptable.

We recommend that the subgrades of all exterior footings be a minimum of 18 inches below the lowest adjacent finished grade, and interior footings should have a minimum embedment of 12 inches below the subgrade of the adjacent floor slab. We recommend that continuous footings and isolated column footings have minimum widths of 18 and 24 inches, respectively.

Discrete spread foundations may be designed using an allowable soil bearing pressure of 2 ksf for dead plus long-term live loads. This value includes a factor of safety of 3 and may be increased by one-third when considering transient loads, such as wind or seismic loads. The weight of the footing and any backfill over the footing may be neglected in determining the applied bearing pressure.

For structural mat foundations, a subgrade modulus of 15 pci can be assumed for preliminary design. The structural engineer should provide output from the structural model with predicted applied pressure and settlement distributions for GeoEngineers to review in order to develop final subgrade modulus values for structural mat foundations.

Provided that the foundations are designed and constructed as recommended above, we estimate that the total settlement of shallow/structural mat foundations will be about 1 inch or less. Differential settlements between footings is estimated to be half the total settlement.

Lateral foundation loads may be resisted by passive resistance on the sides of the foundations and by friction on the base of the foundations. For shallow foundations supported as recommended above, the allowable frictional resistance may be computed using a coefficient of friction of 0.4 applied to vertical dead load forces.

The allowable passive resistance may be computed using an equivalent fluid density of 300 pounds per cubic foot (pcf) (triangular distribution). These values are appropriate for foundation elements that are surrounded by structural fill. The above coefficient of friction and passive equivalent fluid density values incorporate a factor of safety of about 1.5.

Foundation Drains

We recommend that perimeter foundation drains be installed around the proposed LOX and Sonobuoy buildings. The drains should consist of 4-inch-diameter perforated collector pipe enveloped within a minimum thickness of 6 inches of gravel as described in the Structural Fill section of this report. The gravel backfill should be wrapped with a geotextile filter fabric meeting the requirements of construction geotextile for underground drainage (Section 9-33 of the 2012 WSDOT Standard Specifications).

We recommend using either heavy-wall solid pipe (SDR-35 polyvinyl chloride [PVC]) or rigid corrugated polyethylene pipe (ADS N-12 or equivalent) for the collector pipe. We recommend against using flexible tubing for footing drainpipe.

The pipes should be laid with a minimum slope of ½ percent and discharge into an appropriate outfall. The pipe installations should include a cleanout riser with cover located at the upper end of each pipe run. We recommend that the cleanouts be covered and be placed in flush-mounted utility boxes or monuments. The foundation drainpipes should be located below the base of the capillary break layer where a structural mat foundation is used or near the base of perimeter strip footings where discrete spread foundations are used.

Permanent drainage systems should intercept surface water runoff at the top and/or bottom of cut and fill slopes to prevent runoff from flowing in an uncontrolled manner across the site. The finished ground surface adjacent to new and existing buildings should be sloped so that surface water runoff flows away from the structures and the nearby slopes. Roof drains should be tightlined to an appropriate discharge point and should not be connected to the footing or wall drains.

Slab-on-Grade Floors

Subgrade Preparation

Slabs-on-grade (or structural mat foundations, where present) should bear on a 2-foot minimum thickness layer of structural fill. The structural fill section should consist of 18 inches of imported gravel borrow capped with 6 inches of capillary break material.

Prior to placing the structural fill, the exposed subgrade should be evaluated by a licensed geotechnical engineer to confirm that no excessively soft soils or peat/topsoil is present. If excessively soft soils or peat/topsoil is present, these materials should be removed and replaced with properly compacted structural fill.

Design Parameters

We recommend that the 6-inch-thick capillary break layer consist of 1½-minus clean crushed gravel with negligible sand or silt in conformance with Section 9-03.1(4)C, grading No. 57 of the WSDOT Standard Specifications.

For slabs designed as a beam on an elastic foundation, a preliminary modulus of subgrade reaction of 150 pci may be used for subgrade soils prepared as recommended. Provided that the slab is supported as recommended above, we estimate that slabs-on-grade will not settle appreciably.

A vapor barrier should be utilized where control of moisture in the slab is critical (e.g., where an adhesive is used for tiled or carpeted floors). We recommend a vapor barrier consisting of polyethylene sheeting with bonded seams.

Below-Grade Walls

Conventional cast-in-place walls may be necessary for small retaining structures for the Sonobuoy building mostly related to the loading ramps and dock.

For walls that are free to yield at the top at least 0.1 percent of the height of the wall, soil pressures will be less than if movement is limited by such factors as wall stiffness or bracing. Assuming that the walls are backfilled and drainage is provided as outlined in the following paragraphs, we recommend that yielding walls supporting horizontal backfill be designed using an equivalent fluid density of 35 pcf (triangular distribution), while non-yielding walls supporting horizontal backfill be designed using an equivalent fluid density of 55 pcf (triangular distribution). For seismic loading conditions, a rectangular earth pressure equal to 8H psf (where H is the height of the wall in feet) should be added to the active/at-rest pressures. A traffic surcharge pressure of 75 psf should also be included in the design, where traffic will be present above the wall. Other surcharge loading should be applied as appropriate.

Lateral resistance for conventional cast-in-place (CIP) walls can be provided by frictional resistance along the base of the wall and passive resistance in front of the wall. The walls must be founded on compacted structural fill as described below; the allowable frictional resistance may be computed using a coefficient of friction of 0.4 applied to vertical dead-load forces. The allowable passive resistance may be computed using an equivalent fluid density of 300 pcf. The above coefficient of friction and passive equivalent fluid density values incorporate a factor of safety of about 1.5.

The above soil pressures assume that wall drains will be installed to prevent the buildup of hydrostatic pressure behind the walls, as discussed below.

Drainage

Positive drainage should be provided behind cast-in-place retaining walls by placing a minimum 1-foot-wide zone of drain rock or clear crushed rock. A suitable specification would be Permeable Ballast per WSDOT Standard Specification 9-03.9(2). The drainage material should be wrapped with a geotextile filter fabric meeting the requirements of construction geotextile for underground drainage, WSDOT Standard Specification 9-33.

A drainpipe or weephole should be located near the base of the cast-in-place walls. If weepholes are used, the weephole should have a minimum diameter of 2-inches and weepholes should be spaced no more than 8 feet on center. If a drainpipe is used, the drainpipe should consist of 4-inch-diameter perforated collector pipe enveloped within a minimum thickness of 6 inches of gravel as described in the Structural Fill section of this report. The gravel backfill should be wrapped with a geotextile filter fabric meeting the requirements of construction geotextile for underground drainage (Section 9-33 of the 2012 WSDOT Standard Specifications).

We recommend using either heavy-wall solid pipe (SDR-35 polyvinyl chloride [PVC]) or rigid corrugated polyethylene pipe (ADS N-12 or equivalent) for the collector pipe. We recommend against using flexible tubing for footing drainpipe.

The pipes should be laid with a minimum slope of ½ percent and discharge into an appropriate outfall. The pipe installations should include a cleanout riser with cover located at the upper end of each pipe run. We recommend that the cleanouts be covered and be placed in flush-mounted utility boxes or monuments.

Below Grade Vault Considerations

We understand that a below grade vault will be constructed as part of the aircraft rinse facility. Based on the nearby borings (GEI-14A-14 and GEI-17A-14), we anticipate that the subsurface conditions will consist of soft glaciomarine drift clay soils.

The vault will extend approximately 15 to 16 feet below ground. Therefore, installation of a below grade vault will create a bathtub effect when excavated into the soft glaciomarine drift. We recommend that the vault be designed to resist hydrostatic and buoyant forces and the walls should be designed with an equivalent fluid pressure 90 pcf for level backfill (this pressure includes both the soil pressure and hydrostatic water pressure). The surcharge and seismic pressures should be added as described below.

A traffic surcharge pressure of 75 psf should also be included in the design, where traffic will be present above the vault. We also recommend a uniformly distributed seismic surcharge of 8H psf (H = Height of wall) be applied to the wall with a corresponding reduction in the factors of safety to 1.1 or greater.

Construction Considerations

We recommend a minimum of 6 inches of foundation material be placed for leveling and support of the vault. Depending on conditions encountered it may be helpful to place a geotextile fabric as separation between the native subgrade and foundation imported material.

In order to prevent overstressing the concrete retaining walls and causing bulging or rotation, we recommend that the structural fill placed against the back of the wall be compacted within the range of 90 to 92 percent of the MDD. Backfill should be placed after the concrete has had sufficient time to cure and develop the necessary strength.

Pavement Recommendations

We understand that new pavement areas are planned in the vicinity of the LOX plant and Sonobuoy issue/storage facility. Pavement subgrade areas should be stripped and proof-rolled or otherwise examined as recommended in the Earthwork section of this report. We understand that asphalt and concrete pavements will be necessary for different applications. Regardless of pavement type we assume that proper subgrade preparation is accomplished and that pavement construction is completed during a period of extended dry weather.

Asphalt Concrete Pavement

We recommend that the asphalt concrete pavement section in automobile parking areas consist of:

- 3 inches of asphalt concrete,
- 6 inches of crushed surfacing base course,
- 12 inches of structural fill consisting of gravel borrow, and

- woven geotextile stabilization fabric (Minimum 315 pound Grab Tensile Strength, WSDOT 9-33.2[1] Table 3).

In areas subject to truck traffic, we recommend that the thicknesses of asphalt concrete and crushed surfacing base course be increased to 4 and 8 inches, respectively.

Portland Cement Concrete pavement

We recommend that the portland cement concrete pavement section surrounding the LOX plant consist of:

- 8 inches of continuously reinforced concrete pavement,
- 6 inches of crushed surfacing base course,
- 12 inches of structural fill consisting of gravel borrow, and
- woven geotextile stabilization fabric (Minimum 315 pound Grab Tensile Strength, WSDOT 9-33.2[1] Table 3).

If pavements are constructed during wet weather, it may be necessary to excavate soft areas and place an additional thickness of quarry spalls or granular fill to provide adequate pavement support.

The crushed surfacing base course and granular fill should both be compacted to at least 95 percent of the MDD estimated in general accordance with ASTM D 1557. Material specifications for these materials are provided in the Structural Fill section of this report. It is very important to pavement performance that backfill in utility trenches underlying paved areas also be compacted in accordance with the recommendations for structural fill presented in this report.

Earthwork

Excavation Considerations

Fill, organic silt, peat, glaciomarine drift and glacially consolidated deposits were observed in the explorations. We anticipate that these soils can be excavated with conventional excavation equipment, such as trackhoes or dozers. The existing soils at the ground surface may not provide adequate support for moderate to heavy construction equipment. It may be necessary to use a granular work pad to facilitate construction activities at the site because of the soft near-surface soil conditions. The work pad materials should be the contractor's choice. Typical work pads for similar site conditions consist of a 12- to 24-inch-thick layer of 2- to 4-inch quarry spalls, shoulder ballast or crushed rock, often with a woven geotextile separation fabric between the native soils and the work pad materials.

Clearing and Grubbing

We recommend that all new pavement and structure areas be stripped of sod, vegetation and existing pavement/structures. Any remaining below-grade elements from previous site development should also be removed. Abandoned, below-grade utilities should be removed; alternatively, below-grade utilities can be abandoned in place by completely filling the conduits with lean concrete.

Vegetation including the root mass and organic-rich topsoil should be stripped and removed from the new pavement and structure areas.

Depressions/excavations that result from removal of existing improvements that are present in new pavement areas should be filled (if located in areas where proposed grades are higher than the base of the depression/excavation) with properly compacted structural fill.

Subgrade Preparation

The exposed subgrade for footings and slabs and in pavement areas should be evaluated after site grading is complete. Proof-rolling with heavy, rubber-tired construction equipment should be used for this purpose during dry weather. Probing should be used to evaluate the subgrade during periods of wet weather. Soft areas noted during proof-rolling or probing should be excavated and replaced with compacted structural fill. Soft clay is anticipated to be exposed at many subgrades. Peat, topsoil or other organic-rich soils may also be encountered at the subgrade elevation locally. Equipment should be kept off subgrades to the extent possible. Work pads consisting of nonwoven geotextile fabric and quarry spalls may be necessary to create a stable working platform.

We recommend that a woven geotextile stabilization fabric (Minimum 315 pound Grab Tensile Strength, WSDOT 9-33.2[1] Table 3) be placed over the prepared subgrade as referenced in the pavement sections described above, for the following areas:

- New apron
- Asphalt concrete pavement sections
- Portland cement concrete pavement sections (LOX)
- Use of the same fabric would also be beneficial below any construction lay-down areas

Structural Fill

Materials

Materials used to support foundations, structures, roadways and parking areas are classified as structural fill for the purpose of this report. Structural fill material quality varies depending upon its use, as described below:

- Structural fill placed as utility trench backfill, to support structures or placed in apron or parking areas should meet the criteria for gravel borrow as described in 9-03.14(1) of the 2014 WSDOT Standard Specifications, with the additional restriction that the fines content be limited to no more than 5 percent.
- Structural fill used for capillary break material below slabs or structural mat foundations should consist of 1½-minus clean crushed gravel with negligible sand or silt in conformance with Section 9-03.1(4)C, grading No. 57 of the WSDOT Standard Specifications.
- Structural fill placed within 18 inches behind retaining walls should meet the requirements for gravel backfill for walls in Section 9-03.12(2) of the WSDOT Standard Specifications.
- Structural fill placed within 6 inches of perimeter foundation or wall drains (drainage zone aggregate) should meet the requirements for gravel backfill for drains in conformance with Section 9-03.12(4) of the WSDOT Standard Specifications.

- Structural fill placed as crushed surfacing base course below sidewalks and pavements should meet the requirements of crushed rock base course in conformance with Section 9-03.9(3) of the WSDOT Standard Specifications.

On-site Soils

The on-site near-surface soils observed in the explorations contain a high percentage of fine-grained plastic soil and are highly moisture-sensitive. The existing near-surface soils do not meet the criteria for structural fill.

Fill Placement and Compaction Criteria

Structural fill should be mechanically compacted to a firm, non-yielding condition. The structural fill should be placed in lifts. The lift thickness should be sufficiently thin so that after compaction, the entire lift meets the compaction criteria recommended below. The lift thickness should not exceed 1 foot. Each lift should be conditioned to the proper moisture content and compacted to the specified density before placing subsequent lifts. Structural fill should be compacted to the following criteria:

- Structural fill placed below structures and foundations should be compacted to at least 95 percent of the maximum dry density (MDD) estimated in general accordance with ASTM D 1557.
- Structural fill placed in the apron expansion area should be compacted to at least 95 percent of the MDD estimated in general accordance with ASTM D 1557.
- Structural fill placed in new pavement (non-aircraft pavement areas) or hardscape areas, including utility trench backfill, should be compacted to 90 percent of the MDD estimated in general accordance with ASTM D 1557, except that the upper 2 feet of fill below final subgrade should be compacted to at least 95 percent of the MDD.
- Structural fill placed as crushed rock base course below pavements should be compacted to at least 95 percent of the MDD estimated in general accordance with ASTM D 1557.
- Structural fill placed against below-grade and retaining walls, within a distance equal to the height of the wall, should be compacted to between 90 and 92 percent of the MDD estimated in general accordance with ASTM D 1557. Care should be taken when compacting fill against walls to avoid over-compaction and hence overstressing the walls.
- Non-structural fill, such as fill placed in landscape areas, should be compacted to at least 85 percent of the MDD estimated in general accordance with ASTM D 1557. In areas intended for future development, a higher degree of compaction should be considered to reduce the settlement potential of these soils.

Weather Considerations

The on-site soils contain a sufficient percentage of fines (silt and clay) to be highly moisture-sensitive. When the moisture content of these soils is more than a few percent above the optimum moisture content, these soils become muddy and unstable, operation of equipment on these soils will be difficult and it will be difficult or impossible to meet the required compaction criteria. Additionally, disturbance of near-surface soils should be expected if earthwork is completed during periods of wet weather. It will be preferable to schedule site preparation and earthwork activities during periods of dry weather when the soils will: (1) be less susceptible to disturbance and (2) provide better support for construction equipment.

The wet weather season in the Puget Sound region generally begins in October and continues through May; however, periods of wet weather may occur during any month of the year. The optimum earthwork period for these types of soils is typically June through September. If wet weather earthwork is unavoidable, we recommend that:

- The contractor should plan to work from existing pavements for as long as practical. Subgrade is very soft and will not reliably support rubber-tired construction equipment during any season. Low ground pressure excavators should be used at the site during stripping activities.
- Gravel "working mats" should be provided over areas of prepared subgrade. To maintain the integrity of the gravel, it will be necessary to place a geotextile separation fabric between the fine-grained subgrade. It is our experience that 12 to 24 inches of sand and gravel are necessary to support repeated construction traffic.
- Structural fill placed during the wet season or during periods of wet weather should consist of imported sand and gravel with less than 5 percent fines (material passing the U.S. No. 200 sieve).
- The ground surface in and around the work area should be sloped so that surface water is directed away from the work area.
- The ground surface should be graded such that areas of ponded water do not develop.
- The contractor should take measures to prevent surface water from collecting in excavations and trenches.
- Earthwork activities should not take place during periods of heavy precipitation.
- Slopes with exposed soils should be covered with plastic sheeting or similar means.
- Measures should be taken to prevent on-site soils and soils to be used as fill from becoming wet or unstable. These measures may include the use of plastic sheeting, sumps with pumps, and grading. The site soils should not be left uncompacted and exposed to moisture. Sealing the surficial soils by rolling with a smooth-drum roller prior to periods of precipitation will reduce the extent to which these soils become wet or unstable.
- Construction and foot traffic should be restricted to specific areas of the site, preferably areas that are surfaced with materials not susceptible to wet weather disturbance.
- Construction activities should be scheduled so that the length of time that soils are left exposed to moisture is reduced to the extent practicable.

Temporary Slopes

Temporary slopes may be used around the site during construction. We recommend that temporary slopes be inclined no steeper than 1½H:1V (horizontal to vertical). Flatter slopes may be necessary if seepage is present on the face of the cut slopes or if localized sloughing occurs. For open cuts at the site, we recommend that:

- No traffic, construction equipment, stockpiles or building supplies be allowed at the top of the cut slopes within a distance of at least 5 feet from the top of the cut.
- Construction activities be scheduled so that the length of time the temporary cut is left open is reduced to the extent practical.

- The general condition of the slopes should be observed periodically by a geotechnical engineer to confirm adequate stability.

Temporary cut slopes and shoring, if required, must comply with the provisions of Title 296 Washington Administrative Code, Part N, "Excavation, Trenching and Shoring" (WAC 296-155 Part N). Because the contractor has control of the construction operations, the contractor should be made responsible for the stability of cut slopes, as well as the safety of the excavations. Shoring and temporary slopes must conform to applicable local, state and federal safety regulations. The existing fill/native soils are best classified as Type C soils in accordance with WAC 296-166 Part N.

Permanent Slopes

We do not anticipate that new permanent slopes will be constructed as part of this project. If necessary, for planning purposes, we recommend that permanent cut and fill slopes be constructed no steeper than 3H:1V. To achieve uniform compaction, we recommend that fill slopes be overbuilt slightly and subsequently cut back to expose properly compacted fill.

To reduce erosion, newly constructed slopes should be planted or hydroseeded shortly after completion of grading. Until the vegetation is established, some sloughing and raveling of the slopes should be expected. This may require localized repairs and reseeding. Temporary covering, such as clear heavy plastic sheeting, jute fabric, loose straw or excelsior matting should be used to protect the slopes during periods of rainfall.

Temporary Dewatering

We anticipate that groundwater will likely be 2 to 4 feet bgs, with the exception of the vicinity of boring GEI-10A-14 where groundwater was encountered near the ground surface. During the dryer summer and early autumn months, we anticipate that groundwater will be slightly deeper. Construction of the vaults, below-grade tanks, and possibly over-excavation of organic silt and peat under floor slab areas might require dewatering. We recommend that the groundwater table be maintained at least 2-feet below the planned base of the excavations during construction. We anticipate that the temporary dewatering system could likely consist of sumps, but other dewatering measures might be necessary depending on the construction sequence and time of year. The contractor should be responsible for the design and installation of the temporary dewatering systems required to complete the project.

Limited Environmental Subsurface Assessment Considerations

Based on field screening and chemical analytical results obtained during our subsurface exploration program, no visual evidence of soil contamination was observed. Analytes tested were also not detected, with the exception that barium and chromium were detected in each of the four samples. The detected metal concentrations were less than the Model Toxics Control Act (MTCA) Method A or B cleanup levels. Details regarding the analytical testing are provided in Appendix E.

Infiltration Considerations

The glaciomarine drift clay encountered in the explorations should be considered to have a very low infiltration rate such that these soils are generally not suitable for stormwater infiltration.

Given the predominant soil type at the site, and the high groundwater table, it is our opinion that stormwater infiltration is not feasible at this site.

LIMITATIONS

We have prepared this report for the exclusive use of The United States Navy, Notkin Mechanical Engineers and their authorized agents for the P-259 Hangar and Apron Expansion project at NASWI near Oak Harbor, Washington. The data and report should be provided to prospective contractors for their bidding or estimating purposes, but our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of geotechnical engineering in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to Appendix F, titled "Report Limitations and Guidelines for Use," for additional information pertaining to use of this report.

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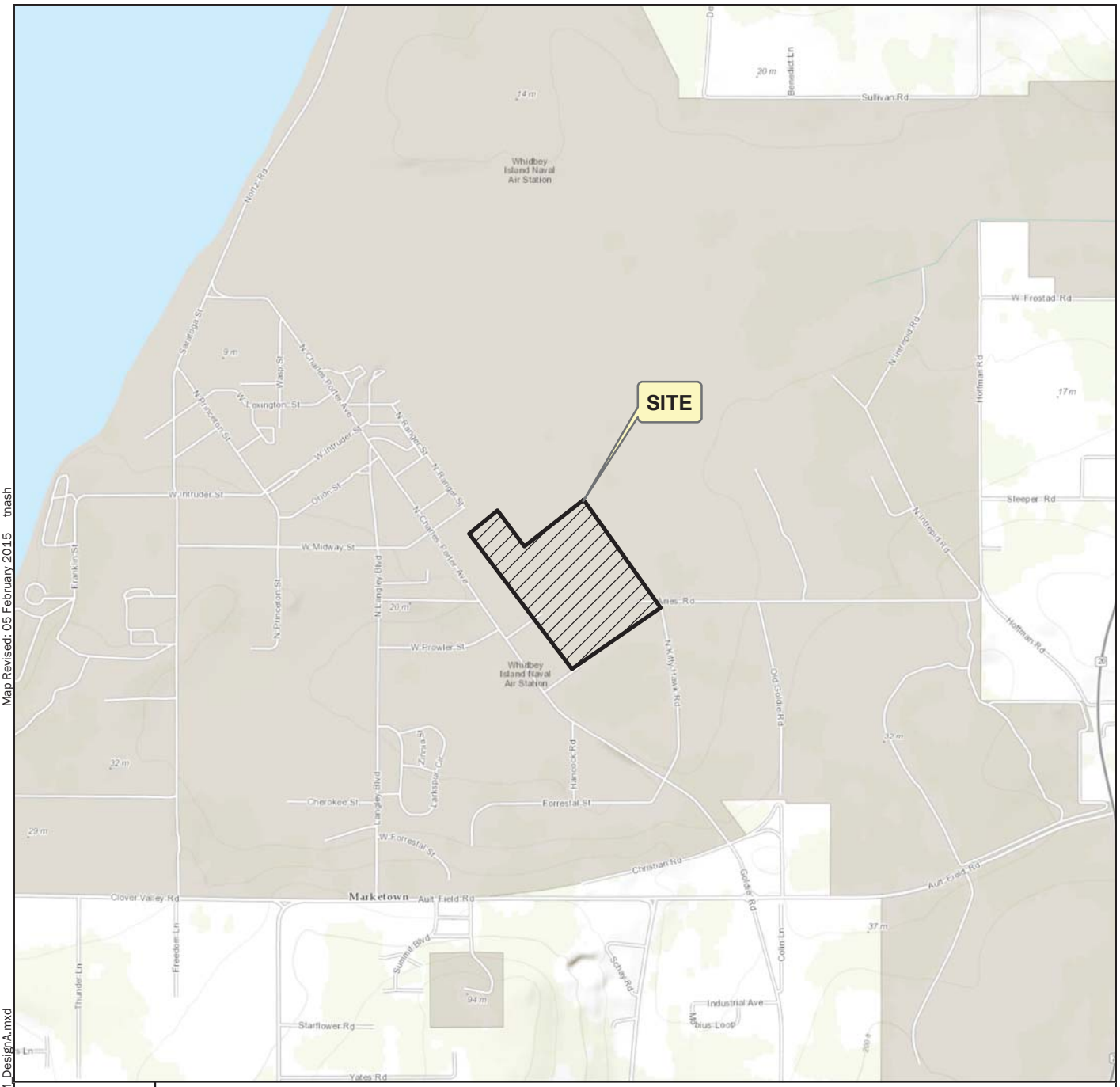
FIGURES

GeoEngineers



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Feet

Data Sources: ESRI Data & Maps

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Projection: NAD 1983 UTM Zone 10N

Design A
Vicinity Map

P-259 P-8A Aircraft Apron Expansion Design Part A
NASWI, Oak Harbor, Washington

GEOENGINEERS

Figure 1

Map Revised: 05 February 2015 tnash

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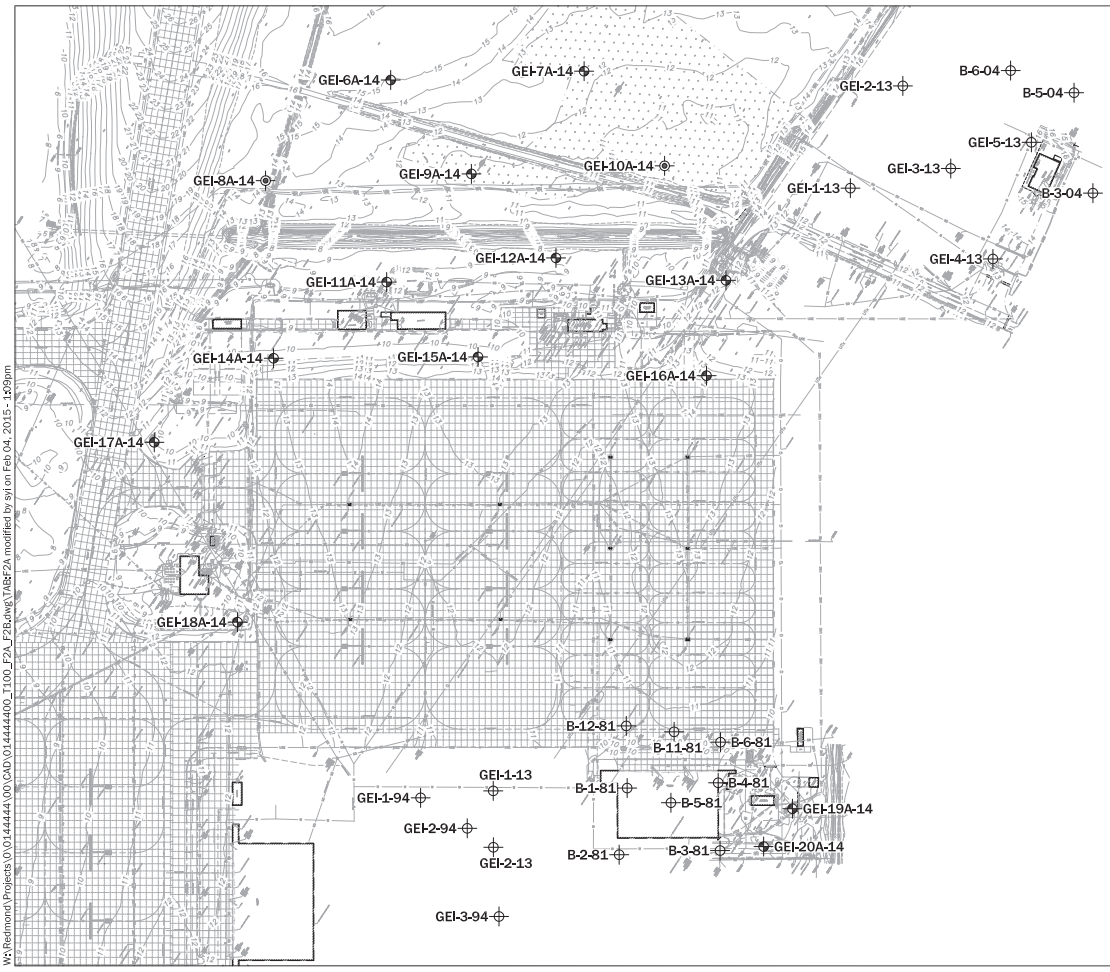

Legend

GEI-6A-14	Boring completed for this study
GEI-8A-14	Boring/monitoring well completed for this study
B-1-81	Boring completed for previous study

200 0 200
Feet

Notes:
1. The locations of all features shown are approximate.
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Reference: Drawing provided by Pacific Surveying & Engineering, Inc.

Design A
Site and Exploration Plan

P-259 P-8A Aircraft Apron Expansion
Design Part A
NASWI, Oak Harbor, Washington

GEOENGINEERS

Figure 2A

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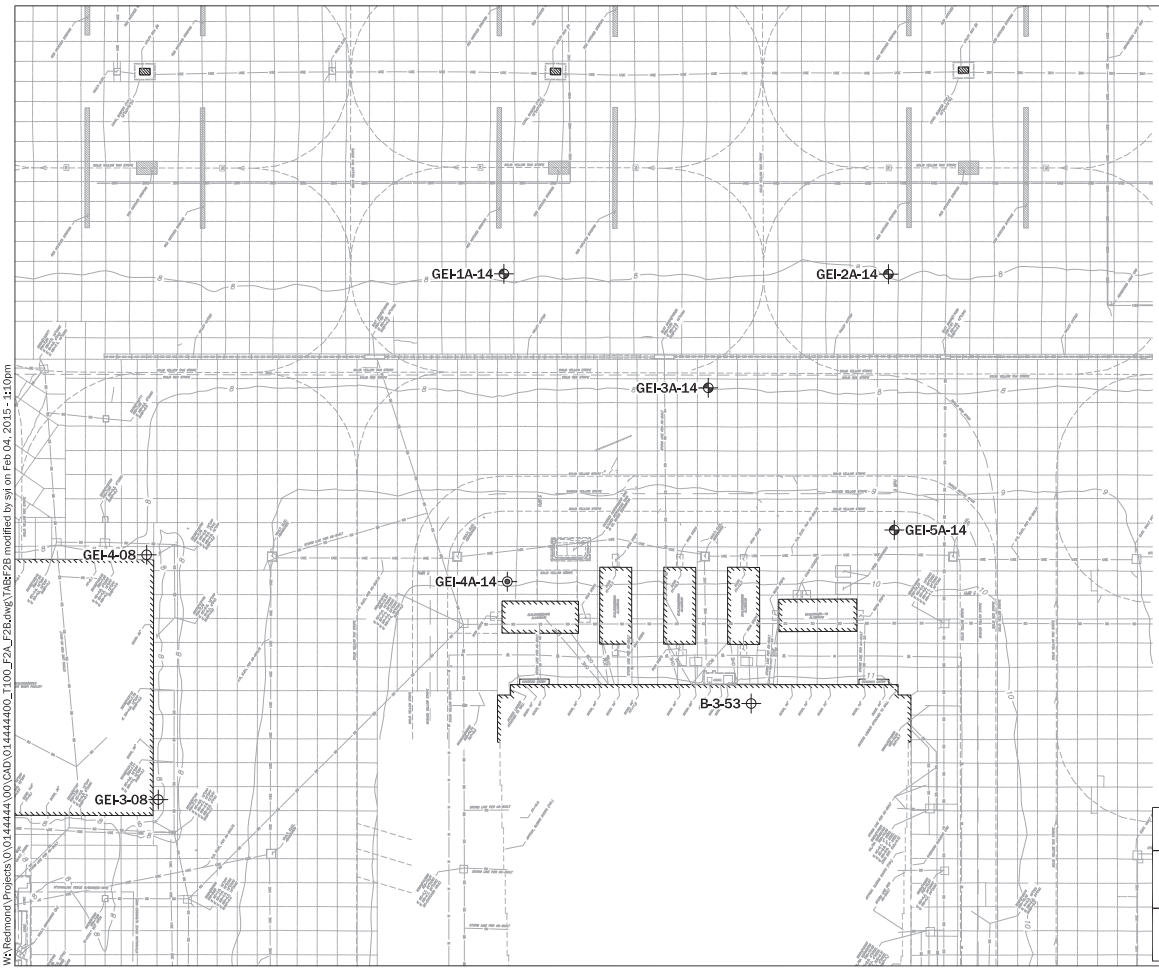

Legend

GEI-1A-14 — Boring completed for this study

GEI-4A-14 — Boring/monitoring well completed for this study

B-3-53 — Boring completed for previous study

60 0 60
Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Reference: Drawing provided by Pacific Surveying & Engineering, Inc.

Design A
Site and Exploration Plan

P-259 P-8A Aircraft Apron Expansion
Design Part A
NASWI, Oak Harbor, Washington

GEOENGINEERS

Figure 2B

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APPENDICES

GeoEngineers

APPENDIX A
Field Explorations

APPENDIX A
FIELD EXPLORATIONS

General

Subsurface conditions were explored at the site by drilling 20 borings. Borings GEI-1A-14 through GEI-20A-14 were completed to depths ranging from 19 to 50½ feet bgs on May 19 through 22, 2014, by Geologic Drill under subcontract to GeoEngineers, Inc.

The locations of the borings were determined by a licensed surveyor and are shown on the Site and Exploration Plan, Figures 2A and 2B.

Borings

The borings were completed using hollow-stem auger drilling techniques with a track-mounted or trailer-mounted drill rig. The borings were continuously monitored by a geotechnical engineer from our firm who examined and classified the soils encountered, obtained representative soil samples, observed groundwater conditions and prepared a detailed log of each exploration.

The soils encountered in the borings were typically sampled at 2½- or 5-foot vertical intervals with a 2-inch outside diameter, split-barrel, standard penetration test (SPT) sampler. The samples were obtained by driving the sampler 18 inches into the soil with a 140-pound hammer free-falling 30 inches. The number of blows required for each 6 inches of penetration was recorded. The blow count ("N-value") of the soil was calculated as the number of blows required for the final 12 inches of penetration. Where sample recovery was poor, an oversized 3-inch (California) sampler was driven to obtain a sample. If either the SPT or California sampler was “overdriven” to 24 inches (4- six-inch intervals), the blow count was recorded as the middle two intervals of the four driven. This resistance, or N-value, provides a measure of the relative density of granular soils and the relative consistency of cohesive soils. Where very dense soil conditions precluded driving the full 18 inches, the penetration resistance for the partial penetration was entered on the logs. Where the sampler penetrated the full 18 inches under the weight of the hammer, the penetration resistance was entered as “0”. The blow counts are shown on the boring logs at the respective sample depths.

Soils encountered in the borings were visually classified in general accordance with the classification system described in Figure A-1. A key to the boring log symbols is also presented in Figure A-1. The logs of the borings are presented in Figures A-2 through A-21. The boring logs are based on our interpretation of the field and laboratory data and indicate the various types of soils and groundwater conditions encountered. The logs also indicate the depths at which these soils or their characteristics change, although the change may actually be gradual. If the change occurred between samples, it was interpreted. The densities noted on the boring logs are based on the blow count data obtained in the borings and judgment based on the conditions observed.

Groundwater Monitoring

Observations of groundwater conditions were made during drilling and recorded by an automated pressure transducer installed in selected monitoring wells. The water levels presented in Figures A-22 through A-24 were observed during the monitoring period that covered late May 2014 to mid-January 2015.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	TS	Topsoil/ Forest Duff/Sod

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Material Description Contact

Distinct contact between soil strata or geologic units

Approximate location of soil strata change within a geologic soil unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

A "P" indicates sampler pushed using the weight of the drill rig.

Laboratory / Field Tests

%F	Percent fines
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
PPM	Parts per million
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen
NT	Not Tested

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

KEY TO EXPLORATION LOGS

GEOENGINEERS

FIGURE A-1

Drilled Start 5/21/2014 End 5/21/2014	Total Depth (ft) 51	Logged By TKC Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) 8 Vertical Datum NASWI Base Datum		Hammer Data Rope & Cathead 140 (lbs) / 30 (in) Drop		Drilling Equipment XL Trailer
Easting (X) Northing (Y)		System Datum NASWI Base Datum		Groundwater Date Measured / Depth to Water (ft) / Elevation (ft): Not encountered
Notes:				

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CC	12 inches portland cement concrete			
									GM	4 inches base course			
		☒	6			1			SM	Gray fine to coarse silty sand with occasional gravel (moist) (fill)	25		
5		■	24	5		2			CL	Gray silty clay, trace organics (roots?) (medium stiff, wet) (glaciomarine drift)	36		NS; <1
	5	■	24	4		3					41		NS; <1
0		■	18	3		4			CL	Gray silty clay with sand lenses (soft, wet)	41		NS; <1
	10	■	18	4		5					27		NS; <1
-5		■	18	16		6				With occasional fine gravel	16		NS; <1
									GW	Gray fine to coarse gravel with sand (dense, wet) (glacially consolidated deposits)			
	15	■	7	35		7 SA					8	5	NS; <1
-10									SM	Gray silty fine to coarse sand with gravel (dense, wet)			
	20	■	14	67*		8							NS; <1 *Blow count overstated
-15									GP	Gray fine to coarse gravel with sand (dense, wet)			
	25	■	14	36		9							NS; <1
-20													
	30	■	14	91		10 %F					8	3	NS; <1 Added water
-25													
	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-1A-1

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-2
Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DB:Template/LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35	12	43		11							NS; <1
30												
	40	15	78		12			ML	Gray silt with fine sand and occasional gravel (hard, wet)			NS; <1
35												
	45	10	86/11"		13				Gravel grades out			NS; <1 Approximately 3 inches of heave
								SP-SM	Gray fine sand with silt (very dense, wet)			
40												
	50	11	50/5"		14							NS; <1 Approximately 4 inches of heave

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-1A-1 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-2

Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/21/2014	End 5/21/2014	Total Depth (ft) 51.5	Logged By TKC / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	8 / NASWI Base Datum		Hammer Data	Rope & Cathead / 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	See remarks
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CC	10 inches cement concrete			
									GM	12 to 14 inches base course			
		☒	6			1					11		
									SP-SM	Fine to medium sand with silt and gravel (fill)			NS; <1
5		■	4	42*		2			ML	Gray fine sandy silt, trace gravel (soft to medium stiff, wet)	21		*Blow count overstated Groundwater observed at time of drilling
	5	■	12	37		3 %F			SP-SM	Gray fine to medium sand with silt (dense, wet) (glacially consolidated deposits)	20	11	NS; <1
0		■	18	78*		4							NS; <1 Added water *Blow count overstated
	10	■	18	45		5							NS; <1 6 inches of heave
-5		■	18	67		6							NS; <1 6 inches of heave
									SP	Gray fine to medium sand (dense, wet)			
	15	■	18	54		7 %F					20	3	NS; <1 12 inches of heave
-10													
	20	■	18	48		8							NS; <1
-15													
	25	■	18	56		9 %F					18	5	NS; <1
-20									SP-SM	Gray fine to medium sand with silt and occasional gravel (very dense, wet)			
	30	■	18	69		10							NS; <1
-25													
	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-2A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-3

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DB:Template/LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35	18	62		11							NS; <1 10 inches of heave
-30								SM	Gray silty fine sand (very dense, wet			
	40	10	50/4"		12 / %F					23	17	NS; <1 2 inches of heave
-35									With 2 to 3 inch brownish-gray sandy silt lense			
	45	10	50/4"		13 / %F					22	22	NS; <1 2 inches of heave
-40												
	50	14	83		14							NS; <1 6 inches of heave

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-2A-14 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion
Project Location: Whidbey Island, Washington
Project Number: 0144-444-00

Figure A-3
Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/20/2014	End 5/20/2014	Total Depth (ft) 51	Logged By TKC / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	8 / NASWI Base Datum		Hammer Data	Rope & Cathead / 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	See remarks
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CC	12 inches cement concrete			
									GM	6 inches base course			
		☒	6			1			SM	Gray silty fine to coarse sand with gravel (fill)	7		NS; <1
5		■	18	6		2			CL	Gray clay (medium stiff, wet) (glaciomarine drift/possibly reworked)	24		NS; <1
	5	■	18	13		3			CL	Gray silty clay (stiff, moist)	24		NS; <1
0		■	18	31		4 / AL				Becomes very stiff	23		NS; <1 AL (LL = 33; PI = 15) Groundwater encountered at time of drilling
	10	■	18	43		5			CL	Gray clay with sand lenses at approximately 10 feet (hard/dense, wet)	24		NS; <1
-5		■	14	15		6 / %F			SP	Gray fine to medium sand, trace gravel (medium dense, wet) (glacially consolidated deposits)	19	5	NS; <1
	15	■	15	35		7				Becomes dense			NS; <1
-10									SP	Gray fine to medium sand (dense, wet)			
	20	■	18	44		8 / %F					19	5	NS; <1
-15													
	25	■	18	72		9				Becomes very dense			NS; <1
-20									SP-SM	Gray fine to medium sand with silt, trace gravel (very dense, wet)			
	30	■	18	69		10 / %F					20	7	NS; <1
-25													
	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-3A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-4

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35		18	61		11							NS; <1
-30													
	40		11.5	50/5.5"		12							NS; <1 12 inches of heave
-35													
	45		18	23		13 %F				Silty zone	26	51	NS; <1 5 inches of heave
-40													
	50		11	50/5"		14							NS; <1 6 inches of heave

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-3A-14 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-4

Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\0144444\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/19/2014	End 5/19/2014	Total Depth (ft) 51	Logged By TKC / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	9.93 NASWI Base Datum		Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater	
Notes:					Date Measured	Depth to Water (ft) / Elevation (ft)
					5/23/2014	2.6 / 7.32

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CC	13 inches cement concrete			
		☒	6			1			GM	NS; <1	6		NS
		■	7	32		2	▼			Brownish-gray silty fine to coarse gravel with sand and wood debris (medium dense, moist) (fill) NS; <1	11		NS
5	5	■	24	6		3			CL	Gray clay with sand and occasional gravel (medium stiff, wet) (reworked glaciomarine drift?) NS; <1	23		NS
		■	9	46		4			GM	Gray silty fine to coarse gravel with sand (dense, wet) (glacially consolidated deposits) NS; <1	9		NS
0	10	■	18	57		5			SM	Gray silty fine to coarse sand with gravel (dense, wet) NS; <1			NS Groundwater encountered at time of drilling
		■	18	61		6 SA			GM	Gray silty fine to coarse gravel with sand (dense, wet) NS; <1	11	10	NS
-5	15	■	18	40		7				NS; <1			NS
-10	20	■	15	35		8 %F			SP	Gray fine to coarse sand, trace gravel (dense, wet) NS; <1	17	3	NS
									GM	Gray silty fine gravel with sand (dense, wet)			
-15	25	■	18	39		9 SA				NS; <1	11	3	NS
-20	30	■	12	30		10				NS; <1			NS
									GP-GM	Gray fine to coarse gravel with sand and silt (dense, wet)			
-25	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well GEI-4A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-5

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35	15	54		11 / %F				NS; <1	9	7	NS
-30	40	15	65		12				NS; <1			NS
								SP-SM	Gray fine sand with silt (very dense, wet)			
-35	45	15	69		13 / %F				NS; <1	20	8	NS
-40	50	10	50/5.5"		14				NS; <1			NS

Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well GEI-4A-14 (continued)

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion
Project Location: Whidbey Island, Washington
Project Number: 0144-444-00

Figure A-5
Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/20/2014	End 5/20/2014	Total Depth (ft) 51.5	Logged By TKC / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	9.4 NASWI Base Datum		Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CC	12.5 inches cement concrete			
			6			1					4		NS; <1
									GM	6 inches base course			
									SM	Brown silty fine to coarse sand with gravel (fill)			
			20	30		2			SP	Gray fine to medium sand (medium dense to dense, wet) (glacially consolidated deposits)	19		NS; <1
5	5		20	30		3 %F					21	5	NS; <1 Added water
			18	83		4				Becomes dense			NS; <1
0	10		18	45		5							NS; <1
									SP-SM	Gray fine to medium sand with silt (dense, moist to wet)			
			15	44		6 %F					21	6	NS; <1
5	15		12	51		7							NS; <1 6 inches of heave
10	20		15	34		8							NS; <1
									SP	Gray fine to medium sand (dense, wet)			
15	25		14	50		9 %F					21	4	NS; <1
20	30		15	48		10							NS; <1
									ML	Gray fine sandy silt (dense, wet)			
25	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-5A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-6

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\0144444\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35	14	73		11 / %F					27	56	NS; <1
30								SM	Gray silty fine sand (very dense, wet)			
	40	15	67		12							NS; <1
35								ML/SM	Gray fine sandy silt to silty fine sand (very dense, wet)			
	45	15	75		13							NS; <1
40								SP-SM	Gray fine sand with silt (very dense, wet)			
	50	15	81		14 / %F					26	8	NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-5A-14 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-6

Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/19/2014	End 5/19/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	15 / NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			0			TS	Brown sandy silt with organic matter (moist) (topsoil)	19		NS; <1
			18	6		1			ML	Brownish-gray fine sandy silt (medium stiff, moist) (glaciomarine drift/possibly reworked glaciomarine drift)	28		NS; <1
10	5		18	11*		2			ML-CL	Brown to gray sandy silty clay with occasional gravel (stiff, moist)	25		NS; <1 *Blow count overstated
			18	3		3			CL	Gray clay, trace fine sand (soft, wet)	40		NS; <1
5	10			P		4 CS; AL					44		AL (LL = 50; PI = 27)
			18	4		5					43		NS; <1
0	15		18	3		6					44		NS; <1
									SW-SM	Gray fine to coarse sand with gravel and silt (dense, wet) (glacially consolidated deposits)			
5	20		9	52		7 SA					8	8	NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-06A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-7

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled Start 5/20/2014	End 5/20/2014	Total Depth (ft) 20.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	12.2 NASWI Base Datum	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)		System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:					

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0		6			0			ML	Dark brown silt with organic matter (soft, moist) (topsoil)	42		NS; <1
10			18	6		1			CL	Brownish-gray clay with sand (medium stiff, moist) (glaciomarine drift)	29		NS; <1
	5		18	10*		2			CL/SC	Gray sandy clay to clayey fine to coarse sand (soft/loose, wet)	37		NS; <1 *Blow count overstated
5			18	1		3			CL	Gray clay (very soft, wet)	56		
	10		24	P		4 CS; AL					51		AL (LL = 59; PI 32)
0			18	2		5					46		NS; <1
	15		18	7		6			CL	Gray clay with fine sand and occasional gravel (medium stiff, wet)	18		NS; <1
-5									SM	Gray silty fine to coarse sand with gravel (very dense, wet) (glacially consolidated deposits)			
	20		5	50/5"		7							

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-07A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-8

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/19/2014	End 5/19/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	14.1 / NASWI Base Datum		Hammer Data	Autohammer / 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater	
Notes:					Date Measured	Depth to Water (ft) / Elevation (ft)
					5/23/2014	4.1 / 9.96

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								ML	Brown silt with sand and gravel (very stiff, moist) (reworked glaciomarine drift)			
			18	16		1				NS; <1	20		NS
10													
	5		0	6		2			ML/CL	Brown silty to clay (medium stiff, wet) (glaciomarine drift) NS; <1 Overdrove with California sampler	31		NS
			18	4		3			CL	Gray clay, trace sand (medium stiff, wet) NS; <1	34		NS
5													
	10		24	P		4 CS; AL				AL (LL = 55; PI = 27)	46		
			18	3		5				Becomes soft			
0													
	15		18	27		6a %F 6b			SP-SM	Gray fine to coarse sand with silt and gravel (medium dense, wet) (glacially consolidated deposits)	12	7	
									SM	Gray silty fine sand with occasional gravel (dense, wet) (outwash)			
5													
	20		12	64		7							

Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well GEI-08A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-9

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/20/2014	End 5/20/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	10.9 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								CL	Gray clay (very soft, wet) (reworked glaciomarine drift)			
10			18	4		1a					51		NS; <1
						1b 1c			OL	Dark brown organic silt (soft, wet) (relict topsoil)			
									CL	Gray clay (soft, wet) (glaciomarine drift)			
	5		12	3		2					37		NS; <1
5			0	P		3							No recovery NS; <1
			0	11*		4				Trace sand and occasional gravel	32		*Blow count overstated Overdrove with California sampler
	10		18	2		5				Gravel grades out	53		
0			18	3		6					48		NS; <1
	15		18	31		7 %F			SM	Gray silty fine to medium sand with occasional gravel (dense, wet) (glacially consolidated deposits)	15	27	NS; <1
-5													
	20		14	84		8							NS; <1
-10													

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-09A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-10

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled Start 5/20/2014	End 5/20/2014	Total Depth (ft) 26.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	11.2 NASWI Base Datum	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)		System Datum	NASWI Base Datum	Groundwater	
Notes:				Date Measured: 11/21/2014	Depth to Water (ft): 0.0 / Elevation (ft): 11.2

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								ML	Brown silt with sand, organic matter and rootlets (soft, moist to wet) (topsoil)			
10		☒	6			0					39		
									CL	Gray clay (very soft, wet) (reworked glaciomarine drift) NS; <1			
		■	18	4		1a 1b 1c					56		NS
									ML/OL	Dark brown silt with organics and rootlets (soft, moist) (relict topsoil)			
									CL	Gray clay (soft, wet) (glaciomarine drift) NS; <1			
	5	■	18	2		2					57		NS
5		■	24	P		3 CS; AL				AL (LL = 54; PI = 31)			
	10	■	18	1		4				Becomes very soft NS; <1	55		NS
0		■	18	1		5				NS; <1	40		NS
	15	■	0	0		6				No recovery			No recovery
-5									SM	Gray silty fine to medium sand with gravel (dense, wet) (glacially consolidated deposits) NS; <1			
	20	■	18	82		7 %F					8	31	NS
-10													
	25	■	12	92/11"*		8				NS; <1 *Blow count overstated			NS *Blow count overstated
-15													

Notes: See Figure A-1 for explanation of symbols.

Log of Monitoring Well GEI-10A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-11

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\0144444\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/19/2014	End 5/19/2014	Total Depth (ft) 19.25	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	9.1 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			0			ML	Brown sandy silt and organic matter (moist) (fill)	27		
									ML	Brownish-gray sandy silt with gravel (medium stiff, moist) (reworked glaciomarine drift)			
5			18	7		1					19		NS; <1
	5		24	3		2			CL	Gray clay (soft, moist)	42		NS; <1
0			24	1		3				Becomes very soft, wet	53		NS; <1
	10		18	P		4							
5			12	28		5			SM	Gray silty fine to coarse sand with gravel (medium dense to dense, wet) (glacially consolidated deposits)			NS; <1
	15		18	31		6 %F				Becomes dense	9	23	NS; <1
10			2	50/3"		7				Becomes very dense			NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-11A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-12

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/19/2014	End 5/19/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	9.2 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			0			ML	Brown and gray sandy silt with grass, rootlets and organic matter (medium stiff, moist) (fill with topsoil)	37		
		■	18	4		1					41		NS; <1
5	5	■	12	2		2			CL	Gray clay with occasional fine gravel (soft, moist)	39		NS; <1
		■	18	0		3				Becomes very soft	52		NS; <1
0	10	■	18	0		4					62		NS; <1
		■	18	0		5					58		NS; <1
-5	15	■	18	0		6					46		NS; <1
-10									SM	Gray silty fine to coarse sand with gravel (medium dense, wet) (glacially consolidated deposits)			
	20	■	18	19		7 %F					13	29	NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-12A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-13

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled Start 5/21/2014	End 5/21/2014	Total Depth (ft) 26.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	12 / NASWI Base Datum	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)		System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:					

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								SM	Brown silty fine to coarse sand with gravel and rootlets (moist)			
		☒	6			0					5		
10									SM/ML	Brown silty fine to medium sand to sandy silt with gravel and rootlets (loose/medium stiff, moist) (fill)			
			6	7		1					18		SS; <1
	5		8	8		2			CL	Gray clay with occasional fine gravel (medium stiff, moist to wet) (glaciomarine drift)	32		NS; <1
5			6	3		3					34		NS; <1
	10		0	4		4							
0									CL	Gray clay with sand and gravel (very soft, wet)			
			18	1		5a 5b			CL	Gray clay (very soft, wet)	52		NS; <1
	15		18	1		6					60		
5										With thin sand lenses			
	20		18	2		7					39		NS; <1
10									SP	Gray fine to coarse sand, trace silt (medium dense, wet) (glacially consolidated deposits)			
	25		18	24		8a 8b 8c			SM	Gray silty fine to medium sand (medium dense, wet)			NS; <1
									SP	Gray medium to coarse sand (stiff, wet)			

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-13A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-14

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/21/2014	End 5/21/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	10.2 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
10	0								AC	2 inches asphalt concrete			
		☒	6			0			CC	6 inches cement concrete	28		
									CL	Brownish-gray clay with 3 inch dark brown silty sand lense (soft, moist) (reworked glaciomarine drift)			
		■	18	3		1					40		NS; <1
5	5	■	18	2		2			CL	Brownish-gray clay, trace organics (soft, moist)	41		NS; <1
									CL	Gray clay (soft, moist to wet) (glaciomarine drift)			
		■	18	3		3				Becomes wet	47		NS; <1
0	10	■	12	2		4					50		NS; <1
		■	0	2		5							No recovery
-5	15	■	18	2		6					43		NS; <1
-10	20	■	16	58		7 %F			SM	Gray silty fine to coarse sand with gravel (very dense, wet) (glacially consolidated deposits)	8	23	NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-14A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-15

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/21/2014	End 5/21/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	10.2 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
10	0								AC	4.5 inches asphalt concrete			
									CC	6.5 inches cement concrete			
		☒	6			0			CL	Sandy clay with gravel (meidum stiff, wet) (fill)	19		
		■	6	5		1							NS; <1
5	5	■		6		2			OL/PT	Organic silt to peat with silt (medium stiff, wet)	140		NS; <1
		■	0	1		3				Becomes very soft			No recovery
0	10	■	18	0		4			CL	Gray clay (very soft to soft, wet) (glaciomarine drift)	60		NS; <1
		■	18	2		5				Trace sand and shells	37		NS; <1
-5	15	■	18	1		6					37		NS; <1
									CL	Gray clay with gravel, trace sand (medium stiff, wet)			
-10	20	■		4		7					26		NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-15A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-16

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/20/2014	End 5/20/2014	Total Depth (ft) 31.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	13.9 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0								SOD	4 inches sod			
		☒	6			0			SM	Brown silty fine to medium sand with gravel (moist) (fill)	4		
		■	12	21		1				Fabric encountered at 3.2 feet	11		NS; <1
10	5	■	9	9		2			OL/PT	Dark brown organic silt to peat (soft, wet)	140		
		■	10	4		3			CL	Gray clay, trace shells (medium stiff, moist) (glaciomarine drift)	30		NS; <1
5	10	■	18	0		4			CL	Gray clay (very soft, wet)	44		NS; <1
									SM	Gray silty clayey fine sand (very loose, wet)			
		■	14	2		5					34		NS; <1
0	15	■	18	1		6 / AL			CL	Gray clay with fine sand (very soft, wet)	41		NS; <1
-5	20	■	18	2		7					47		NS; <1
-10	25	■	18	2		8					31		NS; <1
-15									SP-SM	Gray fine to medium sand with silt and occasional gravel (medium dense, wet) (glacially consolidated deposits)			
	30	■	17	65/11"		9a							NS; <1
						9b			SM	Gray silty fine to coarse sand with gravel (dense, wet)			

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-16A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-17

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/21/2014	End 5/21/2014	Total Depth (ft) 21.5	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	10.1 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			0			SM	Brown silty fine to coarse sand with occasional gravel and rootlets (moist) (fill)	21		
		■	9	16		1			SM/ML	Brown silty fine to medium sand to sandy silt with occasional gravel (medium dense/very stiff, moist) (glaciomarine drift)	23		NS; <1
5	5	■	16	6		2			CL	Grayish-brown clay (medium stiff, moist)	27		NS; <1
		■	16	3		3			CL	Gray clay (soft to very soft, wet)	41		NS; <1
0	10	■	18	2		4					48		NS; <1
		■	18	1		5					51		Water added NS; <1
5	15	■	18	3		6					50		NS; <1
10	20	■	18	2		7					45		NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-17A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-18

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled	Start 5/21/2014	End 5/21/2014	Total Depth (ft) 22	Logged By MWR / Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) / Vertical Datum	10.9 NASWI Base Datum		Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Diedrich D50
Easting (X) / Northing (Y)			System Datum	NASWI Base Datum	Groundwater: Date Measured / Depth to Water (ft) / Elevation (ft)	Not encountered
Notes:						

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			0			SM	Brown silty fine to coarse sand with gravel and rootlets (moist) (fill)	14		
10		■	18	10		1			CL	Brown and gray clay with occasional shells (stiff, moist) (glaciomarine drift)	22		NS; <1
	5	■	0	4		2				Becomes medium stiff	34		NS; <1 Overdrove with California sampler
5		■	18	2		3			CL	Gray clay (soft to very soft, wet)	44		NS; <1
	10	■	18	2		4					46		NS; <1
0		■	18	1		5					39		NS; <1
	15	■	18	2		6					48		NS; <1
-5													
	20	■	24	3		7a					40		NS; <1
-10						7b			SM	Gray silty fine to coarse sand with gravel (dense, wet) (glacially consolidated deposits)			

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-18A-14

GeoEngineers

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-19

Sheet 1 of 1

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled Start 5/22/2014 End 5/22/2014	Total Depth (ft) 41	Logged By TKC Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) 10 Vertical Datum NASWI Base Datum		Hammer Data Rope & Cathead 140 (lbs) / 30 (in) Drop		Drilling Equipment XL Trailer
Easting (X) Northing (Y)		System Datum NASWI Base Datum		Groundwater Date Measured / Depth to Water (ft) / Elevation (ft): Not encountered
Notes:				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	0	☒	6			1			SP-SM	Brown fine to medium sand with silt and occasional gravel (moist) (fill)	10		NS; <1
		■	12	11		2			OL	Black organic silt with fine to medium sand (medium stiff, moist) (relict topsoil)	87		NS; <1
5	5	■	14	4		3			CL	Gray clay with organic lenses (soft, moist to wet) (glaciomarine drift)	45		NS; <1
		■	2	4		4			CH	Gray clay with occasional gravel (soft, wet)	22		NS; <1
0	10	■	15	11		5					28		NS; <1
									CH	Gray clay with fine to medium sand interbeds (medium stiff, wet)			
		■	16	8		6			CH	Gray sandy clay with sand and occasional fine gravel (medium stiff, wet)	24		NS; <1
-5	15	■	18	11*		7					22		*Blow count overstated
									SP-SM	Gray fine to medium sand to fine to medium sand with silt (dense, moist) (glacially consolidated deposits)			
-10	20	■	18	41		8 %F					19	11	NS; <1
									GP	Gray fine to coarse gravel with sand (dense, wet)			
-15	25	■	18	33		9 SA					8	2	NS; <1 3 inches of heave
									SM	Gray silty fine to coarse sand with gravel (very dense, moist)			
-20	30	■	8	89/11"		10 %F					8	29	NS; <1
-25	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-19A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-20

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
	35		5	50/6"		11							NS; <1
-30	40		9	50/6"		12							NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-19A-14 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-20

Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\0144444\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Drilled Start 5/22/2014 End 5/22/2014	Total Depth (ft) 41.5	Logged By TKC Checked By AJH	Driller Geologic Drill	Drilling Method Hollow-Stem Auger
Surface Elevation (ft) 10.4 Vertical Datum NASWI Base Datum		Hammer Data Rope & Cathead 140 (lbs) / 30 (in) Drop		Drilling Equipment XL Trailer
Easting (X) Northing (Y)		System Datum NASWI Base Datum		Groundwater Date Measured / Depth to Water (ft) / Elevation (ft): Not encountered
Notes:				

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
10	0								SM	Brown silty fine to coarse sand with gravel (medium dense, moist) (fill)			
		☒	6			1					7		NS; <1
		■	18	5		2			CL	Gray clay with fine sand and occasional organic matter (medium stiff, moist) (reworked glaciomarine drift)	26		NS; <1
5	5	■	20	5		3					37		NS; <1
									CL	Gray clay with occasional sand and rootlets (soft to very soft, wet) (glaciomarine drift)			
		■	18	2		4					48		NS; <1
0	10	■	18	2		5					44		NS; <1
		■	18	1		6 / AL					48		NS; <1 AL (LL = 43; PI = 21)
-5	15	■	18	3		7					39		NS; <1
-10	20	■	18	20		8 / %F			SM	Gray silty fine sand (medium dense, moist)	24	40	NS; <1
									SM	Gray silty fine to medium sand with silt lenses, trace gravel (dense, wet) (glacially consolidated deposits)			
-15	25	■	14	42		9							NS; <1
									SM	Gray silty fine to coarse sand with gravel (very dense, wet)			Harder drilling at 27 feet
-20	30	■	5	50/5.5"		10 / SA					7	26	NS; <1
	35												

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-20A-14

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-21

Sheet 1 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\0144444\00.GPJ DB:Template\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Moisture Content (%)	Fines Content (%)	REMARKS
-25	35		12	50/5.5"		11							NS; <1
-30	40		12	87		12 / %F					8	8	NS; <1

Notes: See Figure A-1 for explanation of symbols.

Log of Boring GEI-20A-14 (continued)

GEOENGINEERS

Project: P-259 Project - P-8A Hangar and Aircraft Apron Expansion

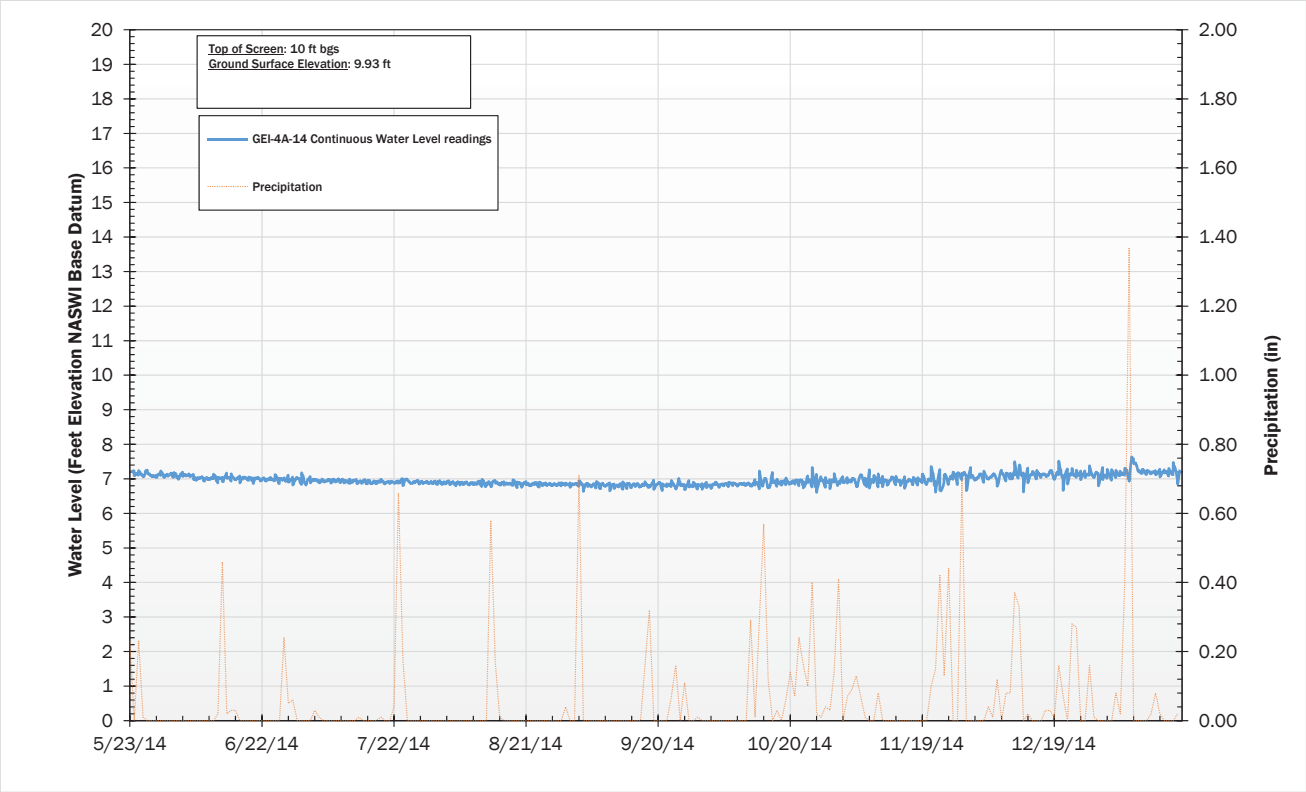
Project Location: Whidbey Island, Washington

Project Number: 0144-444-00

Figure A-21

Sheet 2 of 2

Bellingham: Date:2/5/15 Path:\\RED\PROJECTS\0\0144444\00\GINT\014444400.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_GEOTECH_STANDARD



Notes:
1. Recorded hourly with an INW PT2X unvented pressure transducer
2. Precipitation data obtained from Weather Underground, weather station: KNUW

GEI-4A-14 Groundwater Elevation

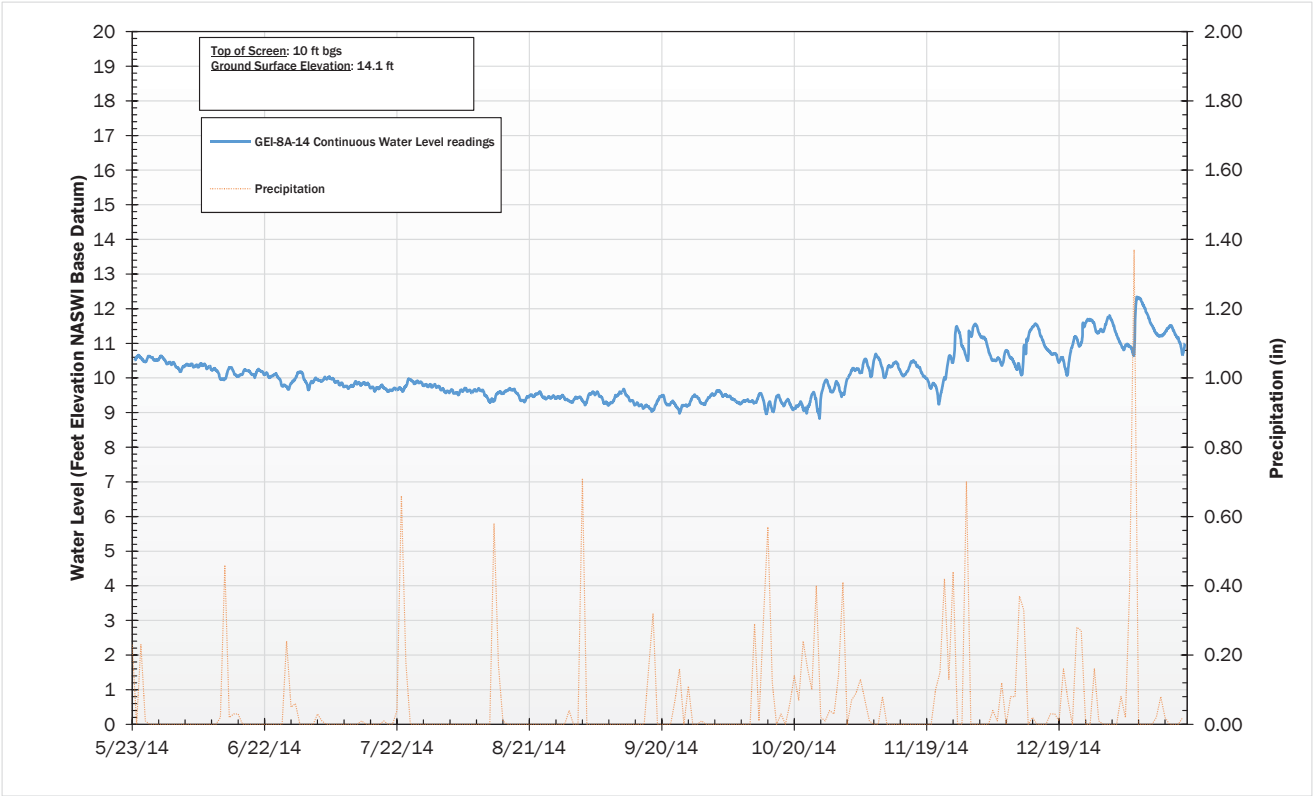
P-259 Project – P-8A Hangar and Aircraft Apron Expansion
NASWI, Oak Harbor, Washington

GeoEngineers

Figure A-22

1/29/15

0144-444-00



Notes:
1. Recorded hourly with an INW PT2X unvented pressure transducer
2. Precipitation data obtained from Weather Underground, weather station: KNUW

GEI-8A-14 Groundwater Elevation

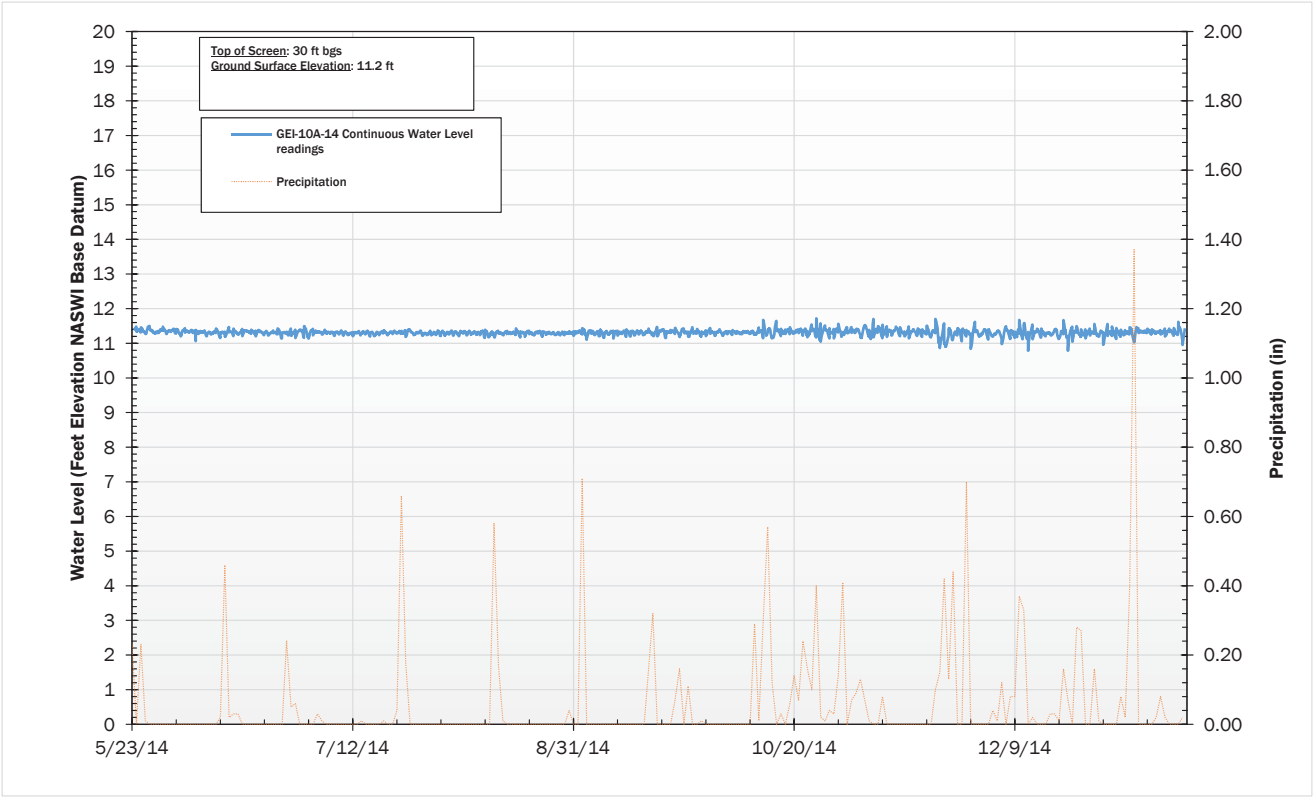
P-259 Project – P-8A Hangar and Aircraft Apron Expansion
NASWI, Oak Harbor, Washington

GeoEngineers

Figure A-23

1/29/15

0144-444-00



Notes:
1. Recorded hourly with an INW PT2X unvented pressure transducer
2. Precipitation data obtained from Weather Underground, weather station: KNUW

GEI-10A-14 Groundwater Elevation

P-259 Project – P-8A Hangar and Aircraft Apron Expansion
NASWI, Oak Harbor, Washington

GeoEngineers

Figure A-24

1/29/15

0144-444-00

APPENDIX B
Laboratory Testing

APPENDIX B
LABORATORY TESTING

General

Soil samples obtained from the explorations were transported to our laboratory and examined to confirm or modify field classifications, as well as to evaluate index properties of the soil samples. Representative samples were selected for laboratory testing consisting of moisture content, fines content, sieve analyses, Atterberg limits (plasticity characteristics) and consolidation characteristics. The tests were performed in general accordance with test methods of ASTM or other applicable procedures.

Moisture Content and Dry Density

Moisture content and/or density tests of selected samples were completed in general accordance with ASTM D 2216 and D 2937, respectively. The results of these tests are presented on the exploration logs in Appendix A at the depths at which the samples were obtained.

Percent Passing U.S. No 200 Sieve

Selected samples were "washed" through the U.S. No. 200 mesh sieve to determine the relative percentages of coarse- and fine-grained particles in the soil. The percent passing values represent the percentage by weight of the sample finer than the U.S. No. 200 sieve. These tests were conducted to verify field descriptions and to determine the fines content for analysis purposes. The tests were conducted in general accordance with ASTM D 1140, and the results are shown on the exploration logs in Appendix A at the representative sample depths.

Sieve Analyses

Sieve analyses were performed on selected samples in general accordance with ASTM D 422. The wet sieve analysis method was used to determine the percentage of soil greater than the U.S. No. 200 mesh sieve. The results of the sieve analyses were plotted, were classified in general accordance with the Unified Soil Classification System (USCS) and are presented in Figures B-1 and B-2.

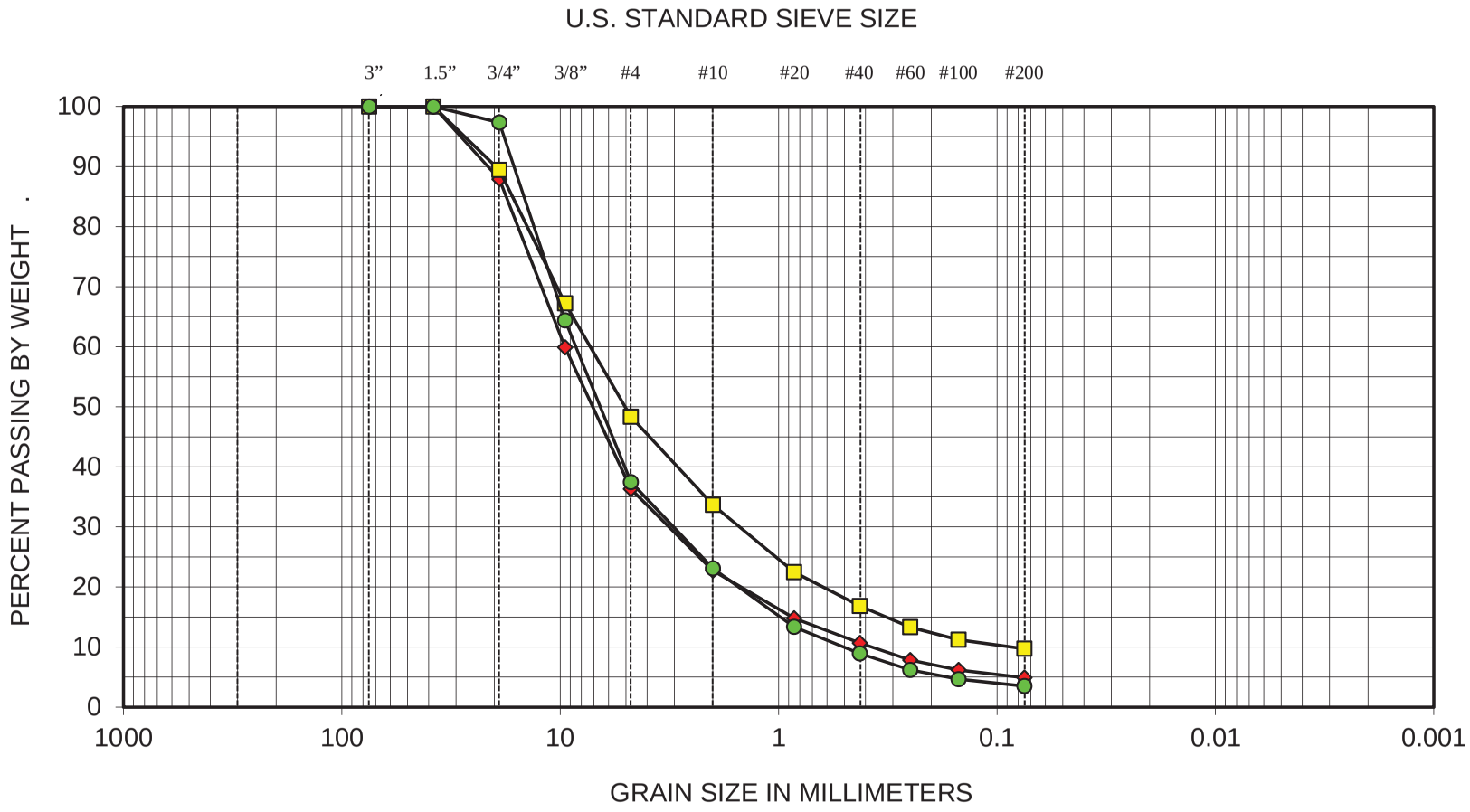
Atterberg Limits Testing

Atterberg limits testing was performed on selected fine-grained soil samples. The tests were used to classify the soil as well as to evaluate index properties. The liquid limit and the plastic limit were estimated through a procedure performed in general accordance with ASTM D 4318. The results of the Atterberg limits testing are summarized in Figures B-3 through B-5.

Consolidation Tests

One-dimensional consolidation tests were conducted on four relatively undisturbed soil samples extruded from Shelby tubes. The tests were conducted in general accordance with ASTM D 2435, using a fixed-ring consolidometer. The primary purpose of the consolidation test is to aid in the estimation of potential consolidation and secondary settlement upon placement of additional loads. Figures B-6 through B-9 summarize the consolidation test results.

GEOENGINEERS



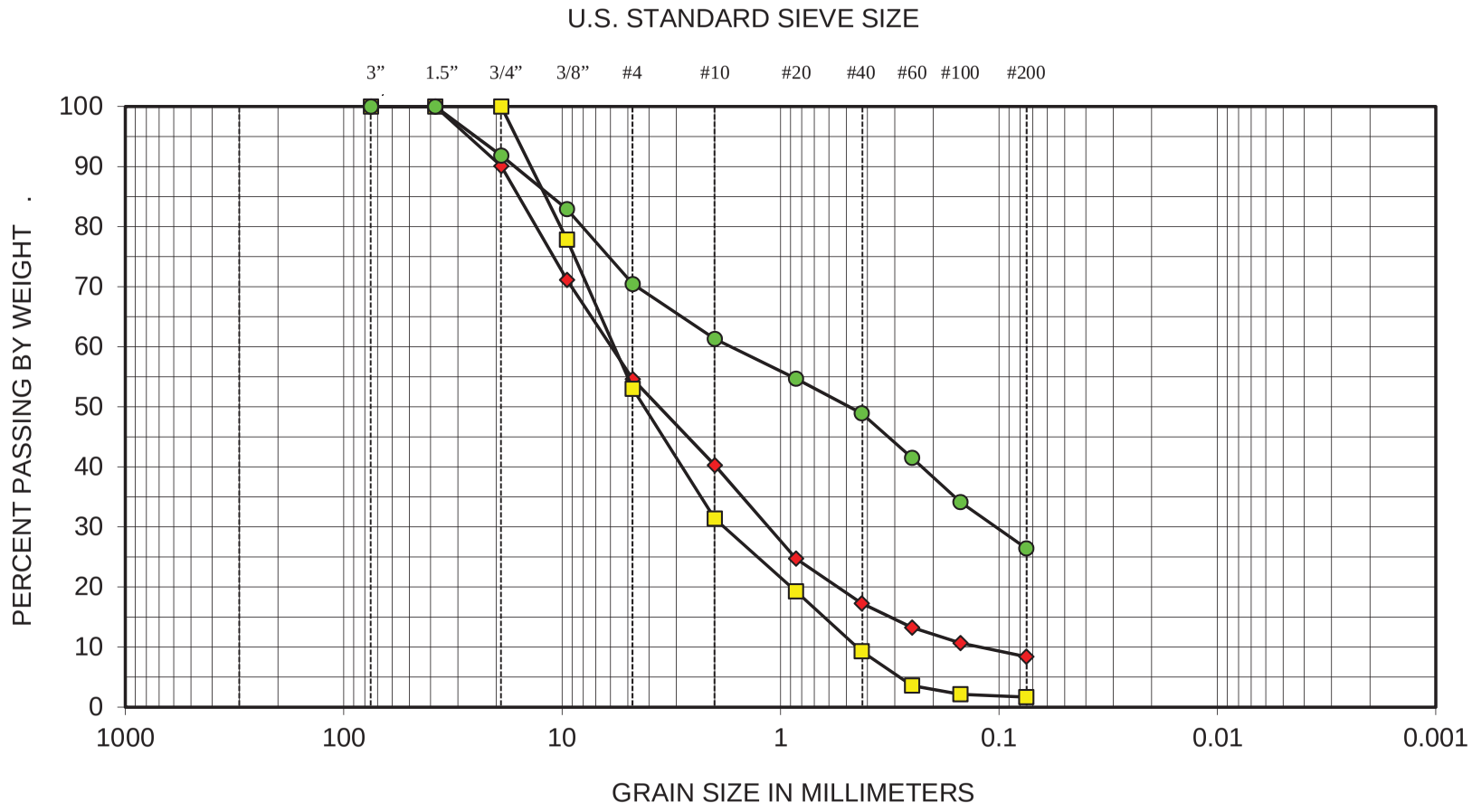
BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	

SYMBOL	EXPLORATION NUMBER	DEPTH (ft)	SOIL CLASSIFICATION
◆	1A-14	15	Fine to coarse gravel with sand and silt (GW-GM))
■	4A-14	12½	Fine to coarse gravel with sand and silt (GP-GM)
●	4A-14	25	Fine gravel with sand and trace silt (GW)

SIEVE ANALYSIS RESULTS

FIGURE B-1

0144-444-00 MWR : 06-09-2014



BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		COARSE	FINE	COARSE	MEDIUM	FINE	

SYMBOL	EXPLORATION NUMBER	DEPTH (ft)	SOIL CLASSIFICATION
◆	6A-14	20	Fine to coarse sand with gravel and silt (SW-SM))
■	19A-14	25	Fine to coarse sand with gravel (SW)
●	20A-14	30	Silty fine to coarse sand with gravel (SM)

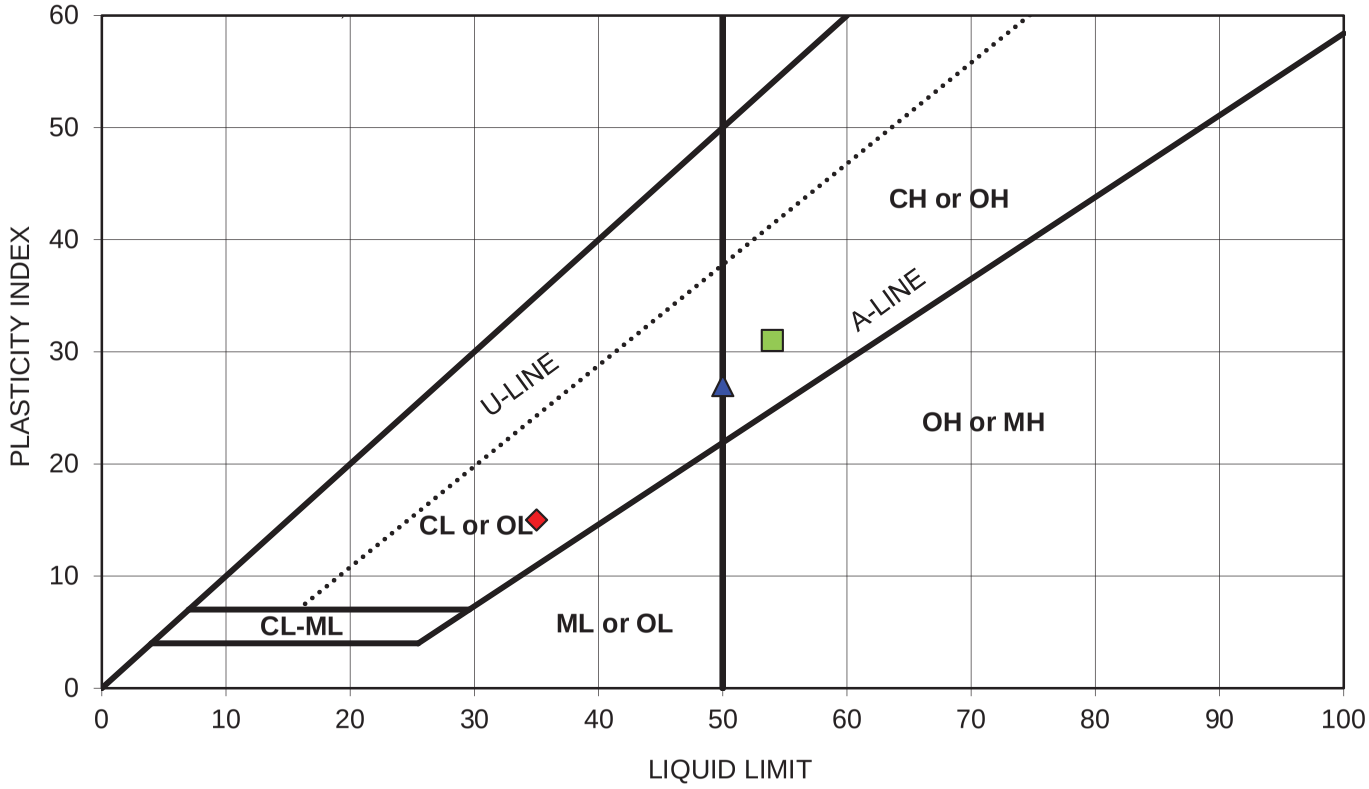
GEOENGINEERS

SIEVE ANALYSIS RESULTS

FIGURE B-2

GEOENGINEERS

PLASTICITY CHART

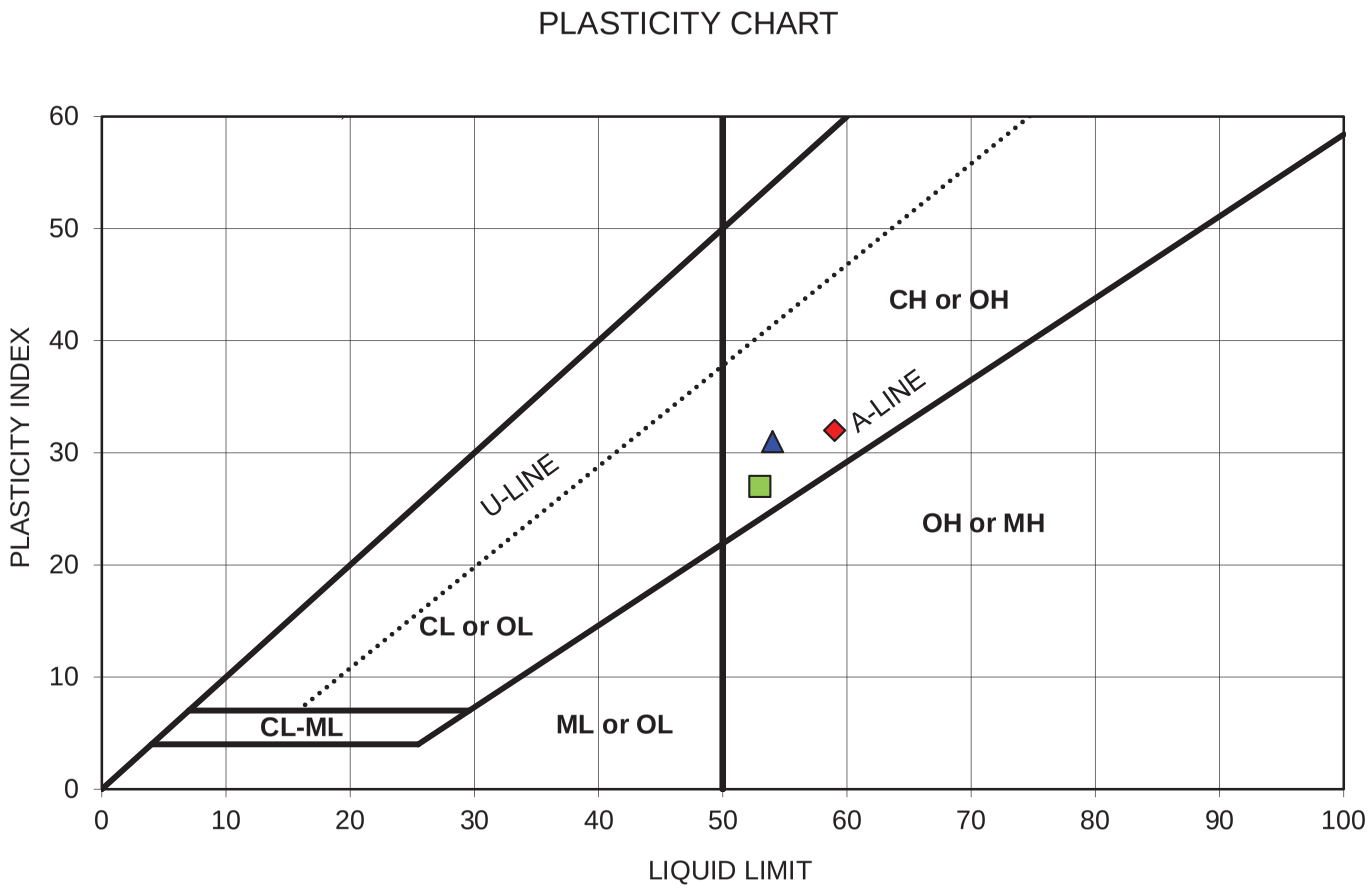


SYMBOL	EXPLORATION NUMBER	SAMPLE DEPTH (ft)	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL DESCRIPTION
◆	3A-14	7.5	23	35	15	Lean clay (CL)
■	6A-14	10	51	59	32	Fat clay (CH)
▲	6A-14	10	44	50	27	Fat clay (CH)

ATTERBERG LIMITS TEST RESULTS

FIGURE B-3

GEOENGINEERS



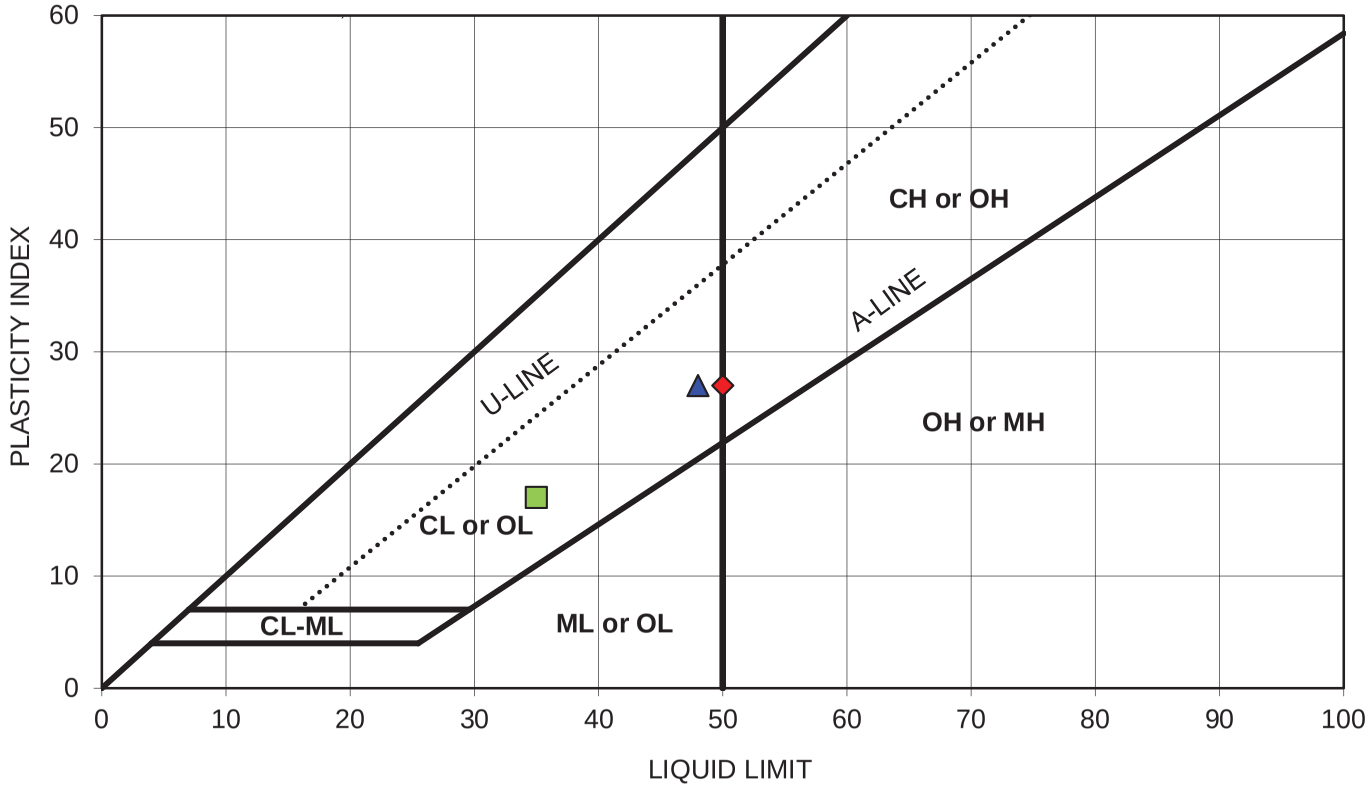
SYMBOL	EXPLORATION NUMBER	SAMPLE DEPTH (ft)	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL DESCRIPTION
◆	7A-14	10	51	59	32	Fat clay (CH)
■	8A-14	10	46	53	27	Fat clay with occasional sand (CH)
▲	10A-14	7.5	53	54	31	Fat clay (CH)

ATTERBERG LIMITS TEST RESULTS

FIGURE B-4

GEOENGINEERS

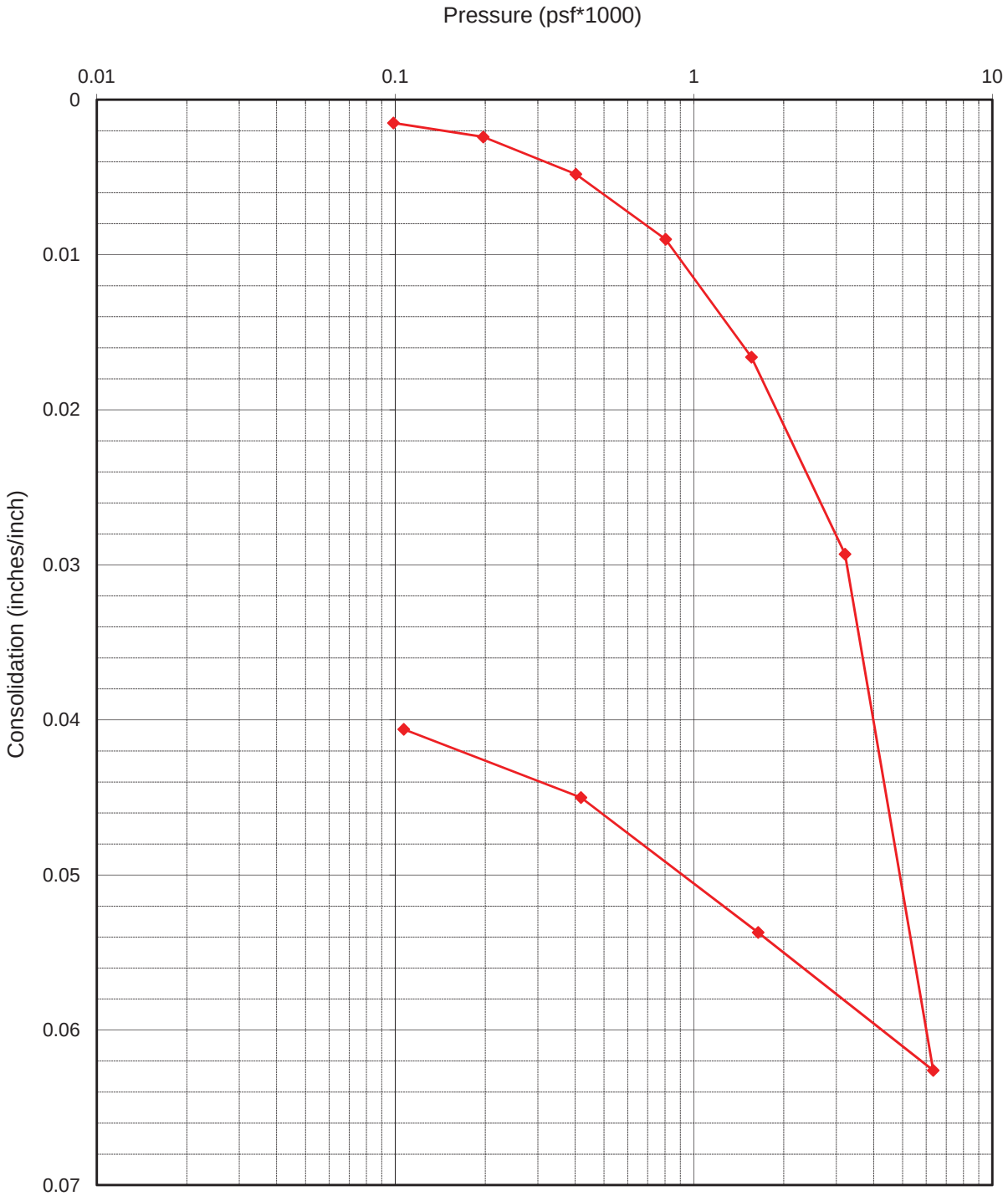
PLASTICITY CHART



SYMBOL	EXPLORATION NUMBER	SAMPLE DEPTH (ft)	MOISTURE CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	SOIL DESCRIPTION
◆	12A-14	10	62	58	36	Fat clay (CH)
■	16A-14	15	41	35	17	Lean clay with occasional fine sand (CL)
▲	20A-14	10	48	43	27	Lean clay (CL)

ATTERBERG LIMITS TEST RESULTS

FIGURE B-5

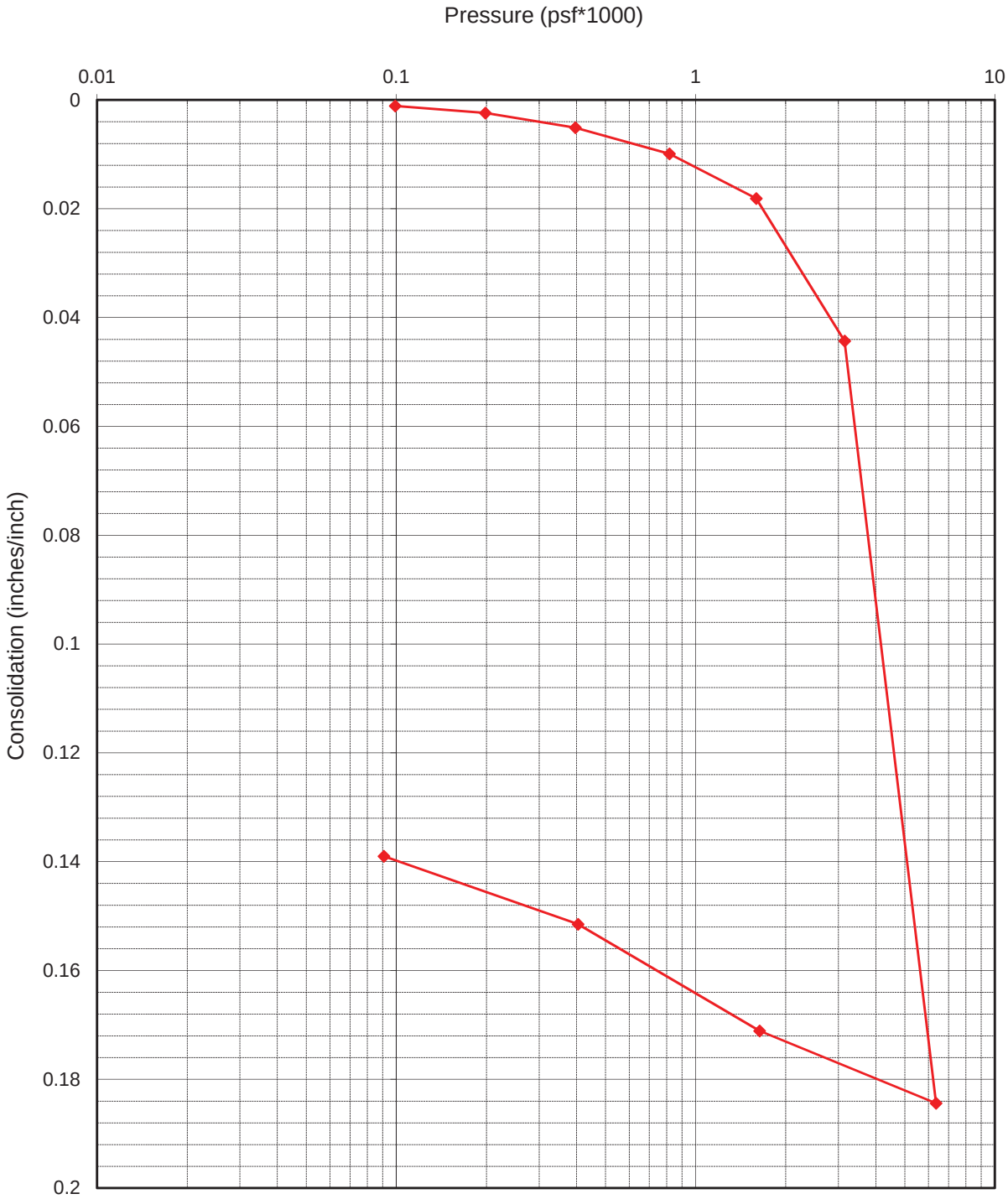


SAMPLE LOCATION	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT^3)
6A-14 S4	10	Fat clay (CH)	44.3	76.3

GeoEngineers

CONSOLIDATION TEST RESULTS

FIGURE B-6

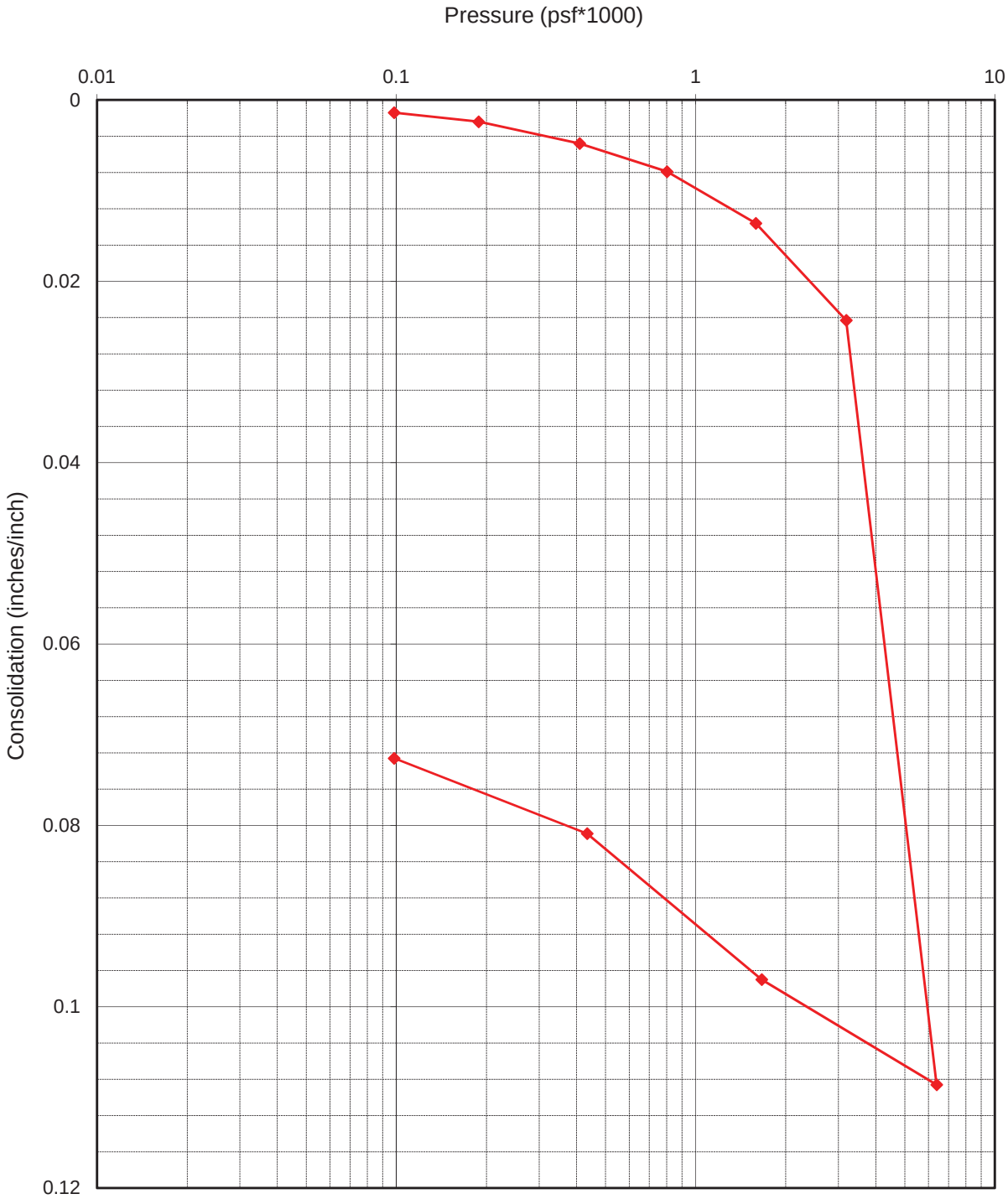


SAMPLE LOCATION	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT^3)
7A-14 S4	10	Fat clay (CH)	51	70.1

GeoEngineers

CONSOLIDATION TEST RESULTS

FIGURE B-7

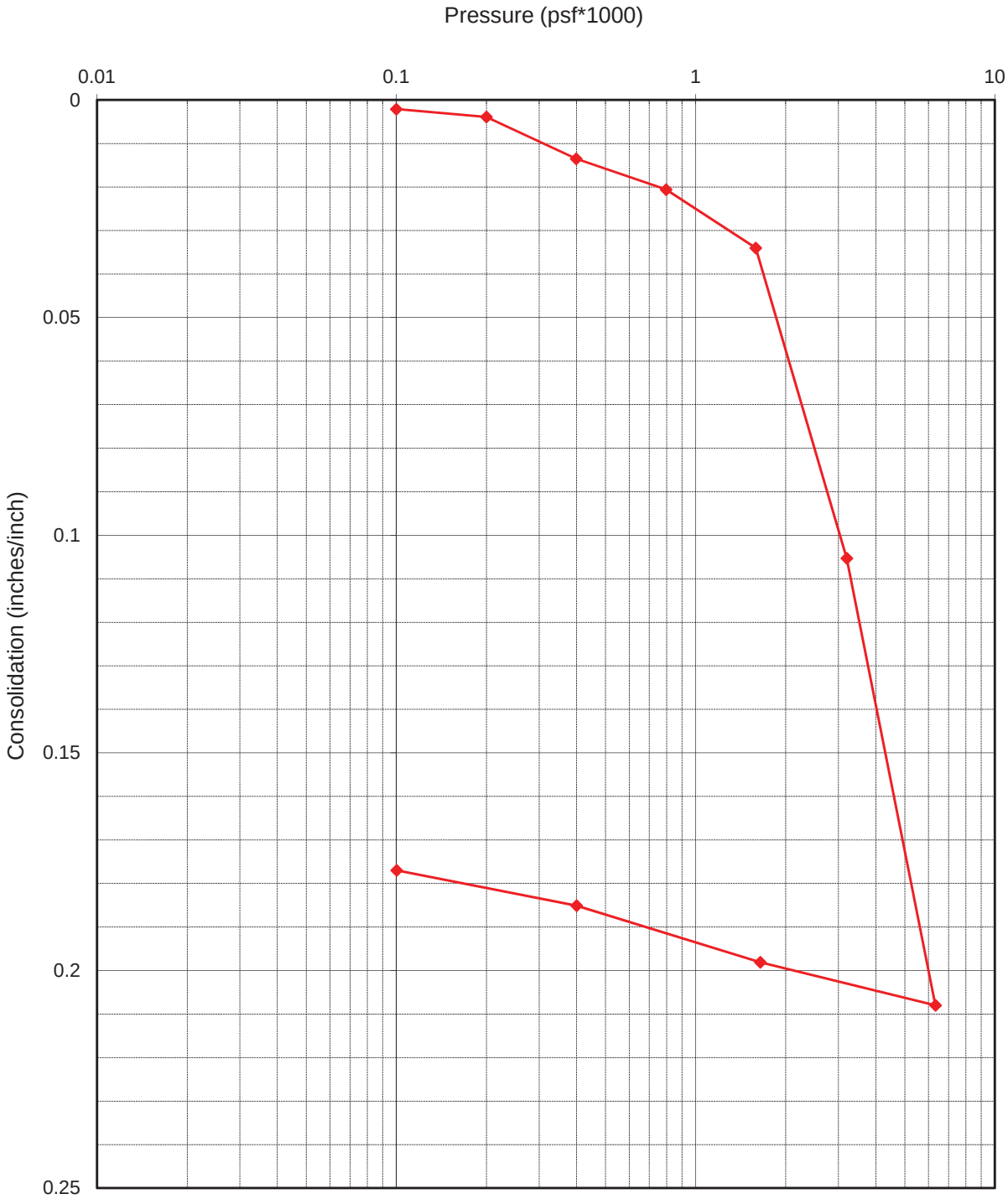


SAMPLE LOCATION	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT^3)
8A-14 S4	10	Fat clay with occasional sand (CH)	46.4	74.3

GEOENGINEERS

CONSOLIDATION TEST RESULTS

FIGURE B-8



SAMPLE LOCATION	SAMPLE DEPTH (FEET)	SOIL CLASSIFICATION	INITIAL MOISTURE CONTENT	INITIAL DRY DENSITY (LBS/FT^3)
10A-14 S3	7.5	Fat clay (CH)	53	69.9

GeoEngineers

CONSOLIDATION TEST RESULTS

FIGURE B-9

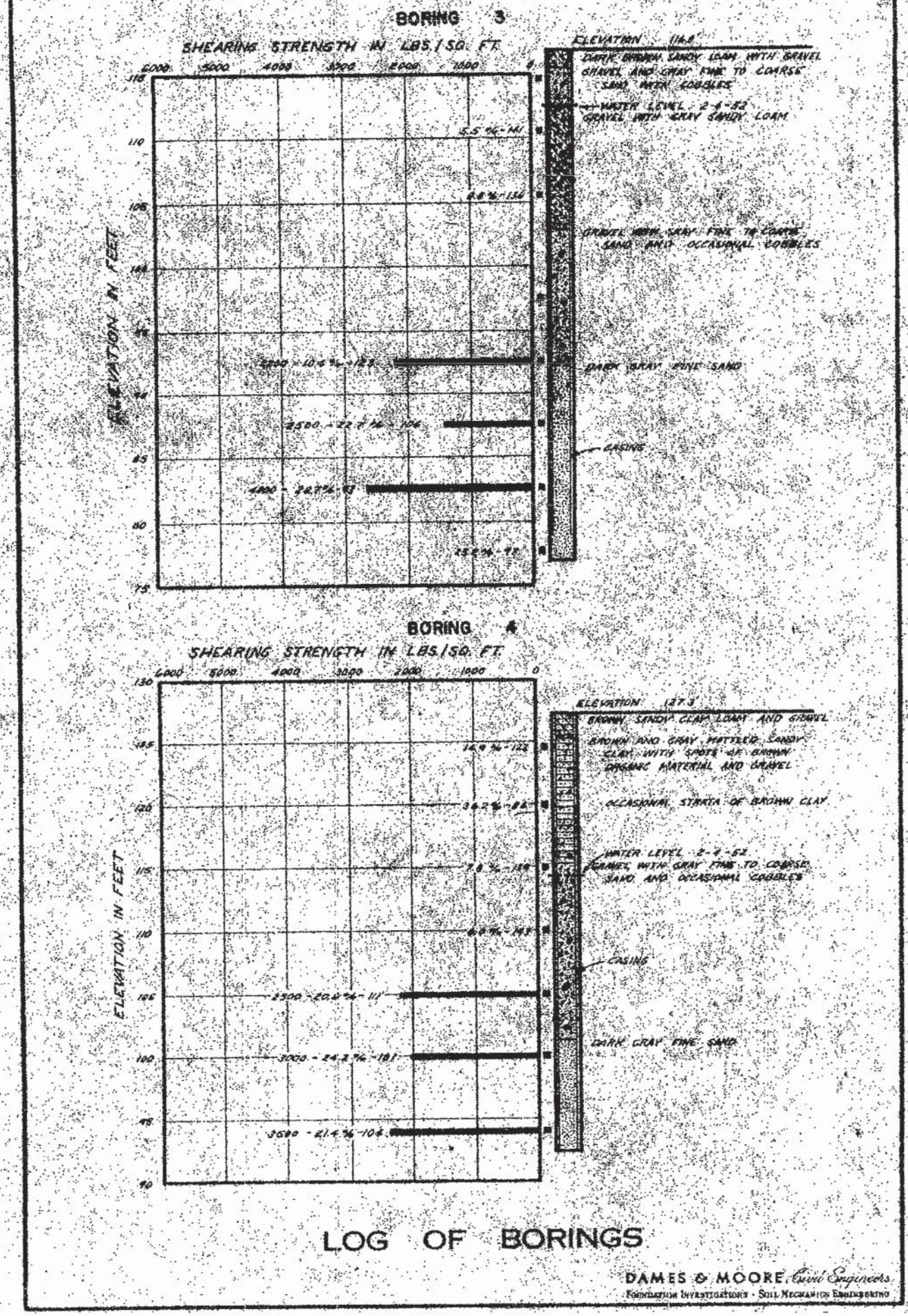
APPENDIX C
Previous Studies

APPENDIX C
PREVIOUS STUDIES

GeoEngineers reviewed logs of previous explorations completed in the general vicinity of the currently planned project. The locations of previous explorations are shown on the Site and Exploration Plan, Figures 2A and 2B. The logs of the previous explorations are presented in this appendix and include:

- The logs of two borings (3 and 4) completed in 1953 by Dames and Moore for the geotechnical evaluation of two proposed hangar sites for the U.S Naval Air Station, AULT Field, Whidbey Island, Washington. The approximate locations of these borings are labeled B-3-53 and B-4-53 in Figures 2A and 2B of this report.
- The logs of eight borings (B-1 through B-6, B-11 and B-12) completed in 1981 by Shannon and Wilson, Inc., and included in the report titled "Subsurface Explorations and Geotechnical Engineering Studies, Aircraft Maintenance Hangar Taxiway, Access Apron and Parking Lot, Naval Air Station Whidbey Island, Washington." The approximate locations of these borings are labeled B-1-81 through B-6-81, B-11-81 and B-12-81 in Figure 2A of this report.
- The logs of three borings (B-1 through B-3) completed in 1994 by GeoEngineers and included in the report titled "Report of Geotechnical Engineering Services, Proposed Tactical Support Center, P-604T, Naval Air Station Whidbey Island, Oak Harbor, Washington, for the United States Navy." The approximate locations of these borings are labeled GEI-1-94 through GEI-3-94 in Figure 2A of this report.
- The logs of four borings (B-3 through B-6) completed in 2004 by Shannon and Wilson, Inc., and included in the report titled "Geotechnical Engineering Report, Consolidated Fuel Facility, Naval Air Station Whidbey Island, Washington," dated January 4, 2007. The approximate locations of these borings are labeled B-3-04 through B-6-04 in Figure 2A of this report.
- The logs of two borings (GEI-3 and GEI-4) completed in 2008 by GeoEngineers and included in the report titled "Geotechnical Engineering Services, P-160 NASWI Indoor Washrack, Oak Harbor, Washington." The approximate locations of these borings are labeled GEI-3-08 and GEI-4-08 in Figure 2B of this report.
- The logs of two borings (B-1 and B-2) completed in July 2013 by GeoEngineers and included in the report titled "Geotechnical Engineering Services, P-251 Hangar and Training Facilities (TOC-MTOC) NASWI, Oak Harbor, Washington." The approximate locations of these borings are labeled GEI-1-13 and GEI-2-13 in Figure 2A of this report.
- The logs of five borings (GEI-1 through GEI-5) completed in August 2013 by GeoEngineers and included in the report titled "Geotechnical Engineering Services, Aircraft Refueler Fleet Parking, Oak Harbor, Washington." The approximate locations of these borings are labeled GEI-1-13 through GEI-5-13 in Figure 2A of this report.

Dames & Moore, 1953 (Hanger 6)



LOG OF BORINGS

DAMES & MOORE, Civil Engineers
FOUNDATION INVESTIGATIONS · SOIL MECHANICS ENGINEERING

Date(s) Drilled	04/22/08	Logged By	BPD	Checked By	LCF
Drilling Contractor	Geologic Drill	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT
Auger Data	3¼-inch ID, 7¼-inch OD	Hammer Data	140 lb hammer/30 in drop rope and cathead	Drilling Equipment	Deep Rock XL
Total Depth (ft)	50	Surface Elevation (ft)	114.5	Groundwater Elevation (ft)	102
Vertical Datum		Datum/ System	US Navy	Easting(x): Northing(y):	

Elevation feet	Depth feet	SAMPLES Interval	Recovered (in)	Blows/foot	Sub-Sample Number	Testing	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV (ppm)	Moisture Content %	NOTES
	0								CC	11 inches cement concrete				Added water for coring
									GM	12 inches base course				
			8	8	1 2				CL	Gray clay (medium stiff to stiff, moist) (fill?)	SS	<1		Trace organic matter
110	5		6	6	3				CL	Gray clay (medium stiff, moist) (glacial marine drift)	SS	<1	21	
			12	2	4					Grades to very soft to soft	SS	<1	43	AL
105	10		18	5	5		▼		CL	Gray clay with occasional gravel (medium stiff, moist to wet)	NS	<1		
100	15		18	28	6				SP	Gray fine to coarse sand with gravel (medium dense, wet) (glacially consolidated deposits)	NS	<1	12	%F = 4 Cuttings become wet
95	20		18	53	7				SM	Gray silty fine to coarse sand with gravel (very dense, wet)	NS	<1		
90	25		18	51	8				SP	Gray fine to medium sand (dense to very dense, wet)	NS	<1	16	SA
85	30		18	38	9						NS	<1		About 8 feet heave Driller added bentonite drilling mud
80	35		18	40	10						NS	<1		2 feet of heave

Note: See Figure A-1 for explanation of symbols.

LOG OF BORING GEI-3

GEOENGINEERS

Project: P-160 Indoor Washrack
Project Location: Whidbey Island, Washington
Project Number: 0144-336-01

Figure A-4
Sheet 1 of 2

Elevation feet	Depth feet	SAMPLES: Interval Recovered (in)	Blows/foot	Sub-Sample Number	Testing	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV (ppm)	Moisture Content %	NOTES
	35												
		18	66	11					Sand grades to fine to coarse	NS	<1		
-75	40												
								ML	Gray sandy silt (hard, moist to wet)				Driller noted change in drilling conditions
		8	69	12						NS	<1		
-70	45												
									Becomes hard and wet with occasional gravel				Driller noted change in drilling conditions
		8	38	13						NS	<1		
-65	50												
-60	55												
-55	60												
-50	65												
-45	70												
-40	75												

Heavy sheen observed over last 30 feet of auger upon removal from hole

Full-depth bentonite mud head maintained during drilling between 28½ feet and 50 feet below ground surface

V6_ENVBORING W:\REDMOND\PROJECTS\0\0144336\01\FINALS\0144336\01.GPJ GEIV6_1.GDT 5/8/08

LOG OF BORING GEI-3 (continued)

GEOENGINEERS

Project: P-160 Indoor Washrack

Project Location: Whidbey Island, Washington

Project Number: 0144-336-01

Figure A-4

Sheet 2 of 2

Date(s) Drilled	04/22/08	Logged By	BPD	Checked By	LCF
Drilling Contractor	Geologic Drill	Drilling Method	Hollow-stem Auger	Sampling Methods	SPT/Shelby Tube
Auger Data	3¼-inch ID, 7¼-inch OD	Hammer Data	140 lb hammer/30 in drop rope and cathead	Drilling Equipment	Deep Rock XL
Total Depth (ft)	55	Surface Elevation (ft)	114.5	Groundwater Elevation (ft)	102.5
Vertical Datum		Datum/ System	US Navy	Easting(x): Northing(y):	

Elevation feet	Depth feet	Interval	Recovered (in)	Blows/foot	Sub-Sample Number	Testing	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV (ppm)	Moisture Content %	NOTES
	0								CC	11 inches cement concrete				Added water for coring
									GM	12 inches base course				
			16	7	1 2				CL	Gray clay (medium stiff, moist) (glacial marine drift)	NS	<1		
110	5		16	5	3				CL	Gray clay with occasional gravel and a sandy clay interbed (medium stiff, moist)	NS	<1	39	AL
			18	64*	4						NS	<1		*Rock in shoe - blowcounts not representative
105	10		24		5					Becomes moist to wet			16	
			12	28	6				CL	Gray sandy clay with occasional gravel (very stiff, wet)	SS	<1		Driller added bentonite drilling mud
100	15													
			14	55	7				ML	Gray sandy silt with interbedded sand and gravel (hard, wet) (glacially consolidated deposits)	SS	<1		
95	20													
			4	50/4"	8				SM	Gray silty fine to coarse sand with gravel (very dense, wet)	SS	<1		Rock in shoe
90	25													
			18	56	9						NS	<1	28	%F = 37
85	30													
									SP-SM	Gray fine sand with silt (very dense, wet)				
			18	75	10						NS	<1		
80	35													

Note: See Figure A-1 for explanation of symbols.

LOG OF BORING GEI-4

GEOENGINEERS

Project: P-160 Indoor Washrack
Project Location: Whidbey Island, Washington
Project Number: 0144-336-01

Figure A-5
Sheet 1 of 2

V6_ENVBORING W:\REDMOND\PROJECTS\0\0144336\01\FINALS\014433601.GPJ GEIV6_1.GDT 5/8/08

Elevation feet	Depth feet	SAMPLES Interval	Recovered (in)	Blows/foot	Sub-Sample Number	Testing	Water Level	Graphic Log	Group Symbol	MATERIAL DESCRIPTION	Sheen	Headspace Vapor TLV (ppm)	Moisture Content %	NOTES
	35													
			18	36	11						NS	<1		
75	40													
			16	53	12						NS	<1		
70	45													
			16	12	13					Becomes medium dense	NS	<1		SA
65	50													
			18	75	14					Becomes very dense	NS	<1		
60	55													
										Full-depth bentonite mud head maintained during drilling between 28½ feet and 50 feet below ground surface				
55	60													
50	65													
45	70													
40	75													

V6_ENVBORING W:\REDMOND\PROJECTS\0\0144336\01\FINALS\014433601.GPJ GEIV6_1.GDT 5/8/08

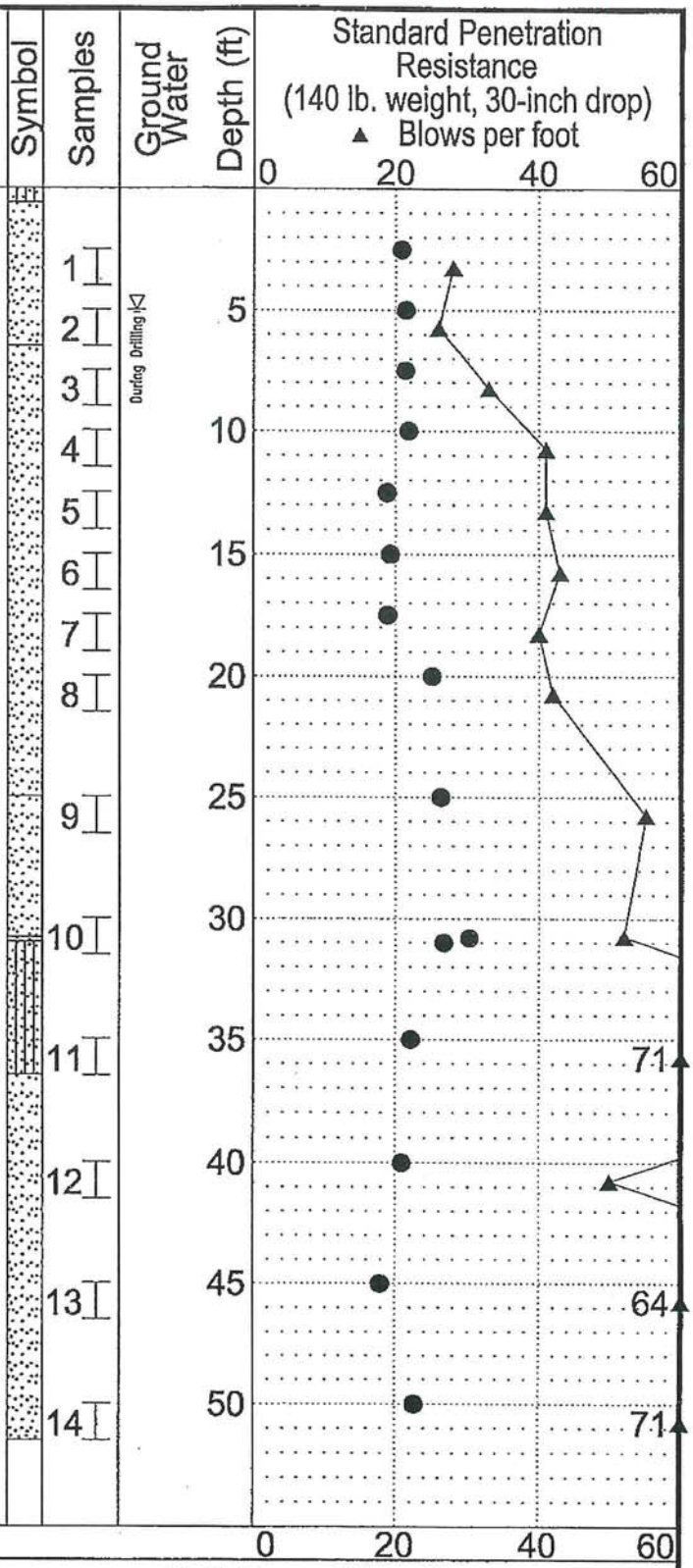
LOG OF BORING GEI-4 (continued)

GEOENGINEERS

Project: P-160 Indoor Washrack
Project Location: Whidbey Island, Washington
Project Number: 0144-336-01

Figure A-5
Sheet 2 of 2

SOIL DESCRIPTION Surface Elevation Approx. 9.5Ft.	Depth (ft)
Loose, dark brown, slightly silty, gravelly SAND; moist; numerous organics and roots; (Fill) SM.	0.6
Medium dense, brown to gray, fine to medium SAND; moist; wet at 5 feet; SP.	6.5
Dense, gray, fine to medium SAND; trace to slight gravel; wet; wood debris at 18.2 and 19 feet; SP.	
Dense, gray, slightly silty fine SAND; wet; SP.	25.0
Very dense, gray, fine to medium SAND; wet; SP.	30.8 31.0
Very dense, gray, fine sandy SILT/silty fine SAND; wet; SM.	36.5
Very dense, gray, fine to medium SAND; wet; SP.	
BOTTOM OF BORING COMPLETED ON 11/20/2000	51.5



NOTE

See Figure A-2 for legend, detailed notes, and water content explanation.

P-3 Support Facility
NAS Whidbey Island, Washington

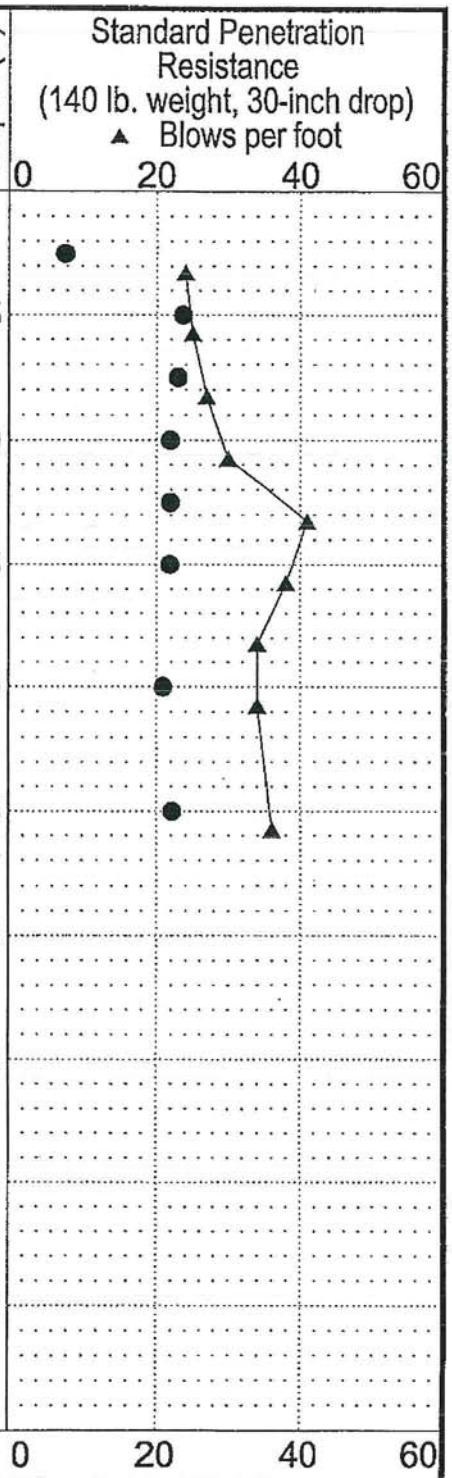
LOG OF BORING B-2

December 2000 21-1-12003-001

SHANNON & WILSON, INC. **FIG. A-3**

File: I:\Drafting\21\12003-001\21-1-12003-001 Boring Logs.dwg Date: 12-19-2000 Author: CVD

SOIL DESCRIPTION Surface Elevation Approx. 12 Ft.	Depth (ft)	Symbol	Samples	Ground Water	Depth (ft)
Medium dense, brown to gray, fine to medium SAND; moist to wet; SP.			1, 2, 3	During Drilling	5, 10
Dense, brown to gray at 14 feet; fine to medium SAND; wet; SP.	9.0		4, 5, 6, 7, 8		15, 20
	26.5		9		25, 30, 35, 40, 45



NOTE

See Figure A-2 for legend, detailed notes, and water content explanation.

P-3 Support Facility
NAS Whidbey Island, Washington

LOG OF BORING B-3

December 2000 21-1-12003-001

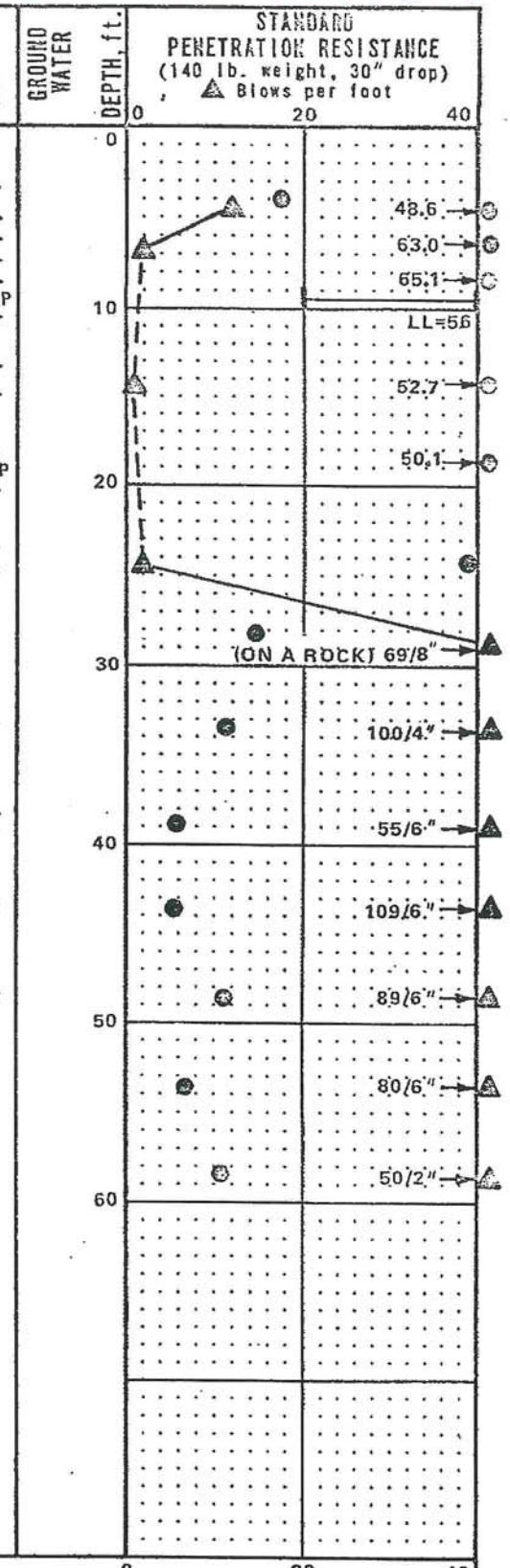
SHANNON & WILSON, INC. **FIG. A-4**

File: I:\Drafting\211\12003-001\21-1-12003-001 Boring Logs.dwg Date: 12-19-2000 Author: CVD

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION Surface Elevation: APPROX. 10 FT.	DEPTH, ft.	SAMPLES
Loose to medium dense, silty, sandy GRAVEL with scattered cobbles.	0	
Stiff, dark brown, peaty, organic SILT with occasional sand layers.	4 5.5	1
Very soft to soft, gray, silty CLAY with scattered organics, a trace of fine sand and gravel		2 3 P 4 5 P 6
Very dense, gray, silty, sandy GRAVEL; with silty, gravelly SAND; traces of clay, and scattered cleaner zones to 4 feet thick.	28.5	7 8 9 10 11 12 13
BORING COMPLETED 8-5-81	59.1	

POCKET PENETROMETER READINGS:
AVERAGE 0.22 TONS/SF AT 8.5-10.5 FT.
AVERAGE 0.45 TONS/SF AT 18.5-20.5 FT.
TORVANE READINGS:
AVERAGE 0.25 TONS/SF AT 8.5-10.5 FT.
AVERAGE 0.29 TONS/SF AT 18.5-20.5 FT.



LEGEND

I 2" O.D. split spoon sample
II 3" O.D. thin-wall sample
* Sample not recovered
Atterberg limits:
Liquid limit
Natural water content
Plastic limit

Impervious seal
Water level
Piezometer tip
P Sample pushed
USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-1

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-1

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION Surface Elevation: APPROX. 8.5 FT.	DEPTH, ft.	SAMPLES
Stiff, brown, sandy, organic SILT; with numerous roots and shell fragments.	0 1.3	1
Very soft to soft, gray, silty CLAY; with scattered shells and fine to medium sandy zones to 5 feet, fine scattered organics.		2 3 P 4
Medium stiff, gray, fine to medium sandy CLAY; scattered zones of gray, silty, clayey, gravelly, fine to medium sand.	16	5 P 6
Very dense, gray, silty, fine to coarse SAND with gravel.	26	7
BORING COMPLETED 5-5-81	33.8	8

POCKET PENETROMETER READINGS:

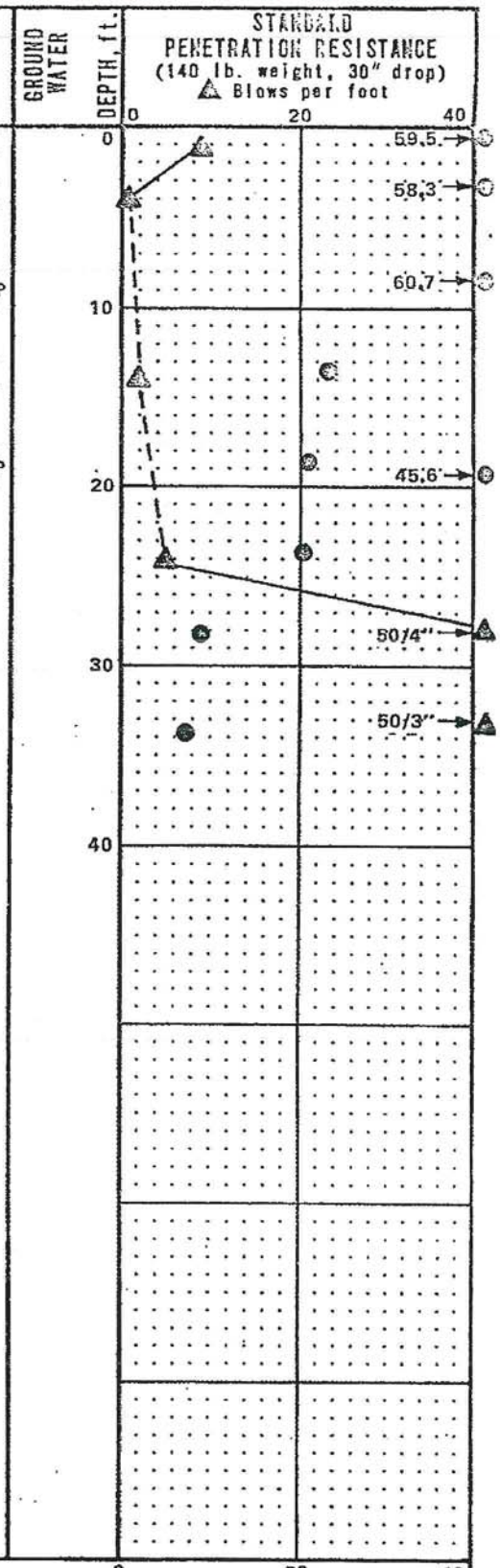
0.2 TONS/SF AT 8.0-10.0 FT.

0.1 TONS/SF AT 18.0-20.0 FT.

TORVANE READINGS:

0.15 TONS/SF AT 8.0-10.0 FT.

0.12 TONS/SF AT 18.0-20.0 FT.



LEGEND

I 2" O.D. split spoon sample

II 3" O.D. thin-wall sample

* Sample not recovered

Atterberg limits:

Liquid limit

Natural water content

Plastic limit

Impervious seal

Water level

Piezometer tip

P Sample pushed

USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-2

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-2

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION

Surface Elevation: APPROX. 8.5 FT.

Description	Depth, ft.
Medium stiff, dark brown, peaty, organic SILT with numerous organics and roots.	0 – 1.7
Very soft to soft, gray silty CLAY.	1.7 – 3.5
Very soft, brown, silty, fibrous PEAT.	3.5 – 4.5
Medium dense, gray, clean, fine to medium SAND with scattered roots, organics, and a trace of gravel.	4.5 – 8
Very soft to soft, gray, silty CLAY.	8 – 17
Medium stiff, gray, silty CLAY; with scattered fine to coarse sand and a trace of fine gravel and fine organics.	17 – 26.5
Very dense, gray, silty, gravelly, fine to coarse SAND. Clean zone from 43 to 45 feet. (Clean)	26.5 – 50.5
Hard, gray, silty CLAY; with numerous silt stringers.	50.5 – 59.5

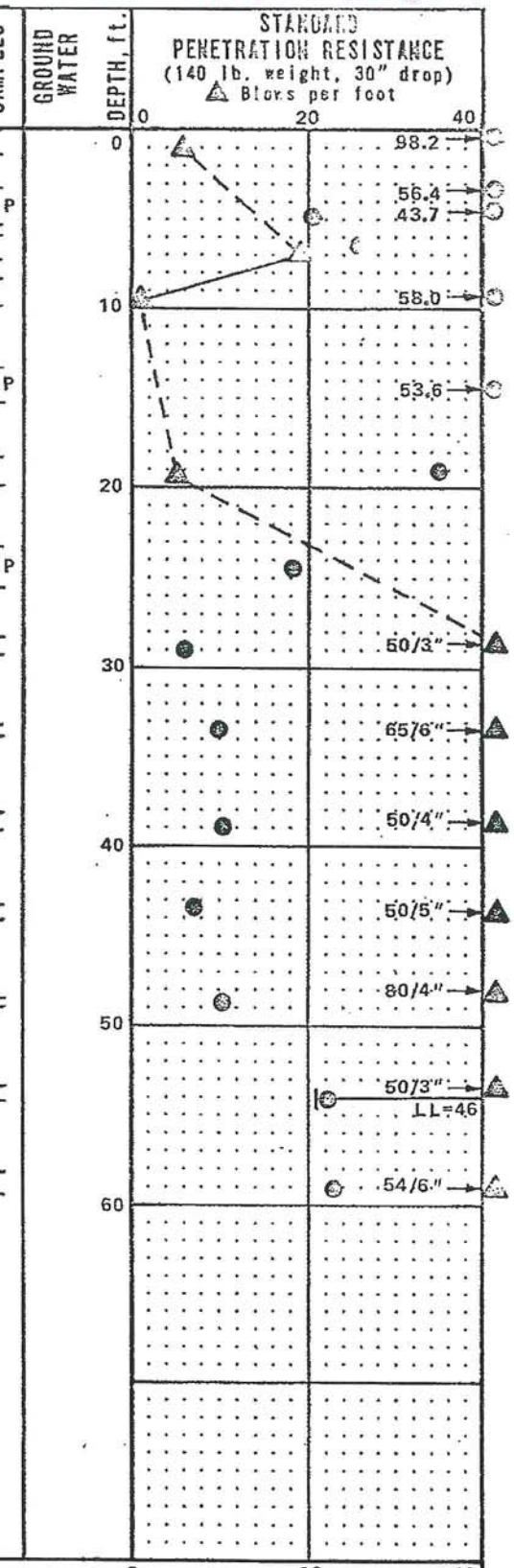
BORING COMPLETED 6-5-81

POCKET PENETROMETER READINGS:

AVERAGE 0.27 TONS/SF AT 13.5-15.5 FT.

TORVANE READINGS:

0.25 TONS/SF AT 13.5-15.5 FT.



% Water content

LEGEND

I 2" O.D. split spoon sample

II 3" O.D. thin-wall sample

* Sample not recovered

Atterberg limits:

Liquid limit

Natural water content

Plastic limit

Impervious seal

Water level

Piezometer tip

P Sample pushed

USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-3

MAY 1981

W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-3

SOIL DESCRIPTION

Surface Elevation: APPROX. 8 FT.

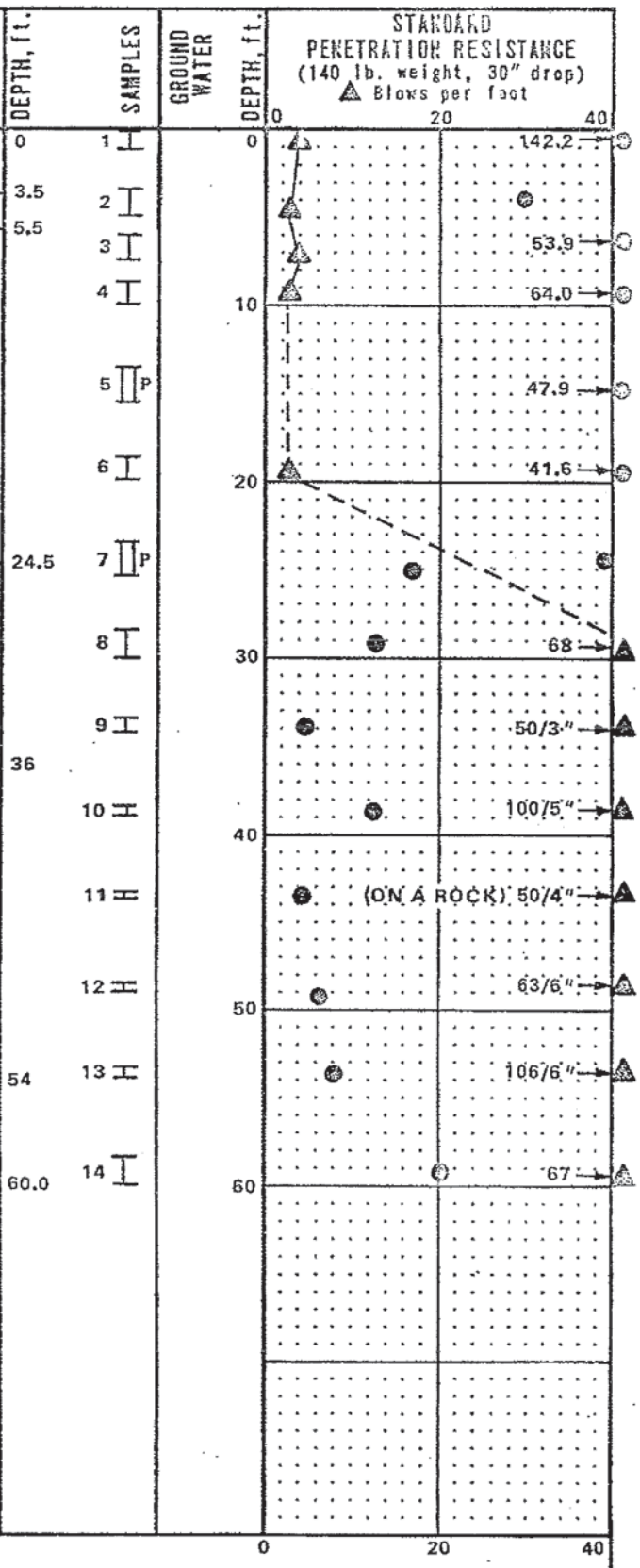
Description	Depth, ft.
Soft, dark brown, organic SILT with numerous organics, and roots and scattered sand.	0
Medium stiff, gray, clayey SILT; with numerous organics and shell fragments.	3.5
Soft, gray, silty CLAY with a trace of sand and gravel. Fine to medium, sandy clay from 7 to 8 feet.	5.5
Very dense, gray, slightly clayey, clean to silty, gravelly, fine to coarse SAND; with wood fragments and clay pockets; becoming cleaner below approximately 32 ft.	24.5
Very dense, gray, slightly silty, fine to coarse, sandy GRAVEL with a trace of clay to about 40 ft.	36
Very dense, gray, clean, slightly gravelly, fine to medium SAND.	54
BORING COMPLETED 5-6-81	60.0

POCKET PENETROMETER READINGS:

AVERAGE 0.37 TONS/SF AT 13.5-15.5 FT.

TORVANE READINGS:

0.3 TONS/SF AT 13.5-15.5 FT.



LEGEND

I 2" O.D. split spoon sample

II 3" O.D. thin-wall sample

* Sample not recovered

Atterberg limits:

- Liquid limit
- Natural water content
- Plastic limit

Impervious seal

Water level

Piezometer tip

P Sample pushed

USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-4

MAY 1981 W-3844-01

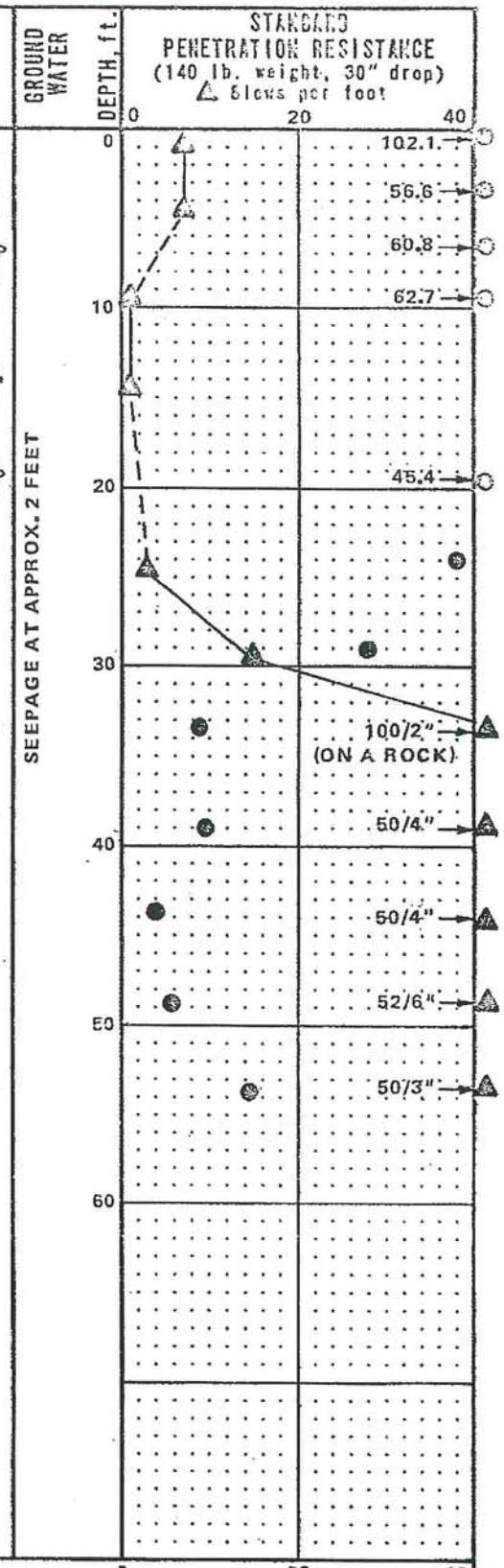
SHANNON & WILSON, INC
GEOTECHNICAL CONSULTANTS

FIG. A-4

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION Surface Elevation: APPROX. 9 FT.	DEPTH, ft.	SAMPLES
Medium stiff, dark brown, peaty organic SILT with numerous roots and fine organics.	0	1
Soft to medium stiff, gray, silty CLAY; with scattered organics, shell fragments, sand and gravel.	2.4	2
Very soft to soft, gray, silty CLAY with scattered fine organics and shell fragments, trace of fine sand to approximately 18 ft., becoming sandy from 18 ft., with lenses of clean, fine sand.	7	3 P 4 5 * 6 P 7
Very stiff, gray, fine sandy, silty CLAY with scattered sand and sand pockets.	26.5	8
Very dense, gray, slightly silty to silty, clayey, fine to coarse SAND and fine to coarse GRAVEL with slightly cleaner layers.	31.5	9 10 11 12
BORING COMPLETED 5-7-81	53.7	13

POCKET PENETROMETER READINGS:
0.25 TONS/SF AT 6.0-8.0 FT.
AVERAGE 0.37 TONS/SF AT 18.5-20.5 FT.
TORVANE READINGS:
0.2 TONS/SF AT 6.0-8.0 FT.
AVERAGE 0.33 TONS/SF AT 18.5-20.5 FT.



LEGEND

I 2" O.D. split spoon sample
II 3" O.D. thin-wall sample
* Sample not recovered
Atterberg limits:
Liquid limit
Natural water content
Plastic limit

Impervious seal
Water level
Piezometer tip
P Fixed piston
USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-5

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-5

SOIL DESCRIPTION Surface Elevation: APPROX. 7 FT.	DEPTH, ft.	SAMPLES	GROUND WATER	DEPTH, ft.	STANDARD PENETRATION RESISTANCE (140 lb. weight, 30" drop) ▲ Blows per foot (0 – 20 – 40)	
Soft, dark brown, peaty, organic SILT with numerous roots and fine organics, and scattered fine sand.	0	1	5-8-81	0		199.9
Soft, gray, silty CLAY; with roots, organics and shell fragments.	2.2					
Very soft to soft, gray, silty CLAY; with scattered organics and silty, clayey, fine sand layers.	4	2 P				255.5 66.2
		3				
	10.0	4		10		41.8
BORING COMPLETED 5-6-81						

LEGEND

- I 2" O.D. split spoon sample
- II 3" O.D. thin-wall sample
- * Sample not recovered
- Atterberg limits: Liquid limit; Natural water content; Plastic limit
- Impervious seal
- Water level
- Piezometer tip
- P Sample pushed
- USC Unified Soil Classification
- ● % Water content

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-6

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-6

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION Surface Elevation: APPROX. 6.5 FT.	DEPTH, ft.	SAMPLES	GROUND WATER	DEPTH, ft.	STANDARD PENETRATION RESISTANCE (140 lb. weight, 30" drop) △ Blows per foot 0 20 40
Medium stiff, dark brown, peaty, organic SILT, trace of fine sand.	0	1	5-8-81	0	143.0
Soft, gray, clayey SILT with scattered sand, shells and organics.	1.7				
Soft, gray, silty CLAY with a trace of fine sand.	4				
Medium dense, gray, clean to slightly silty, fine to medium SAND.	9.5	2		10	54.0
Soft, gray, fine, sandy, silty CLAY.	12.5				
BORING COMPLETED 5-7-81	15.5	3 **			45.6
VANE SHEAR READINGS: UNDISTURBED: 349 psf AT 7.5 FT. REMOLDED: 87 psf AT 7.5 FT. UNDISTURBED: 1048 psf AT 15.0 FT. REMOLDED: 160 psf AT 15.0 FT.				20	
**SAMPLE OF SOIL DISTURBED BY VANE SHEAR TEST—NO BLOW COUNT TAKEN.					

LEGEND

I 2" O.D. split spoon sample
II 3" O.D. thin-wall sample
* Sample not recovered
Atterberg limits:
Liquid limit
Natural water content
Plastic limit

Impervious seal
Water level
Piezometer tip
P Sample pushed
USC Unified Soil Classification

0 20 40
● % Water content

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-11

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

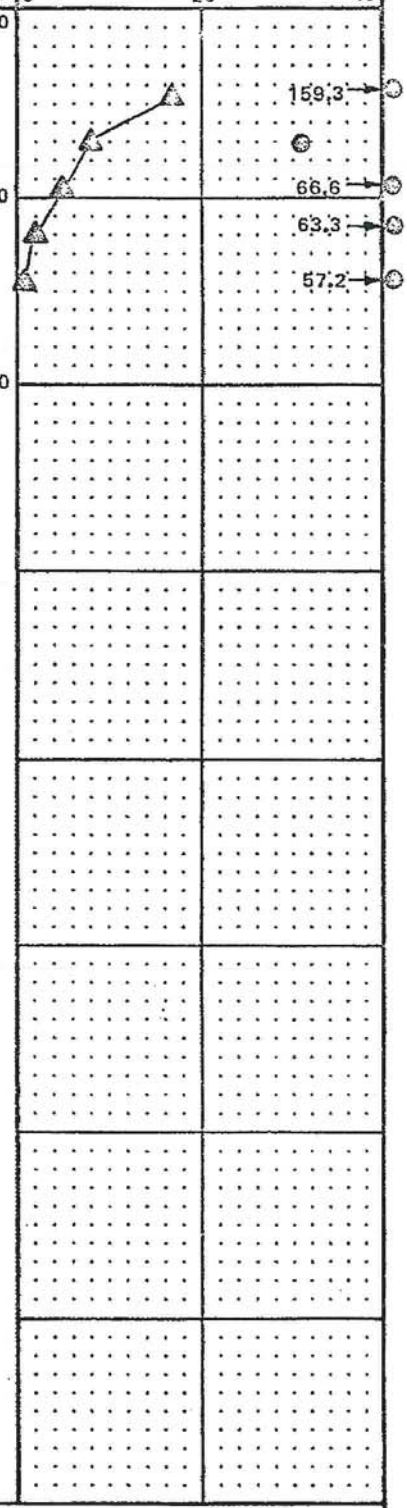
FIG. A-11

Shannon & Wilson, 1981 (Hanger 9)

SOIL DESCRIPTION Surface Elevation: APPROX. 10 FT.	DEPTH, ft.	SAMPLES
Loose to medium dense, gray, slightly silty, sandy GRAVEL (Road Fill)	0	
Very stiff, dark brown, peaty, organic SILT.	2.5	1
Stiff, becoming medium stiff, gray, fine sandy CLAY with shell fragments.	6.5 6.7	2
Very soft to soft, gray, silty CLAY with scattered organics and occasional thin, fine silty sand layers.		3 4 5
BORING COMPLETED 5-8-81	15.0	

GROUND WATER DEPTH, ft.

STANDARD PENETRATION RESISTANCE (140 lb. weight, 30" drop)
▲ Blows per foot



● % Water content

LEGEND

I 2" O.D. split spoon sample
II 3" O.D. thin-wall sample
* Sample not recovered
Atterberg limits:
Liquid limit
Natural water content
Plastic limit

Impervious seal
Water level
Piezometer tip
P Sample pushed
USC Unified Soil Classification

NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

NAVAL AIR RESERVE UNIT, WHIDBEY ISLAND
AIRCRAFT MAINTENANCE HANGAR

LOG OF BORING B-12

MAY 1981 W-3844-01

SHANNON & WILSON, INC.
GEOTECHNICAL CONSULTANTS

FIG. A-12

Drilled	Start 8/15/2013	End 8/15/2013	Total Depth (ft)	7	Logged By / Checked By	AJH / NLT	Driller	Geological Drill	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	17 GoogleEarth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Easting (X) / Northing (Y)					System Datum		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:								8/15/2013	3.3	13.75

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	4-inches asphalt concrete			
			5	50/5"*		1 %F			SP-SM	Brown fine to coarse sand with gravel and silt (medium dense, moist) (fill) (subbase)	NS	<1	%F = 13; MC = 7 *Blowcount overstated, drilling on a rock
15									CTB	Cement treated base			
			18	10		2	▼		CL	Gray clay with sand and occasional gravel (stiff, moist) (glacial marine drift)	NS	<1	MC = 21
			6	9		3					NS	<1	MC = 25
	5									Becomes sandy and wet			
			18	8		4			SC	Gray clayey sand (loose, wet)	NS	<1	MC = 28
10													

Note: See Figure A-1 for explanation of symbols.

Log of Boring GEI-1

GEOENGINEERS

Project: Aircraft Refueler Fleet Parking Repair
Project Location: Oak Harbor, Washington
Project Number: 0144-439-00

Figure A-2
Sheet 1 of 1

Redmond: Date:8/28/13 Path:\\RED\PROJECTS\0\0144439\GINT\0144439\00.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled	Start 8/15/2013	End 8/15/2013	Total Depth (ft)	11.5	Logged By / Checked By	AJH / NLT	Driller	Geological Drill	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	19 GoogleEarth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Easting (X) / Northing (Y)					System Datum		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	4-inches asphalt concrete			
			6	50/3"*		1			SP-SM	Gray fine to coarse sand with silt and gravel (dense, moist) (fill) (subbase)	SS	<1	MC = 4 *Blowcount overstated, drilling on concrete
									CTB	8-inches cement treated base			
									SP-SM	Brown fine to coarse sand with silt and occasional gravel (dense, moist) (fill)			
			6	20		2					NS	<1	MC = 5
15													
	5		7	6		3					SS	<1	MC = 14
									CL	Gray clay (soft, moist to wet) (glacial marine drift)			
10													
	10		6	3		4					NS	<1	MC = 7

Note: See Figure A-1 for explanation of symbols.

Log of Boring GEI-2

GeoEngineers

Project: Aircraft Refueler Fleet Parking Repair
Project Location: Oak Harbor, Washington
Project Number: 0144-439-00

Figure A-3
Sheet 1 of 1

Redmond: Date:8/28/13 Path:\\RED\PROJECTS\0\0144439\GINT\0144439\00.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled	Start 8/15/2013	End 8/15/2013	Total Depth (ft)	11.5	Logged By / Checked By	AJH / NLT	Driller	Geological Drill	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	18 GoogleEarth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Easting (X) / Northing (Y)					System Datum		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:								8/15/2013	4.3	13.75

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	4-inches asphalt concrete			
			6	50/6"*		1			SP-SM	Gray fine to coarse sand with gravel and silt (medium dense, moist) (fill) (subbase)	NS	<1	MC = 3 *Blowcount overstated, drilling on concrete
									CTB	4-inches cement treated base			
									OL	2-inches organics			
									CL	Gray clay with iron staining (stiff, moist) (glacial marine drift)			
15			18	16		2					NS	<1	MC = 23
							▼						
	5		18	5		3				Becomes medium stiff and moist to wet	NS	<1	MC = 29
10													
	10		18	1		4				Becomes very soft and wet	NS	<1	MC = 58

Note: See Figure A-1 for explanation of symbols.

Log of Boring GEI-3

GEOENGINEERS

Project: Aircraft Refueler Fleet Parking Repair
Project Location: Oak Harbor, Washington
Project Number: 0144-439-00

Figure A-4
Sheet 1 of 1

Redmond: Date:8/28/13 Path:\\RED\PROJECTS\0\0144439\GINT\0144439\00.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled	Start 8/15/2013	End 8/15/2013	Total Depth (ft)	11.5	Logged By / Checked By	AJH / NLT	Driller	Geological Drill	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	17 GoogleEarth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Easting (X) / Northing (Y)					System Datum		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	4-inches asphalt concrete			
			6	50/6"		1 SA			SP-SM	Gray fine to coarse sand with silt and gravel (dense, moist) (fill) (subbase)	NS	<1	SA (%F = 9; MC = 7)
									CL	Gray clay with occasional dark layers (stiff, moist) (glacial marine drift)			No CTB encountered
15			18	8		2					NS	<1	MC = 26
	5		12	4		3				Becomes soft and moist to wet with sand	NS	<1	MC = 48
10													
	10		18	2		4				Becomes very soft	NS	<1	MC = 4

Note: See Figure A-1 for explanation of symbols.

Log of Boring GEI-4

GeoEngineers

Project: Aircraft Refueler Fleet Parking Repair
Project Location: Oak Harbor, Washington
Project Number: 0144-439-00

Figure A-5
Sheet 1 of 1

Redmond: Date:8/28/13 Path:\\RED\PROJECTS\0\0144439\GINT\0144439\00.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled	Start 8/15/2013	End 8/15/2013	Total Depth (ft)	11.5	Logged By / Checked By	AJH / NLT	Driller	Geological Drill	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	20 GoogleEarth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Easting (X) / Northing (Y)					System Datum		Groundwater	Date Measured	Depth to Water (ft)	Elevation (ft)
Notes:										

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	4-inches asphalt concrete			
			6	50/6"*		1			SP-SM	Gray fine to coarse sand with gravel and silt (dense, moist) (fill) (subbase)	NS	<1	MC = 4 *Blowcount overstated, drilling on concrete
									CTB	5-inches cement treated base			
									SP-SM	Gray-brown fine to coarse sand with gravel and silt (medium dense, moist) (fill)			
			18	16		2a					NS	<1	MC = 6
						2b			CL	Gray clay with iron staining (stiff, moist) (glacial marine drift)			MC = 17
15	5		18	5		3				Becomes medium stiff with sand, moist to wet	NS	<1	MC = 24
10	10		18	1		4				Becomes very soft, wet	NS	<1	MC = 59

Note: See Figure A-1 for explanation of symbols.

Log of Boring GEI-5

GeoEngineers

Project: Aircraft Refueler Fleet Parking Repair
Project Location: Oak Harbor, Washington
Project Number: 0144-439-00

Figure A-6
Sheet 1 of 1

Redmond: Date:8/28/13 Path:\\RED\PROJECTS\0\0144439\GINT\0144439\00.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

TEST DATA

BORING B-1

Lab Tests	Moisture Content (%)	Dry Density (pcf)	Blow Count	Samples	Group Symbol	DESCRIPTION
					SOD	4 inches sod
					SP	Light gray fine to medium sand with fine gravel (medium dense, moist) (fill)
MD	52	66	6	■	ML/PT	Mottled brown and gray silt, dark brown peat and grayish brown fine to medium sand (medium stiff/loose, moist)
					CL	Gray silty clay with a trace of fine sand (very soft, wet)
MD	40	80	1	■		
			1	■		Grades to gray silty clay
			1	■		
			1	■		
					CL	Gray silty clay with occasional coarse sand and fine gravel (medium stiff, wet)
MD	32	91	8	■		
					SP	Gray fine to medium sand (dense, wet) (glacially overridden)
MD	16	119	74/10"	■	SP	Gray medium to coarse sand with fine gravel (dense, wet) (glacially overridden)
					SM	Gray silty fine to coarse sand with fine gravel (dense, wet) (glacially overridden)
MD	17	119	50/5.5"	■	ML	Gray sandy silt (hard, wet) (glacially overridden)

DEPTH IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

Note: See Figure A-2 for explanation of symbols

:JBT:KME:CMS 3/21/94

0144-166-R05

Geo Engineers

LOG OF BORING

FIGURE A-3 a

TEST DATA

BORING B-1
(Continued)

DESCRIPTION

Lab Tests	Moisture Content (%)	Dry Density (pcf)	Blow Count	Samples	Group Symbol	DEPTH IN FEET	DESCRIPTION
					SM	40	Gray silty fine to medium sand with coarse sand and fine gravel (very dense, wet) (glacially overridden)
			72	■		45	
MD	10	133	50/5"	■		50	
			50/2"	☒		55	Boring completed at 54.0 feet on 02/24/94 Ground water encountered at 7.0 feet during drilling
						60	
						65	
						70	
						75	
						80	

Note: See Figure A-2 for explanation of symbols

:JBT:KME:CMS 3/21/94

0144-166-R05

Geo Engineers

LOG OF BORING

FIGURE A-3b

TEST DATA

BORING B-2

Lab Tests	Moisture Content (%)	Dry Density (pcf)	Blow Count	Samples	Group Symbol	DESCRIPTION
					SOD	4 inches sod
					SP	Light grayish brown fine to medium sand with fine gravel (medium dense, moist) (fill)
MD	45	70	16	■	PT	Dark brown peat with gray silt and occasional fine sand and gravel (stiff, moist)
					ML	Light gray silt (very soft, wet)
					ML/PT	Gray silt and dark brown peat with shell fragments (very soft, wet)
MD	45	76	1	■	CL	Gray silty clay with occasional shell fragments (very soft, wet)
			1	■		Grades to gray silty clay with occasional fine gravel
CS	55	68	1	■		Grades to gray silty clay
			1	■		
			6	■	CL	Gray silty clay with occasional fine gravel (medium stiff, wet)
					SM	Gray silty fine to medium sand with fine gravel (medium dense, wet)
MD	22	105	18	■	ML	Gray fine to medium sandy silt with occasional fine gravel (stiff, wet) (glacially overridden)
			50/5.5"	■		Grades to hard

DEPTH IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

Note: See Figure A-2 for explanation of symbols

:JBT:KME:CMS 3/21/94

0144-166-R05

Geo Engineers

LOG OF BORING

FIGURE A-4 a

TEST DATA

BORING B-2
(Continued)

Lab Tests	Moisture Content (%)	Dry Density (pcf)	Blow Count	Samples	Group Symbol	DESCRIPTION
					SM	Gray silty fine to medium sand with fine gravel and occasional coarse sand (very dense, wet) (glacially overridden)
MD	8	139	85/11.5"	■		

Boring completed at 44.0 feet on 02/25/94
Ground water encountered at 4.0 feet during drilling
Piezometer installed at 44.0 feet on 02/25/94
Water level observed in piezometer at 0.85 feet on 02/25/94

DEPTH IN FEET: 40, 45, 50, 55, 60, 65, 70, 75, 80

Note: See Figure A-2 for explanation of symbols

:JBT:KME:CMS 3/21/94

0144-186-R05

Geo Engineers

LOG OF BORING

FIGURE A-4b

TEST DATA

BORING B-3

Lab Tests	Moisture Content (%)	Dry Density (pcf)	Blow Count	Samples	Group Symbol	DESCRIPTION
					ASPHALT	3 inches asphalt concrete
					SP-SM	Light brown fine to coarse sand with fine to coarse gravel and silt (dense, moist) (fill)
					GP-GM	Gray sandy gravel with silt (very dense, moist) (fill)
MD	7	138	58	■		

Boring completed at 5.0 feet on 02/25/94
No ground water encountered during drilling

DEPTH IN FEET: 0, 5, 10, 15, 20, 25, 30, 35, 40

Note: See Figure A-2 for explanation of symbols

:JBT:KME:CMS 3/21/94

0144-166-R05

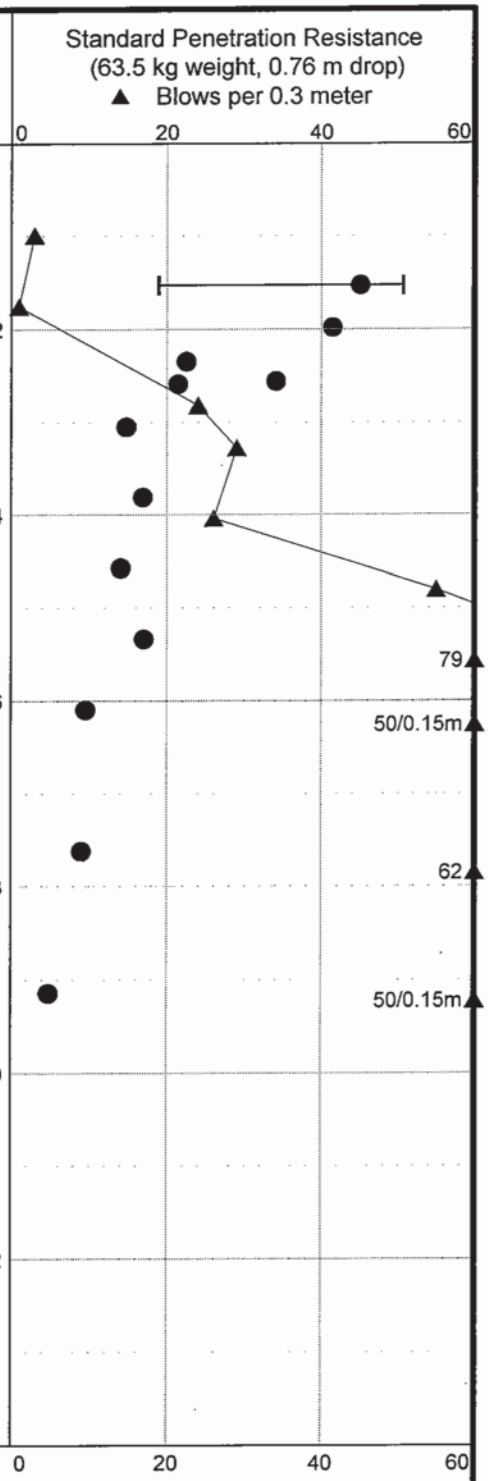
Geo Engineers

LOG OF BORING

FIGURE A-5

SOIL DESCRIPTION Surface Elevation: Approx. 4.8 m (NAVD29)	Depth, M	Symbol	PID, ppm	Samples	Ground Water	Depth, M
Medium stiff, brown, silty CLAY to dark brown, slightly fine sandy, slightly clayey, organic SILT; moist; numerous organics; (Hp/Hf) CH/OH.	0.91			1 *		
Interbedded, very soft, gray and light green-gray, silty CLAY, trace of sand, to loose to medium dense, silty, fine to medium SAND; moist; numerous plant stems and organic fragments; (Qvrm) CH/CL/SM.	2.56		0	2		
				3	During Drilling	
			0	4		
			0	5		
Medium dense to very dense, gray, trace of silt to silty SAND, trace of fine gravel to locally gravelly; wet; (Qvro) SP/SP-SM.			0	6		
			0	7		
				8		
Very dense, gray, gravelly, silty SAND to silty, gravelly SAND; moist to wet; locally trace of clay; (Qvri) SM.	5.76			9		
				10		
Very dense, gray, slightly silty, sandy GRAVEL; wet; (Qvro) GW-GM.	8.23					
	9.30			11		
BOTTOM OF BORING COMPLETED 5/24/2004						

Note: Corrosion samples were taken at 1.5 and 9.1 meters; analytical samples were taken at 2.6 and 3.8 meters.



LEGEND

- * Sample Not Recovered
- Standard Penetration Test
- Thin Wall Sample
- Ground Water Level ATD

NOTES

1. The boring was performed using hollow stem auger drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

Naval Air Station Whidbey Island
Consolidated Fuel Facility Project
Oak Harbor, Washington

LOG OF BORING B-3

June 2004 | 21-1-20111-001

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-4

MASTER LOG2 21-20111.GPJ SHAN WIL.GDT 6/18/04 Log: CMJ Rev: CMJ Typ: LKD

SOIL DESCRIPTION

Surface Elevation: Approx. 5.9 m (NAVD29)

Depth, M	Symbol	PID, ppm	Samples	Ground Water
0.61		0	1	During Drilling
1.52		0	2	
3.63		0	3	
5.33		0	4, 5	
7.62			6, 7, 8	
9.60			9, 10	

Loose, brown, slightly fine sandy, clayey, organic SILT; moist; scattered organics; (Hp/Hf) OH/OL.

Dense, brown, slightly silty, sandy GRAVEL; moist; (Ha) GP-GM.

Soft to very soft, silty CLAY grading to interbedded, sandy, silty CLAY and loose, silty, fine to medium SAND; moist; scattered sand partings, scattered organics; (Qvrm) CH/SM.

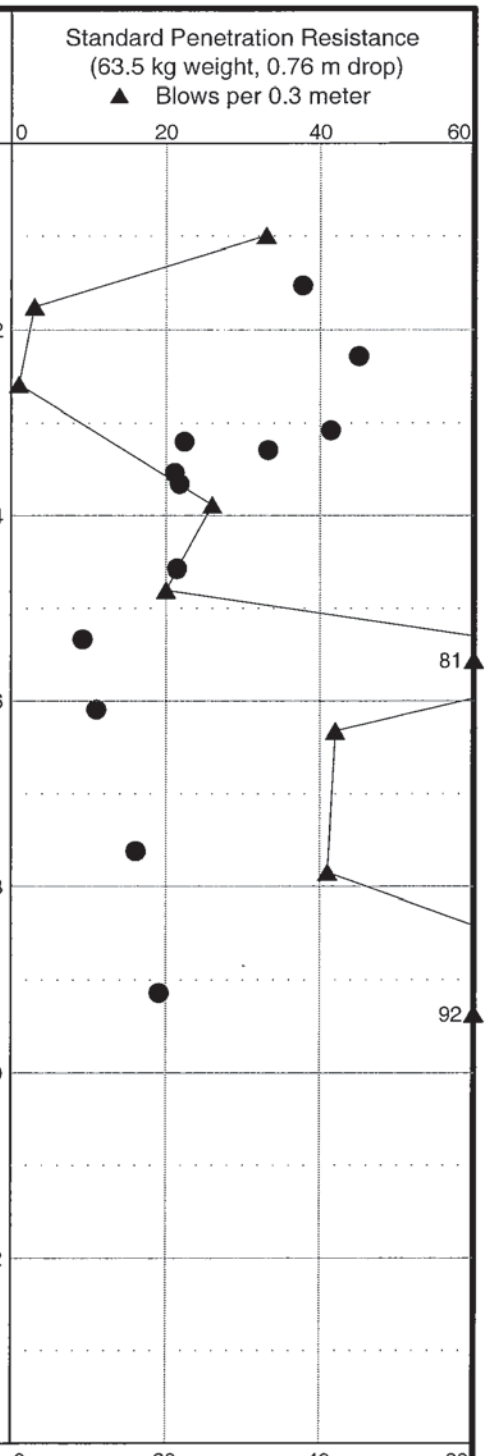
Medium dense, gray and brown, slightly silty to silty, fine to medium SAND; wet; scattered iron-oxide stains, micaceous, clayey toward bottom; (Qvro) SP-SM/SM.

Very dense to dense, gray-brown, silty, gravelly SAND; moist to wet; locally clayey; (Qvro/Qvri) SM.

Dense to very dense, gray, slightly silty, slightly gravelly SAND to slightly silty, fine to medium SAND; wet; (Qvro) SP-SM/SM.

BOTTOM OF BORING
COMPLETED 5/24/2004

Notes:
1. Water was added inside the auger at 9.1 meters.
2. Corrosion samples were taken at 1.5 and 7.6/9.1 meters (composite sample); analytical samples were taken at 0.8 and 3.6 meters.



LEGEND

- * Sample Not Recovered
- Standard Penetration Test
- Thin Wall Sample
- Ground Water Level ATD
- ● % Water Content
- Plastic Limit ├─●─┤ Liquid Limit
- Natural Water Content

NOTES

1. The boring was performed using hollow stem auger drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

Naval Air Station Whidbey Island
Consolidated Fuel Facility Project
Oak Harbor, Washington

LOG OF BORING B-4

June 2004 | 21-1-20111-001

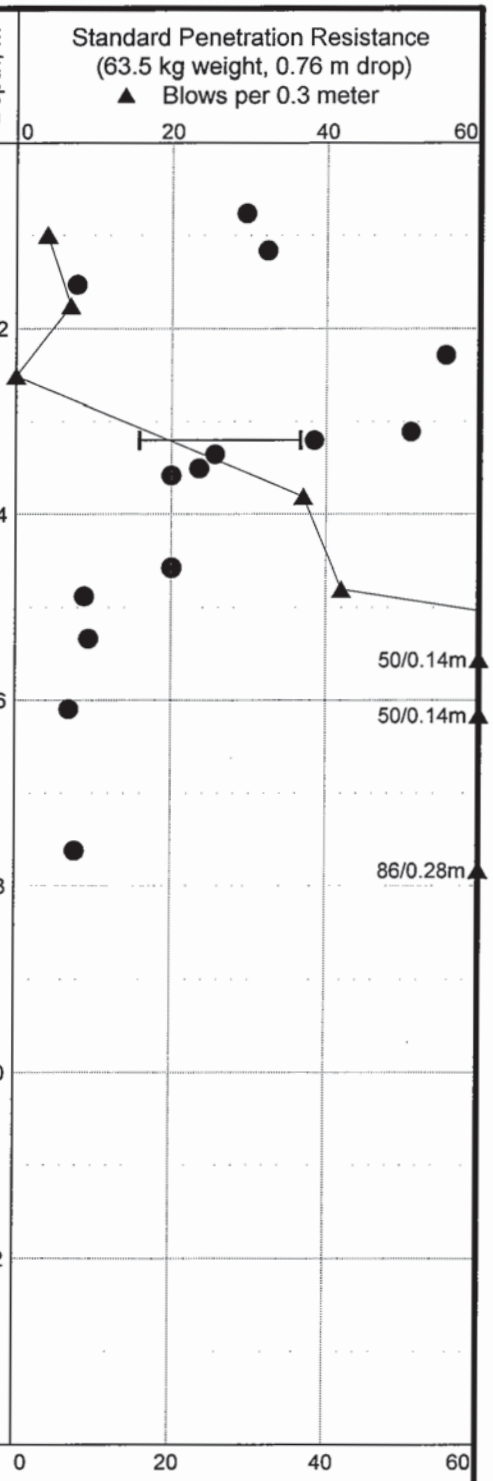
SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. A-5

MASTER_LOG2 21-20111.GPJ SHAN_WIL.GDT 6/21/04 Log: CMJ Rev: CMJ Typ: LKD

SOIL DESCRIPTION Surface Elevation: Approx. 4.8 m (NAVD29)	Depth, M	Symbol	PID, ppm	Samples	Ground Water
Very loose, dark brown, slightly sandy, organic, clayey SILT; moist; numerous organics; scattered soil clasts; (Hp/Hf) OH/OL.	1.16		0	1	
Interbedded, medium stiff to very soft, gray to light green-gray, trace to slightly fine sandy, silty CLAY and loose, silty, clayey SAND and silty, fine SAND; moist; scattered organics; (Qvrm) CH/CL/SC/SM.	3.51		0 0	2 3 4	During Drilling
Dense, brown grading to gray, silty, fine SAND, trace of gravel; wet; scattered slightly clayey seams at bottom; (Qvro) SM.	4.88		0	5 6	
Very dense, gray, gravelly, silty SAND to silty, gravelly SAND; moist to wet; locally trace of clay; (Qvri) SM.	8.05			7 8 9	
BOTTOM OF BORING COMPLETED 5/25/2004					

Note: Corrosion samples were taken at 2.3 and 7.6 meters; analytical samples were taken at 0.8 and 3.6 meters.



LEGEND

* Sample Not Recovered
Standard Penetration Test
Thin Wall Sample
Ground Water Level ATD

NOTES

1. The boring was performed using hollow stem auger drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

Naval Air Station Whidbey Island
Consolidated Fuel Facility Project
Oak Harbor, Washington

LOG OF BORING B-5

June 2004 | 21-1-20111-001

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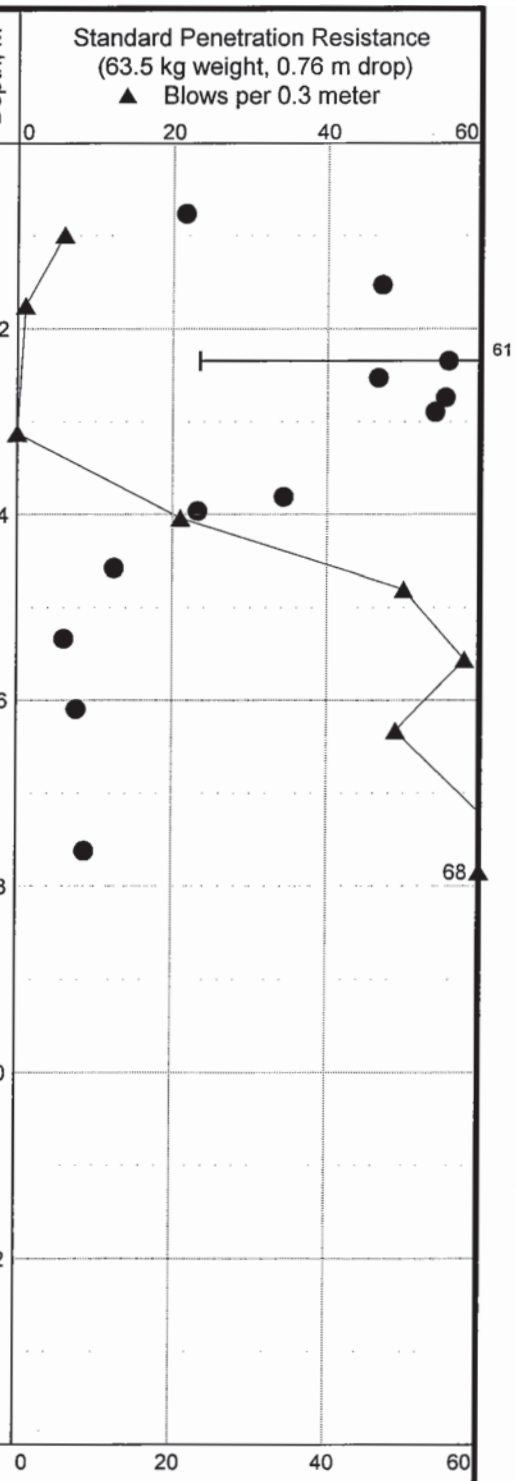
FIG. A-6

MASTER LOG2 21-20111.GPJ SHAN WIL.GDT 6/18/04 Log: CMJ Rev: CMJ Typ: LKD

SOIL DESCRIPTION Surface Elevation: Approx. 4.5 m (NAVD29)	Depth, M	Symbol	PID, ppm	Samples	Ground Water
Loose, brown, organic, silty, fine to medium SAND; moist; numerous organics; (Hp/Hf) SM.	0.30		0	1	
Medium stiff, mottled light gray and orange-brown, slightly sandy to sandy, silty CLAY, trace of gravel; moist; (Qvrm) CH.	1.52		0	2	
Very soft to soft, gray to gray-brown, silty CLAY; moist; interbedded with sandy, silty clay and silty, fine to medium sand; (Qvrm) CH/CL.			0	3 4	During Drilling
Medium dense, gray, slightly silty to silty, fine to medium SAND; wet; scattered clayey seams; (Qvro) SP-SM/SM.	3.96		0	5	
Very dense, gray, silty, gravelly SAND, trace of clay; moist; (Qvro) SM.	5.00		0	6 7	
Dense to very dense, gray, slightly silty to silty, sandy GRAVEL; wet; (Qvro) GP-GM/GM.	6.10			8	
Very dense, gray, gravelly, silty SAND; wet to moist; (Qvri) SM.	7.62 8.08			9	

BOTTOM OF BORING
COMPLETED 5/25/2004

Note: Corrosion samples were taken at 1.5 and 7.6 meters; analytical samples were taken at 0.8 and 4.6 meters.



LEGEND

* Sample Not Recovered
Standard Penetration Test
Thin Wall Sample
Ground Water Level ATD

NOTES

1. The boring was performed using hollow stem auger drilling methods.
2. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
3. The discussion in the text of this report is necessary for a proper understanding of the nature of the subsurface materials.
4. Groundwater level, if indicated above, is for the date specified and may vary.
5. Refer to KEY for explanation of symbols, codes and definitions.
6. USCS designation is based on visual-manual classification and selected lab testing.

Naval Air Station Whidbey Island
Consolidated Fuel Facility Project
Oak Harbor, Washington

LOG OF BORING B-6

June 2004 | 21-1-20111-001

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FIG. A-7

MASTER_LOG2 21-20111.GPJ SHAN_WIL.GDT 6/18/04 Log: CMJ Rev: CMJ Typ: LKD

Drilled	Start 7/16/2013	End 7/16/2013	Total Depth (ft)	55.5	Logged By / Checked By	AJH / SDS	Driller	Geologic Drill	Drilling Method	Hollw-stem Auger
Surface Elevation (ft) / Vertical Datum	14 / Google Earth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Latitude / Longitude					System Datum	Geographic	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0								AC	3½ inches asphalt concrete			
									SP-SM	Brown fine to coarse sand with silt and gravel (medium dense, moist) (gravel base) (fill)			
									SP-SM	Brown fine to coarse sand with silt and occasional gravel (dense, moist to wet) (fill)			
			18	38		1 %F					NS	<1	%F = 8; MC = 13
10													
	5		18	17		2 %F				Becomes wet	NS	<1	%F = 7; MC = 15
									ML	Gray silt with sand and trace shells (very soft, wet) (glaciomarine drift)			
5													
	10		18	1		3					NS	<1	MC = 47
0									CH	Gray fat clay (very soft, wet)			
	15		18	1		4 AL					NS	<1	AL (LL = 57; PI = 32); MC = 59
-5													
	20		18	3		5a					NS	<1	MC = 19
						36			CL	Gray clay (soft, wet)			
-10													
	25		18	37*		6			CL	Gray clay (very stiff, wet)	NS	<1	*Blowcount overstated MC = 40
-15													
	30			20		7					NS	<1	MC = 20
-20													
	35												

Note: See Figure A-1 for explanation of symbols.

Log of Boring B-1

GEOENGINEERS

Project: US Navy P-251, P-8A Hangar and Training Facilities

Project Location: Oak Harbor, Washington

Project Number: 0144-432-00

Figure A-2

Sheet 1 of 2

Redmond: Date:7/25/13 Path:\\RED\PROJECTS\0\0144432\GINT\0144432\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35			4		8a %F / 8b AL			SM	Gray silty clayey fine sand (loose, wet)	NS	<1	%F = 28; MC = 19 AL (LL = 46; PI = 22); MC = 35
									CL	Gray clay (soft, wet)			
-25													
	40		18	7		9			CL	Gray silty clay (stiff, wet)			
-30									CL	Gray clay with sand and gravel (very stiff to hard, wet) (glacially consolidated deposits)			
	45		6	50/6"		10					NS	<1	MC = 31
									SM	Gray silty fine to medium sand with gravel (very dense, wet)			
-35													
	50		18	50/6"		11 SA					NS	<1	SA (%F = 46); MC = 14
-40													
	55		6	100/6"		12					NS	<1	

Note: See Figure A-1 for explanation of symbols.

Log of Boring B-1 (continued)

GeoEngineers

Project: US Navy P-251, P-8A Hangar and Training Facilities
Project Location: Oak Harbor, Washington
Project Number: 0144-432-00

Figure A-2
Sheet 2 of 2

Redmond: Date:7/25/13 Path:\\RED\PROJECTS\0\0144432\GINT\0144432\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Drilled	Start 7/16/2013	End 7/16/2013	Total Depth (ft)	56.5	Logged By / Checked By	AJH / SDS	Driller	Geologic Drill	Drilling Method	Hollw-stem Auger
Surface Elevation (ft) / Vertical Datum	14 / Google Earth				Hammer Data	Rope & Cathead 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer		
Latitude / Longitude					System Datum	Geographic	Groundwater: Date Measured	Depth to Water (ft)	Elevation (ft)	
Notes:										

Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
0							AC	4 inches asphalt concrete			
							SP-SM	Brown fine to coarse sand with silt and gravel (gravel base) (fill)			
							SP-SM	Brown fine sand with silt (medium dense, moist to wet) (fill)			
		18	28		1 %F				SS	<1	%F = 6; MC = 13
5		18	3		2 %F		SP	Brown fine sand (loose, wet)	NS	<1	%F = 3; MC = 19
								With trace shells in sampler shoe			
							CL	Gray clay (very soft, wet) (glaciomarine drift)			
10		18	1		3				NS	<1	MC = 62
							CH	Gray fat clay (very soft, wet)			
15		18	1		4 AL				NS	<1	AL (LL = 56; PI = 32); MC = 60
20		18	1		5				NS	<1	MC = 29
25		18	1		6				NS	<1	MC = 50
30		18	1		7				NS	<1	MC = 42
							CL	Gray clay with sand (stiff, wet)			
35											

Note: See Figure A-1 for explanation of symbols.

Log of Boring B-2

GEOENGINEERS

Project: US Navy P-251, P-8A Hangar and Training Facilities

Project Location: Oak Harbor, Washington

Project Number: 0144-432-00

Figure A-3

Sheet 1 of 2

Redmond: Date:7/25/13 Path:\\RED\PROJECTS\0\0144432\GINT\0144432\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35			10		8					NS	<1	MC =32
-25													
	40		18	60		9			CL	Gray clay with sand and occasional gravel (very stiff to hard, wet) (glacially consolidated deposits)	NS	<1	MC = 28
-30									SM	Gray silty fine to coarse sand with gravel (very dense, wet)			
	45			70		10 / SA					NS	<1	SA (%F = 32); MC = 10
-35													
	50		18	89		11							MC = 14
-40													
	55		18	64		12							MC = 16

Note: See Figure A-1 for explanation of symbols.

Log of Boring B-2 (continued)

GeoEngineers

Project: US Navy P-251, P-8A Hangar and Training Facilities
Project Location: Oak Harbor, Washington
Project Number: 0144-432-00

Figure A-3
Sheet 2 of 2

Redmond: Date:7/25/13 Path:\\RED\PROJECTS\0\0144432\GINT\0144432\00.GPJ DBTemplate\LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

APPENDIX D
Pavement Study

Pavement Design Report

P-252 P-8A Hangar and Aircraft Apron Expansion
Pavement Testing and Design
Naval Air Station Whidbey Island, Washington

January 22, 2015

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1-22-2015

EXPIRES: 10-12-2016

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APPENDICES

INTRODUCTION

This report covers pavement design recommendations for construction of a parking apron expansion to support P-8A Poseidon aircraft at Naval Air Station (NAS) Whidbey Island, Washington. The report documents our site investigation, field testing, pavement design analysis and recommendations for design and construction of the apron expansion.

Project Description

The location of the proposed P-8A Apron Expansion project at NAS Whidbey Island is shown in Figure 1. As shown, the apron expansion consists of an area of approximate dimensions 300 ft by 880 ft immediately adjacent to the northeast edge of the existing aircraft parking apron.

The existing portland cement concrete (PCC) aircraft parking apron, PA1-A28A and PA1-A26A, has approximate dimensions of 750 ft by 1,050 ft and was constructed circa 1978.[1] As shown in Figure 1, the present pavement testing and design effort was concentrated on the northeast edge of the existing apron. Figure 2 provides a detailed view of the northeast edge of the existing aircraft parking apron upon which nondestructive deflection testing and pavement coring was conducted.

Review of Previous Pavement Evaluations

We contacted the Naval Facility Engineering Command (NAVFAC) Southwest Division responsible for conducting airfield pavement evaluations of US Naval installations in the western United States. NAVFAC personnel provided a copy of a December 2013 Airfield Pavement Load Evaluation study performed at NAS Whidbey Island.

Based on the NAVFAC report, the existing parking apron can be described as two unique sections identified as PA1-A28A and PA1-A26A. PA1-A28A is reportedly constructed in 1978 and consists of 11 inches of PCC over 12 inches aggregate base (AB) over 6 inches of cement treated base (CTB). The second section, Section PA1-A26A, was constructed in 1984 and consists of 11 inches of PCC over 7 inches CTB and 12 inches of subbase.[1] Our explorations described later in this report identify the base layer underlying PA1-A26A as asphalt concrete (AC) base, not CTB. Otherwise, the information gathered from our literature review is consistent with our field explorations.

Project Design Criteria

We understand that the P-252 P-8A Hangar and Aircraft Apron Expansion project will include the expansion of the existing PCC parking apron into the approximate area shown in Figure 1. The aircraft parking apron expansion consists of the construction of a new airfield pavement in an area that is currently occupied by small aircraft operation support buildings, vehicle parking areas, and bare land that includes a drainage ditch. We anticipate that the aircraft parking expansion project will be constructed on FILL placed over bare land. The project work scope specifies that the structural section of the new parking apron expansion must be designed to meet Navy design criteria for the P-8A Poseidon aircraft operations over the next 20 years.

Methodology

Our approach in developing design recommendations for the new P-8A aircraft parking apron was based on conducting nondestructive deflection testing (NDT) and shallow pavement cores and borings on the existing aircraft parking apron to establish a reasonable subgrade stiffness that could be used to design the new P-8A parking apron.

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[1] Southwest Division, Naval Facilities Engineering Command (2013), "Airfield Pavement Load Evaluation," Naval Air Station Whidbey Island, Washington.

Design Aircraft Mix

The new parking apron expansion is being designed to support the P-8A Poseidon aircraft which will be based at NAS Whidbey Island. A design life of 20 years was selected based upon the minimum requirements of Unified Facilities Criteria (UFC) 3-260-02, *Pavement Design for Airfields*.[2] The type of aircraft projected to operate at the naval air station and the number of annual departures anticipated for each type of aircraft was provided by GeoEngineers, Inc. and is presented in the following table. We further understand that the aircraft mix is taken from the Final Supplemental Environmental Impact Statement (SEIS) which was published in April 2014. The Navy is planning for P-8A aircraft to be permanently based at NAS Whidbey Island beginning in 2016.[3] In addition, the Navy will base a number of EA-18B Growler aircraft at the airfield. The aircraft mix and projected 20-year design passes are presented in the following table.

Table 1—P-252 P-8A Aircraft Apron Expansion Design Aircraft Mix

Aircraft	Max Operating Weight, lbs	Main Gear Wheel Load, lbs	Tire Pressure, psi	Annual Design Passes	20-yr Design Passes	Equivalent 20-yr P-8A Design Passes
EA-18G	66,000	27,099	200	9,942	198,840	1
P-8A	189,700	44,864	222	2,347	46,940	46,940
C-40A	171,000	39,398	204	697	13,940	2,199
Transient (P-8A)	189,700	44,864	222	695	13,900	13,900
					Total	63,040

The Final SEIS does not identify the type of transient aircraft that will use the parking apron. For the purpose of this airfield pavement design, we have conservatively assumed that all transient aircraft are P-8A Poseidon aircraft.

The Navy considers aircraft parking aprons as primary pavements which are designated as Type B traffic areas according UFC 3-260-02. Type B traffic areas support aircraft at maximum operating weights in a distributed (non-channelized) traffic pattern.[4]

The existing aircraft parking apron, Sections PA1-A28A and PA1-A26A, was constructed in 1978 and 1984 to support the P-3C Orion aircraft that has operated at NAS Whidbey Island for several decades. The P-3C Orion is a 1960s-era four-engine turbo-prop aircraft with a maximum operating weight of 139,760 lbs on a dual gear system. With a maximum tire pressure of 181 psi, the P-3C "footprint" is much less severe than the P-8A Poseidon. The P-8A maximum operating weight is 189,700 lbs on a dual gear system with maximum tire pressure of 222 psi. Compared to the P-3C Orion, the maximum operating weight of the P-8A is 36 percent heavier and the single wheel load of the P-8A is 35 percent heavier. The properties of both the P-3C Orion and the P-8A Poseidon are shown in the following table.

[2] Department of Defense (2001), *Pavement Design for Airfields*, Unified Facilities Criteria, 3-260-02, Washington, DC.

[3] Department of the Navy (2014), "Final Supplemental Environmental Impact Statement for the Introduction of P-8A Multi-Mission Aircraft into the US Navy Fleet," accessed by internet on 7/1/2014 at www.mmaeis.com.

[4] Department of Defense (2001), *Pavement Design for Airfields*, Unified Facilities Criteria, 3-260-02, Washington, DC.

Table 2—Comparison of P-3C and P-8A Aircraft

Aircraft	P-3C Orion[5]	P-8A Poseidon[6]	Percent Increase P-3C to P-8A
Maximum Operating Weight, lbs	139,760	189,700	36 %
Main Gear Configuration	Dual	Dual	N/A
Main Gear Wheel Load, lbs	33,193	44,864	35 %
Tire Pressure, psi	181	222	23 %

It is well established that the impact of aircraft load to a pavement system is an exponential relationship. Consequently, pavements designed to support a P-8A aircraft are likely to be considerably thicker than pavements designed to support P-3C aircraft.

Design Procedure

Pavement design analysis was accomplished using mechanistic design methods contained within the Pavement Computer Assisted Structural Engineering (PCASE) Program version 2.09.02 design software. PCASE is the preferred design solution for military pavements and conforms to UFC 3-260-02.

SITE INVESTIGATION

Core Logs

Pavement coring was conducted on May 21, 2014 using our electric core drill under the direction of our technician who classified the soil units, logged the explorations and obtained representative samples. Shallow borings explored conditions immediately below bound pavement layers. Core logs are presented in Appendix 1.

Summary of Soil Boring Logs (Completed by GeoEngineers)

GeoEngineers advanced nine borings to depths of at least 10 feet below ground surface (bgs) within the proposed footprint of the P-8A Aircraft Parking Apron Expansion project. A summary of those borings is provided in the following table:

[5] Department of Defense (2001), *Pavement Design for Airfields*, Unified Facilities Criteria, 3-260-02, Washington, DC.

[6] US Navy (2014), Aircraft and Weapons, P-8 Poseidon, accessed by internet on July 1, 2014: http://www.navair.navy.mil/index.cfm?fuseaction=home.display&key=CFD01141-CD4E-4DB8-A6B2-7E8FBFB31B86.

Table 3—Summary of Near Surface Soil Conditions (Based upon GeoEngineers Explorations[7])

Boring No.		GEI-6A-14	GEI-7A-14	GEI-8A-14	GEI-9A-14	GEI-10A-14	GEI-11A-14	GEI-12A-14	GEI-13A-14	GEI-14A-14
Depth, bgs (ft)	0-1	Topsoil	ML	ML (very stiff, moist) N=16	CL (very soft, wet) N=4	ML (soft, moist to wet)	ML (med stiff, moist) N=7	ML (med stiff, moist) N=4	SM	AC/PCC
	1-2	ML (med stiff, moist) N=6	CL (med stiff, moist) N=6			CL			SM/ML (loose/med stiff, moist) (fill) N=7	ML (soft, moist) N=3
	2-3									
	3-4				OL	ML/OL				
	4-5				CL	CL				

Based on a review of the GeoEngineers soil borings for this project, it appears that the soils that will provide subgrade support to the aircraft parking apron expansion are low plasticity silts and clays ranging from very soft to very stiff, moist to wet.

Nondestructive Deflection Testing

Non-destructive deflection testing was conducted on May 21, 2014 using our KUAB Falling Weight Deflectometer (FWD), which complies with ASTM D 4694 and is annually reference calibrated at the FHWA Western Regional FWD calibration center (current reference calibration conducted 2/6/2014). The testing was accomplished in accordance with ASTM D 4695 and was conducted along three test lines as shown in Figure 2.

The FWD loading sequence consisted of an initial unrecorded impact load of nominally 12,000 lbs-force (lbf) to seat the deflection sensors. Following the seating impact, measurements were recorded at impact loads of nominally 16,000 lbf, 24,000 lbf, and 32,000 lbf with a single impact performed at each of these loads. The actual loads developed by these impacts vary from their nominal loads depending upon the stiffness of the pavement and subgrade soil.

The FWD load is generated by a two mass/two buffer falling weight system that produces a nearly haversine-shaped load pulse waveform. The buffer and weight combination used for these tests produces a load pulse rise time of approximately 14.3 milliseconds, which is equivalent to a loading duration of 28.6 milliseconds and a haversine frequency of approximately 35 Hz. The load pulse was applied to the pavement surface through a 450 mm diameter (8.86 inch radius) 4-part segmented plate designed to apply uniform surface pressure distribution despite irregularities in the pavement surface. Pavement deflections were measured by seismometers (absolute deflection sensors) positioned, with respect to the center of the load plate, at distances of 0, 12, 18, 24, 30, 36, 48 and 60 inches. Air temperature and pavement surface temperature (the latter measured by infrared thermometer) was recorded for each test. Geodetic coordinates of the test locations were measured from GPS signals with Coast Guard radio beacon differential correction using a sub-meter capable Trimble™ GPS receiver with the antenna mounted on the FWD above the load plate.

The measurement units for the test data are distance in feet, deflections in mil units (1 mil = 0.001 inch), load in pounds, sensor distance in inches, load plate radius in inches and temperature in degrees Fahrenheit.

Interpretation and Backcalculation of Deflection Data

Non-destructive deflection test data was interpreted using a closed-form backcalculation procedure to compute a modulus of subgrade reaction (k-value) for each FWD data point on the existing parking

[7] GeoEngineers, Inc. (2014), Exploration Logs (Draft)—P-8A Hangar & Aircraft Apron Expansion, Whidbey Island, Washington, Project No. 0144-444-0.

apron, Sections PA1-A28A and PA1-A26A. The procedure used is described in Appendix B of the National Cooperative Highway Research Program Report 1-30 and forms the basis for the methods described in the American Association of State Highway and Transportation Officials (AASHTO) Pavement Design Guide Supplement.

To establish the design subgrade resilient modulus, we applied a statistical approach as described in Federal Aviation Administration Advisory Circular 150/5320-6E, Airport Pavement Design and Evaluation. Our results are presented in the following table.

Table 4—Design Subgrade Resilient Modulus

Selected Design Subgrade Resilient Modulus based on Deflection Testing on Existing Parking Apron, pci	Recommended Ranges for Subgrade Resilient Modulus, pci [8]			
	ML	CL	SM	OL
150	100-200	100-200	200-300	100-200

The selected design resilient modulus is consistent with the ranges established for the soil types found at the site of the proposed aircraft parking apron.

FINDINGS AND RECOMMENDATIONS

Existing Pavement and Soil Conditions

Four pavement cores and shallow explorations were conducted on May 21, 2014 on the existing PCC parking apron to measure pavement thickness, determine the existence of any underlying base layers and conduct field classification of the underlying soil subgrade. The location of the four cores is shown in Figure 2 by the labels C-1 through C-4. The pavement profiles showed that two distinctly different pavement sections existed consisting of the following layers to a depth of approximately 2 ft below ground surface (bgs):

Sections PA1-A28A

- 11.25 inch thick PCC surface course

Dense, 2.0” maximum size, poorly graded, gravelly SAND with silt was encountered below the PCC to a depth of approximately 28 inches bgs. Free water was not encountered.

Section PA1-A26A

- 12.0 inch thick PCC surface course
- 6.5 inch thick asphalt concrete (AC) base course

Dense, 2.0” maximum size, poorly graded, gravelly SAND with silt was encountered below the AC to a depth of approximately 28 inches bgs. Free water was not encountered.

Recommended New Pavement Section

The native soils onsite are not suitable for direct support of the new aircraft parking apron. We recommend that a minimum of 12 inches of aggregate base or crushed stone be placed and compacted to provide a firm and unyielding foundation upon which to support the new parking apron pavement. The existing PCC aircraft parking aprons are performing well and for that reason we have selected a conventional rigid pavement structure consisting of jointed plain (unreinforced) concrete pavement

[8] Federal Aviation Administration (2009), Airport Pavement Design and Evaluation, FAA AC 150/5320-6E, Washington, DC.

(JPCP) surface course over a stabilized AC base as our recommended design. The purpose of the AC base layer is to minimize loss of support at joints and improve the load transfer between panels.

- 15.0 inch PCC Surface Course
- 4.0 inch AC Base Course
- 12.0 inches Aggregate Base Course
- Geotextile Separation Layer

Of note is the excellent performance of existing PCC pavements at NAS Whidbey Island. Section PA1-A28A, constructed in 1984, includes an AC stabilized base under the PCC pavement and has performed very well. Stabilized bases under PCC pavements provide improved load transfer (with or without dowel bars) and reduce the likelihood of base softening and pumping occurring at the pavement joints. The additional cost of including an AC stabilized base under this pavement can be justified by the improvement in durability of the pavement system to support the P-8A mission well into the future. Dowel bars are recommended for load transfer. The PCASE design summary report is included in Appendix 3

Recommendations for Materials and Construction

Portland Cement Concrete

- Comply with the requirements of Unified Facility Guide Specifications (UFGS) 32.13.11 *Concrete Pavement for Airfields and Other Heavy-Duty Pavements*
- Specify 650 psi minimum flexural strength
- Specify Type I or Type II portland cement
- Conform to requirements for aggregate source testing for alkali-silica reactivity
- Conform to requirements for combined aggregate gradation including the Coarseness and Workability Factors
- Enforce limits on deleterious materials as shown in Table 5 of UFGS 32.13.11

Asphalt Concrete

- Comply with the requirements of UFGS 32 12 15.13 *Hot-Mix Asphalt Airfield Paving*
- Use 1/2” nominal maximum size aggregate
- Specify Gyratory Mix Design Level of 75 gyrations
- Use PG 64-22 performance grade asphalt binder conforming to AASHTO M320
- Target in-place density of each lift in the range 94-96% of Theoretical Maximum Density

CLOSURE

This report was prepared solely for GeoEngineers, Inc. and the United States Navy for design of this project. The opinions and recommendations contained within the report are not intended, nor should they be construed, to represent a warranty, either express or implied. Our work has been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the locale. No other warranty, expressed or implied, is made.

If during construction, unexpected subsurface conditions are encountered within the excavation, we should be notified at once so that we may review such conditions and revise our recommendations, if necessary. We request that we review the construction documents prior to bidding for conformity to our recommendations.

We would be pleased to provide additional input, as necessary, during the design process. Please feel free to contact us with any questions regarding this report.

Figure 1 – Project Location Map

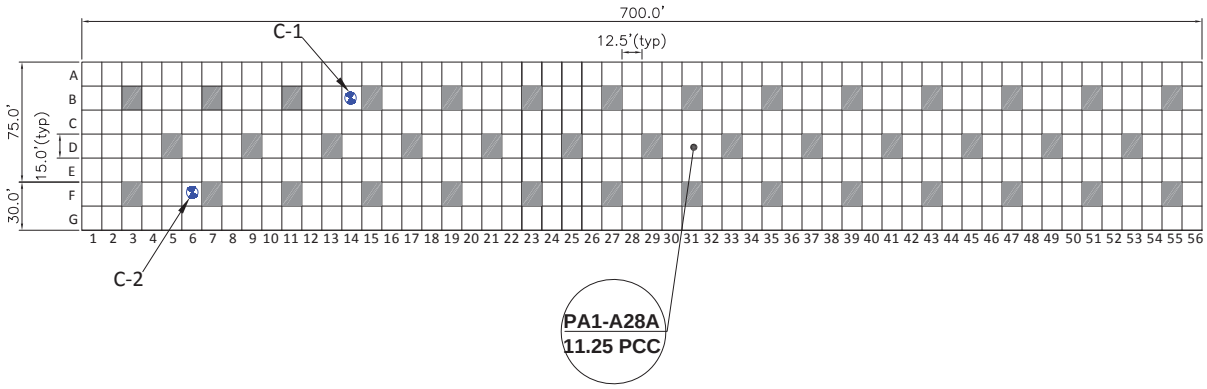
Figure 2 – Site and Exploration Location Plan

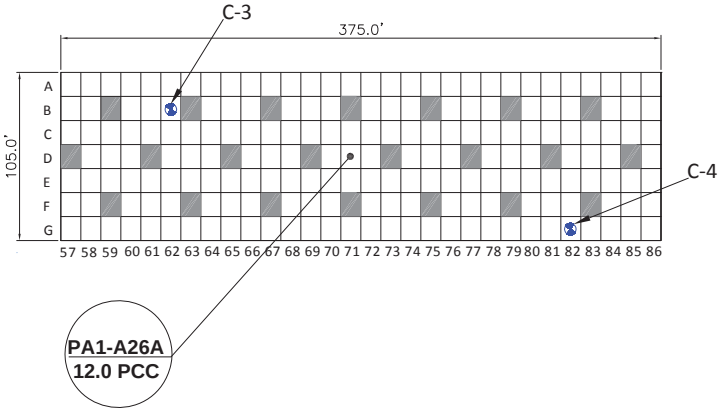
PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

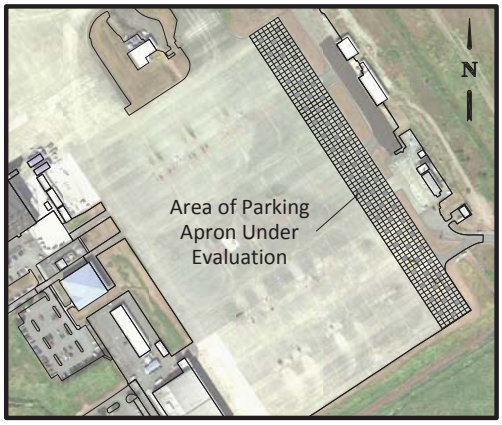
PROJECT LOCATION MAP

SHEET 1

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
14010	JID	JID	7/11/2014		







Naval Air Station
Whidbey Island

GEOENGINEERS

Core Locations

FWD Test Locations

PAVEMENT SERVICES, INC.

SITE AND EXPLORATION LOCATION PLAN

Rev.	Date	By
Description		
Rev.	Date	By
Description		

DATE	DRAWN	DESIGNED	APPROVED
07-09-14	AEH	LAH	JID

SHEET
2

APPENDIX 1 – PAVEMENT CORE LOGS

Core Number

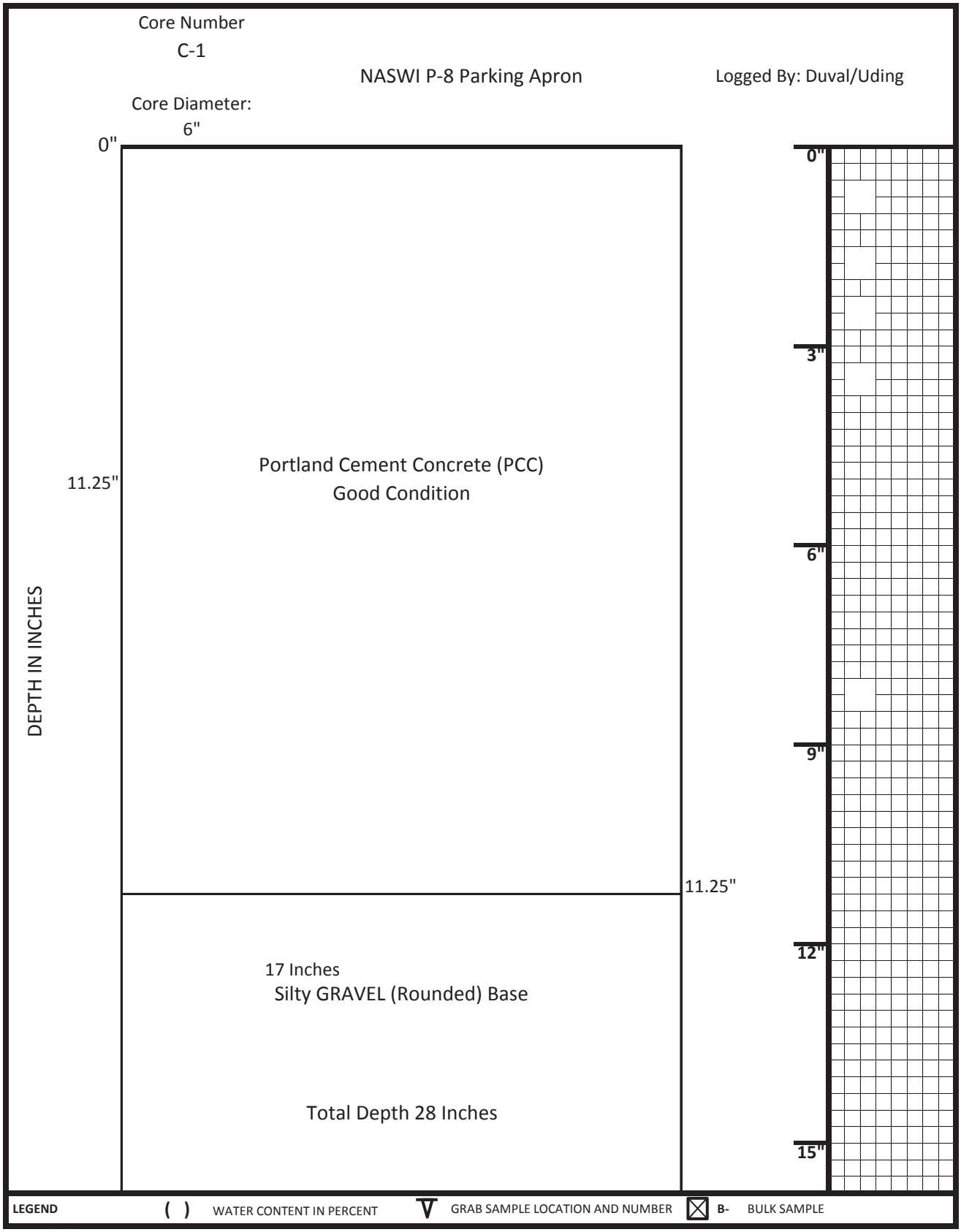
C-1

NASWI P-8 Parking Apron

Logged By: Duval/Uding

Core Diameter:

6"



LEGEND ( ) WATER CONTENT IN PERCENT ▽ GRAB SAMPLE LOCATION AND NUMBER ☒ B- BULK SAMPLE

PAVEMENT SERVICES, INC.

INNOVATIVE PAVEMENT SOLUTIONS

LOG OF CORE HOLE C-1

CENTER SLAB 14 ROW 6

WHIDBEY ISLAND, WASHINGTON

JOB NUMBER:	14010	DRAWN: AEH	APPROVED:	DATE:	6/3/2014

Core Number

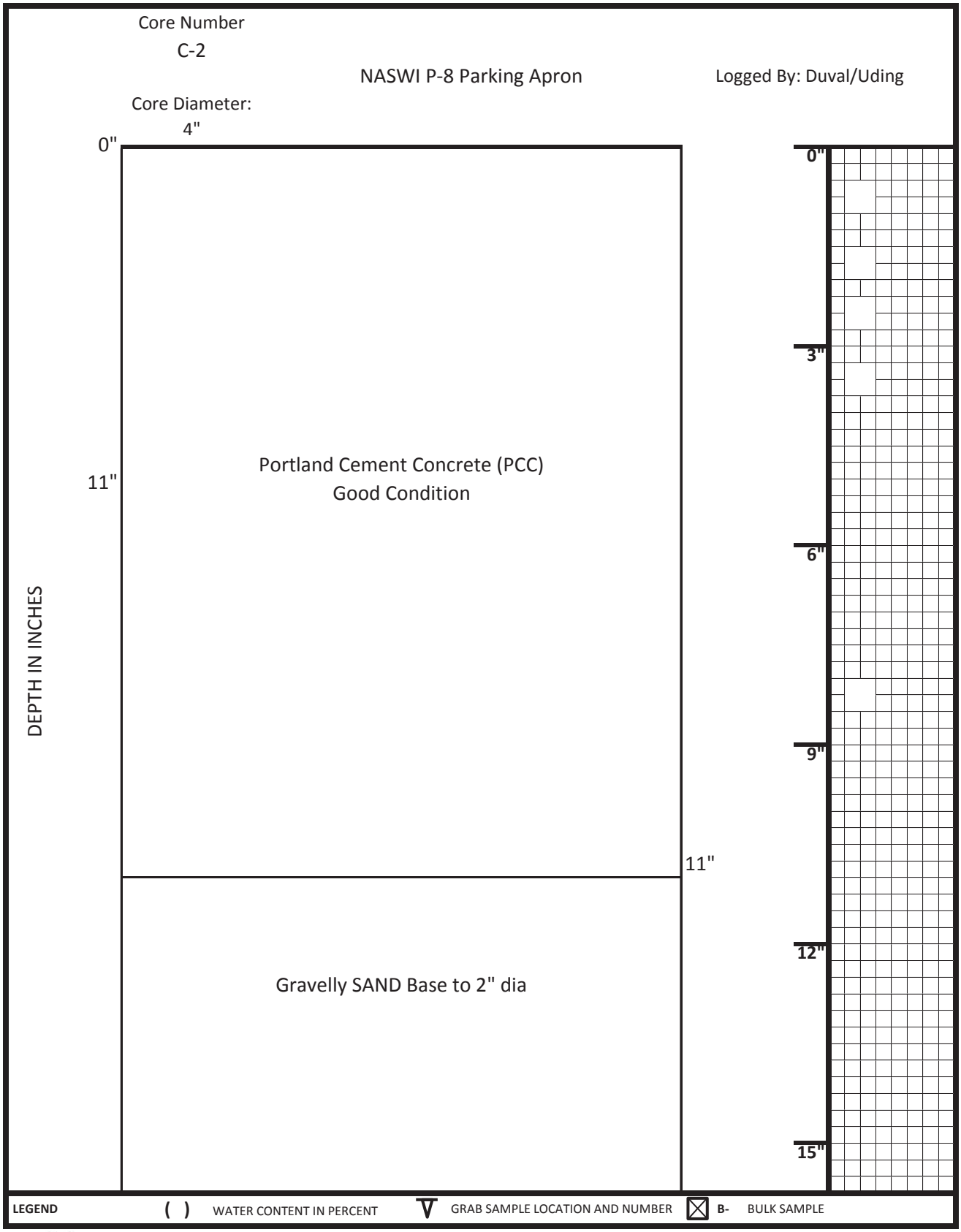
C-2

NASWI P-8 Parking Apron

Logged By: Duval/Uding

Core Diameter:

4"



LEGEND ( ) WATER CONTENT IN PERCENT ▽ GRAB SAMPLE LOCATION AND NUMBER ☒ **B-** BULK SAMPLE

PAVEMENT SERVICES, INC.

INNOVATIVE PAVEMENT SOLUTIONS

LOG OF CORE HOLE C-2

CENTER SLAB 6 ROW 6 FROM NW END

WHIDBEY ISLAND, WASHINGTON

JOB NUMBER: *14010* *DRAWN: AEH* *APPROVED:* *DATE:* *6/3/2014*

Core Number
C-3

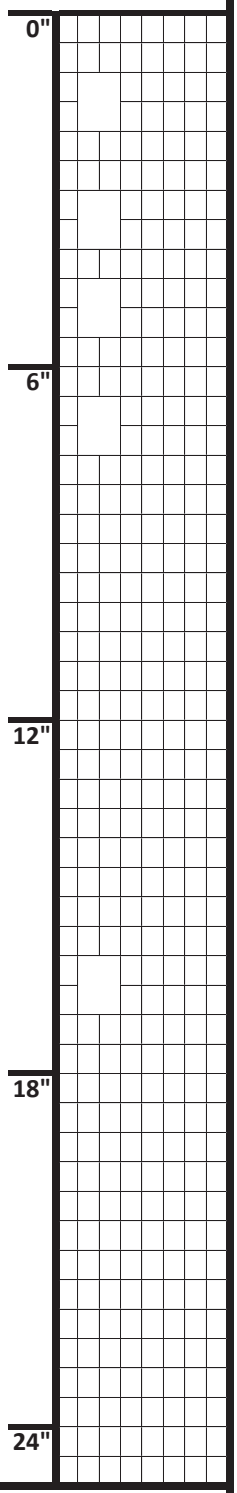
NASWI P-8 Parking Apron

Logged By: Duval/Uding

Core Diameter:
4"

DEPTH IN INCHES

0"		
11.5"	Portland Cement Concrete (PCC) Good Condition	11.5"
2"	Asphalt Concrete (AC) Good Conditon	13.5"
1.5"	Asphalt Concrete (AC) Fair Conditon	15"
2.25"	Asphalt Concrete (AC) Fair Conditon	17.25"
	Gravelly SAND Base to 2" dia (Rounded to Subrounded)	



LEGEND ( ) WATER CONTENT IN PERCENT ▽ GRAB SAMPLE LOCATION AND NUMBER ☒ **B-** BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

LOG OF CORE HOLE C-3
CENTER SLAB 6 ROW 3 FROM FEATURE CHANGE
WHIDBEY ISLAND, WASHINGTON

JOB NUMBER: 14010 *DRAWN:* AEH *APPROVED:* *DATE:* 6/3/2014

Core Number
C-4

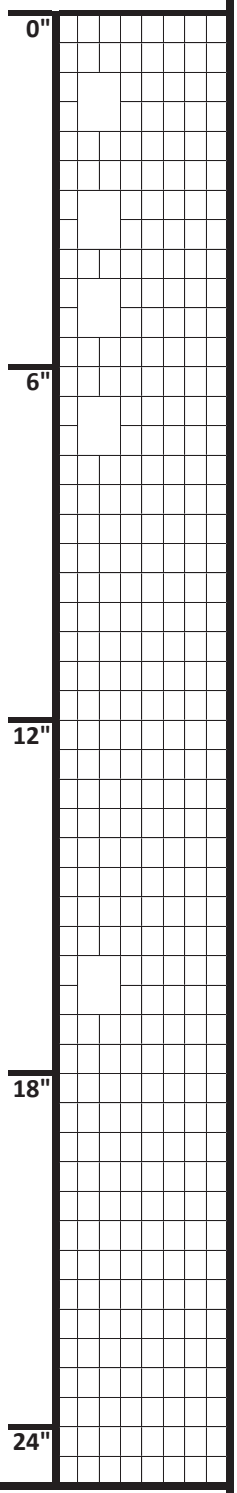
NASWI P-8 Parking Apron

Logged By: Duval/Uding

Core Diameter:
6"

DEPTH IN INCHES

0"		
12"	Portland Cement Concrete (PCC) Good Condition	12"
2"	Asphalt Concrete (AC) Good Conditon	14"
3"	Asphalt Concrete (AC) Fair Conditon	17"
2.25"	Asphalt Concrete (AC) Poor Conditon	19.25"
	Gravelly SAND Base to 2" dia., (Clean) (Rounded to Subrounded)	



LEGEND ( ) WATER CONTENT IN PERCENT ▽ GRAB SAMPLE LOCATION AND NUMBER ☒ **B-** BULK SAMPLE

PAVEMENT SERVICES, INC.
INNOVATIVE PAVEMENT SOLUTIONS

LOG OF CORE HOLE C-4
CENTER SLAB 5 ROW 7 FROM SE END
WHIDBEY ISLAND, WASHINGTON

JOB NUMBER: 14010 *DRAWN:* AEH *APPROVED:* *DATE:* 6/3/2014

APPENDIX 2 – PAVEMENT DESIGN CALCULATIONS

Table A2.1 Analysis of Slab Properties

FWD Field File:	Whidbey Island NAS P8A Prking Aprn.fwd							
Load Plate Radius, in	8.86							
Sensor Distance, in.	0	12	18	24	30	36	48	60
	Center	Behind	Behind	Behind	Behind	Behind	Behind	Behind

Slab Constants

Poisson's ratio	0.15
Default slab elastic modulus, psi	5,000,000
Average slab length, in.	180
Average slab width, in.	150
Slab dimension for finite slab size adjustment factor, in.	164
Average mid-slab bending factor	1.12

Notes:
1. Radius of relative stiffness is computed based on the deflection ratio D18/D36 per Eq. B-25 from NCHRP Project 1-30 Appendix B,
2. The subgrade k-value is estimated using the deflection D0, per Eq. 30 in the 1998 Supplement to Part II of the 1993 AASHTO desi
3. The adjustment factors for finite slab size are computed per Eq.s 34-36 of the 1998 Supplement to the 1993 AASHTO design guid
4. Slab modulus and thickness are computed based on deflection D0 by Eq. B-21 from NCHRP Project 1-30 Appendix B, 12/94.

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
1	2	18391	5.06	4.51	4.41	4.02	3.87	3.62	2.77	2.71	47.66	3.45	4.22	43.20	0.124	289	144		13.3		1.13	M
1	3	25432	6.65	6.09	5.91	5.25	4.89	4.62	3.99	3.31	41.34	3.98	5.78	38.64	0.124	364	182		12.4		1.11	M
1	4	32621	8.08	7.45	7.07	6.44	6.17	5.63	4.74	5.18	43.47	3.78	6.93	40.23	0.124	360	180		13.0		1.11	M
2	2	17973	4.51	4.13	4.15	3.80	3.64	3.25	2.74	2.72	41.53	3.96	3.91	38.79	0.124	377	188		12.6		1.09	M
2	3	25117	6.04	5.55	5.61	4.99	4.72	4.32	3.70	3.48	39.79	4.13	5.30	37.46	0.123	417	208		12.4		1.08	M
2	4	32599	7.47	6.89	6.26	5.89	5.63	5.15	4.27	4.73	48.01	3.42	6.22	43.44	0.124	344	172		14.2		1.14	M
3	2	18097	4.45	4.13	4.06	3.64	3.35	3.28	2.72	2.67	45.34	3.62	3.77	41.58	0.124	344	172		13.4		1.09	M
3	3	25290	5.88	5.43	5.31	4.70	4.32	4.21	3.70	3.60	42.94	3.83	5.06	39.84	0.124	389	195		13.2		1.09	M
3	4	32840	7.42	6.89	6.35	6.11	5.66	5.35	4.74	4.65	52.21	3.15	6.01	46.21	0.124	317	159		15.0		1.12	M
4	2	18120	4.45	4.07	4.18	3.70	3.24	3.15	2.51	2.48	37.80	4.35	3.95	35.90	0.123	438	219		12.0		1.08	M
4	3	25213	5.99	5.55	5.19	4.80	4.52	4.24	3.54	3.07	46.94	3.50	5.02	42.70	0.124	341	170		13.9		1.12	M
4	4	32449	7.42	6.95	6.53	6.02	5.46	5.22	4.49	5.11	43.95	3.74	6.34	40.58	0.124	384	192	11.25	13.5	8,584,657	1.10	M
5	2	18097	4.45	4.07	4.18	3.70	3.18	3.20	2.51	2.74	39.22	4.19	3.92	37.02	0.123	416	208		12.2		1.08	M
5	3	25176	5.93	5.49	5.43	4.76	4.61	4.09	3.52	2.96	37.76	4.35	5.27	35.86	0.123	458	229		12.1		1.09	M
5	4	32708	7.36	6.92	6.41	5.86	5.40	5.16	4.37	5.20	44.85	3.66	6.25	41.23	0.124	381	190		13.7		1.10	M
6	2	17960	4.51	4.04	3.88	3.64	3.16	3.00	2.50	2.34	40.19	4.09	3.95	37.77	0.123	394	197		12.3		1.14	M
6	3	25025	6.04	5.55	5.37	4.83	4.52	4.12	3.41	3.15	39.43	4.17	5.31	37.18	0.123	421	210		12.4		1.11	M
6	4	32629	7.53	6.92	6.38	5.89	5.77	5.38	4.21	5.46	52.39	3.14	6.09	46.32	0.124	309	155		14.9		1.13	M
7	2	17947	4.29	3.83	3.76	3.41	2.98	3.03	2.40	2.43	45.00	3.65	3.64	41.34	0.124	357	178		13.5		1.13	M
7	3	24979	5.72	5.17	4.71	4.54	4.26	3.92	3.40	2.87	49.94	3.29	4.70	44.73	0.124	329	164		14.6		1.16	M
7	4	32342	7.03	6.41	6.02	5.63	5.66	4.90	4.07	4.97	46.39	3.54	5.91	42.32	0.124	378	189		14.2		1.13	M
8	2	17878	5.66	4.84	4.62	4.15	3.87	3.58	2.88	2.71	40.41	4.07	4.95	37.94	0.123	310	155		11.5		1.20	M
8	3	24920	7.42	6.56	6.00	5.54	5.23	4.76	3.97	3.83	43.01	3.82	6.38	39.90	0.124	303	152		12.2		1.18	M
8	4	32456	9.12	8.08	7.43	6.66	6.23	5.89	4.89	5.46	42.92	3.83	7.85	39.83	0.124	322	161		12.4		1.18	M
9	2	17859	4.89	4.42	4.50	3.93	3.58	3.60	2.82	3.03	44.04	3.73	4.18	40.65	0.124	320	160		12.7		1.10	M
9	3	24957	6.37	5.85	5.55	5.08	4.83	4.61	3.96	3.83	49.60	3.31	5.25	44.51	0.124	297	149		14.0		1.12	M
9	4	32548	8.02	7.51	6.53	6.53	6.11	5.78	5.28	6.66	64.99	2.53	5.98	53.61	0.124	235	118		16.6		1.14	M
10	2	17809	4.95	4.39	4.24	3.93	3.53	3.60	2.97	2.81	53.79	3.05	3.97	47.20	0.124	250	125		14.3		1.15	M
10	3	25002	6.48	5.85	5.79	5.28	5.15	4.60	3.96	3.63	43.18	3.80	5.56	40.02	0.124	347	173		12.8		1.11	M
10	4	32365	8.02	7.25	6.71	6.24	6.28	5.68	4.91	5.27	53.16	3.09	6.46	46.81	0.124	284	142		14.7		1.15	M
11	2	17836	4.67	4.16	4.21	3.77	3.44	3.22	2.50	2.45	39.13	4.20	4.11	36.95	0.123	392	196		12.0		1.12	M
11	3	24856	6.26	5.61	5.10	4.76	4.38	4.21	3.57	3.15	48.56	3.38	5.19	43.81	0.124	309	154		13.9		1.17	M

Table A2.1 Analysis of Slab Properties

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
11	4	32474	7.80	7.01	6.65	6.02	5.80	5.26	4.59	5.02	42.66	3.85	6.72	39.64	0.124	380	190		13.0		1.14	M
12	2	17731	4.23	3.86	3.82	3.51	3.16	3.05	2.34	2.40	43.80	3.75	3.62	40.47	0.124	370	185		13.3		1.10	M
12	3	24796	5.66	5.26	5.13	4.51	4.32	3.98	3.41	3.07	40.54	4.05	4.94	38.04	0.123	428	214		12.8		1.09	M
12	4	32411	7.14	6.59	6.20	5.66	5.49	4.92	4.39	5.43	43.04	3.82	6.14	39.92	0.124	410	205		13.5		1.12	M
13	2	17800	4.23	3.83	3.67	3.41	3.10	3.05	2.45	2.43	49.69	3.31	3.48	44.57	0.124	319	159		14.3		1.13	M
13	3	24842	5.61	5.14	5.04	4.60	4.38	3.96	3.31	3.28	41.90	3.92	4.86	39.07	0.124	414	207		13.1		1.10	M
13	4	32405	6.98	6.41	5.82	5.31	5.00	4.95	4.37	4.27	54.16	3.03	5.58	47.43	0.124	320	160		15.6		1.14	M
14	2	17754	4.89	4.37	4.24	3.93	3.61	3.49	2.88	2.75	48.10	3.42	4.07	43.50	0.124	286	143		13.4		1.14	M
14	3	24783	6.26	5.82	5.61	5.12	4.89	4.67	3.86	3.66	49.98	3.29	5.15	44.76	0.124	298	149		14.1		1.10	M
14	4	32428	7.75	7.16	6.50	6.18	5.91	5.68	4.95	5.04	60.93	2.70	5.93	51.41	0.124	257	128		16.1		1.13	M
15	2	17728	5.39	4.81	4.74	4.28	3.92	3.82	3.01	3.20	45.01	3.65	4.57	41.34	0.124	280	140		12.4		1.13	M
15	3	24755	6.98	6.38	6.23	5.86	5.86	5.16	4.36	4.19	49.11	3.35	5.77	44.18	0.124	272	136		13.5		1.11	M
15	4	32428	8.46	7.84	7.37	6.79	6.68	6.30	5.48	5.65	55.27	2.97	6.72	48.11	0.124	259	129		14.8		1.11	M
16	2	17653	4.95	4.51	4.50	4.09	3.81	3.74	3.11	3.03	49.70	3.31	4.08	44.57	0.124	270	135		13.6		1.10	M
16	3	24636	6.54	6.18	5.88	5.54	5.15	5.06	4.39	4.11	56.84	2.89	5.14	49.06	0.124	247	123		15.0		1.08	M
16	4	32383	8.08	7.66	7.04	6.76	6.37	6.13	5.33	6.34	59.91	2.74	6.23	50.84	0.124	250	125	11.50	15.8	12,863,143	1.10	M
17	2	17682	4.62	4.19	4.09	3.86	3.50	3.38	2.60	2.71	48.74	3.37	3.83	43.93	0.124	296	148		13.7		1.12	M
17	3	24741	6.26	5.85	5.61	5.15	5.00	4.80	4.21	3.45	55.48	2.96	4.96	48.24	0.124	266	133		15.0		1.09	M
17	4	32456	7.75	7.25	6.89	6.47	6.62	6.14	5.91	5.80	67.42	2.44	5.70	54.86	0.124	235	118		17.1		1.10	M
18	2	17548	4.56	4.01	4.12	3.70	3.10	3.15	2.44	2.27	39.10	4.20	4.02	36.92	0.123	395	198		12.0		1.12	M
18	3	24650	6.15	5.64	5.22	4.83	4.63	4.43	3.64	3.15	53.69	3.06	4.93	47.14	0.124	279	139		14.8		1.13	M
18	4	32245	7.64	7.04	7.01	6.15	6.48	5.54	4.96	4.94	42.56	3.86	6.59	39.56	0.124	387	193		13.0		1.09	M
19	2	17571	4.56	4.19	4.15	3.80	3.41	3.35	2.47	2.37	45.23	3.63	3.86	41.50	0.124	327	163		13.1		1.09	M
19	3	24568	6.26	5.82	5.76	5.08	4.92	4.51	3.79	3.32	41.51	3.96	5.43	38.78	0.124	371	186		12.5		1.08	M
19	4	32154	7.86	7.30	6.89	6.44	6.03	5.69	4.73	4.62	48.63	3.38	6.52	43.86	0.124	318	159		14.0		1.11	M
20	2	17535	4.45	3.95	3.85	3.41	3.10	3.14	2.41	2.29	46.69	3.52	3.74	42.53	0.124	321	161		13.5		1.14	M
20	3	24705	5.99	5.46	5.19	4.63	4.61	4.13	3.46	3.03	43.38	3.79	5.14	40.17	0.124	368	184		13.1		1.12	M
20	4	32273	7.47	6.80	6.14	5.82	5.49	5.00	4.34	3.95	46.46	3.54	6.28	42.37	0.124	354	177		13.9		1.15	M
21	2	17617	4.01	3.68	3.52	3.22	2.87	2.90	2.09	2.50	48.24	3.41	3.33	43.59	0.124	344	172		14.3		1.11	M
21	3	24810	5.55	5.23	5.01	4.57	4.29	4.01	3.30	2.72	44.11	3.73	4.74	40.70	0.124	391	195		13.6		1.08	M
21	4	32326	7.03	6.62	6.23	5.92	5.49	4.99	4.33	5.59	44.20	3.72	6.00	40.76	0.124	401	201		13.7		1.09	M
22	2	17558	4.73	4.25	4.32	3.73	3.47	3.24	2.49	2.45	37.39	4.39	4.21	35.57	0.123	406	203		11.5		1.10	M
22	3	24581	6.48	5.97	5.73	5.21	4.92	4.61	3.89	2.94	44.78	3.67	5.51	41.18	0.124	326	163		13.0		1.11	M
22	4	31994	8.19	7.57	6.92	6.53	6.85	5.68	5.11	5.05	47.65	3.45	6.83	43.19	0.124	311	155		13.6		1.13	M
23	2	17525	4.51	4.07	3.91	3.38	3.21	3.15	2.34	2.42	44.96	3.65	3.83	41.31	0.124	332	166		13.1		1.13	M
23	3	24669	6.04	5.61	5.37	4.99	4.61	4.35	3.46	3.19	45.71	3.59	5.10	41.84	0.124	342	171		13.5		1.10	M
23	4	32360	7.75	7.16	6.77	6.63	6.03	5.22	4.43	6.87	39.91	4.12	6.80	37.56	0.123	417	208		12.5		1.11	M
24	2	17754	4.56	3.98	3.88	3.57	3.38	3.08	2.50	2.32	43.08	3.81	3.92	39.95	0.124	351	175		12.8		1.16	M
24	3	24787	5.99	5.40	5.07	4.63	4.49	4.01	3.43	3.12	42.65	3.85	5.16	39.63	0.124	378	189		13.0		1.14	M
24	4	32342	7.53	6.74	6.23	5.76	5.46	4.89	4.36	4.43	41.78	3.93	6.52	38.98	0.124	403	202		13.0		1.16	M
25	2	17649	4.45	3.95	3.70	3.44	3.21	2.94	2.28	2.32	43.20	3.80	3.82	40.04	0.124	356	178		12.9		1.16	M
25	3	24718	6.04	5.43	5.07	4.47	4.35	3.94	3.26	3.04	40.71	4.04	5.27	38.17	0.123	398	199		12.6		1.15	M
25	4	32222	7.53	6.80	6.23	5.63	5.32	4.85	3.94	4.47	40.89	4.02	6.56	38.31	0.123	413	207		12.8		1.16	M
26	2	17777	4.62	3.89	3.64	3.31	3.07	2.81	2.14	2.20	40.03	4.10	4.05	37.65	0.123	382	191		12.2		1.23	M

Table A2.1 Analysis of Slab Properties

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
26	3	24728	6.15	5.32	4.95	4.41	4.21	3.74	2.99	3.09	38.03	4.32	5.46	36.08	0.123	429	215		11.9		1.20	M
26	4	32268	7.64	6.62	6.00	5.44	5.29	4.53	3.80	4.88	37.96	4.33	6.78	36.03	0.123	452	226		12.1		1.21	M
27	2	17764	4.12	3.56	3.73	2.96	2.62	2.61	1.99	2.16	32.54	5.05	3.78	31.53	0.123	581	290		11.0		1.13	M
27	3	24833	5.55	4.93	4.53	4.02	3.72	3.47	2.76	2.46	39.28	4.18	4.89	37.06	0.123	457	228		12.6		1.17	M
27	4	32314	7.03	6.24	5.91	5.34	4.95	4.45	3.67	4.81	37.73	4.36	6.25	35.84	0.123	496	248		12.4		1.16	M
28	2	17659	4.40	3.74	3.73	3.19	2.67	2.71	2.12	2.39	34.95	4.70	3.98	33.58	0.123	484	242		11.3		1.18	M
28	3	24787	5.77	4.96	4.77	4.12	3.64	3.63	3.03	2.77	38.67	4.25	5.10	36.59	0.123	448	224		12.3		1.19	M
28	4	32474	7.14	6.21	5.67	5.31	5.15	4.51	3.86	4.84	43.33	3.79	6.13	40.13	0.124	407	203		13.5		1.20	M
29	2	17682	4.29	3.71	3.55	3.12	2.62	2.76	2.21	2.27	40.75	4.03	3.74	38.20	0.123	400	200		12.6		1.18	M
29	3	24833	5.77	5.05	4.98	4.28	4.29	3.81	3.04	3.35	39.16	4.20	5.08	36.97	0.123	441	220		12.5		1.15	M
29	4	32446	7.31	6.41	5.85	5.37	5.51	4.56	3.96	5.90	41.03	4.00	6.36	38.41	0.124	427	213		13.0		1.19	M
30	2	17718	4.40	3.95	3.79	3.48	3.21	3.16	2.57	2.49	50.26	3.27	3.61	44.94	0.124	301	151		14.2		1.14	M
30	3	24714	5.83	5.43	5.19	4.67	4.26	4.14	3.48	3.28	43.68	3.76	4.99	40.39	0.124	375	188		13.3		1.10	M
30	4	32388	7.36	6.80	6.50	5.92	6.06	5.30	4.41	4.97	46.65	3.52	6.18	42.50	0.124	359	180		14.0		1.11	M
31	2	17649	4.34	3.80	3.64	3.38	3.35	2.86	2.21	2.39	41.90	3.92	3.76	39.07	0.124	380	190		12.8		1.17	M
31	3	24751	5.88	5.26	4.98	4.44	4.15	3.82	3.10	3.04	39.41	4.17	5.17	37.17	0.123	428	214		12.4		1.15	M
31	4	32428	7.36	6.47	5.88	5.41	5.17	4.66	3.99	4.53	42.89	3.83	6.33	39.81	0.124	399	200		13.3		1.19	M
32	2	17672	4.18	3.71	3.61	3.25	3.04	2.93	2.39	2.34	45.98	3.57	3.53	42.04	0.124	351	176		13.7		1.14	M
32	3	24705	5.66	5.11	4.77	4.34	4.18	3.93	3.25	3.04	48.25	3.41	4.70	43.60	0.124	342	171		14.3		1.15	M
32	4	32314	7.14	6.41	5.88	5.47	5.20	4.99	4.04	4.49	53.69	3.06	5.73	47.14	0.124	315	157		15.4		1.16	M
33	2	17786	3.41	3.15	3.28	2.90	2.59	2.42	1.99	2.04	36.08	4.55	3.06	34.51	0.123	601	300		12.6		1.06	M
33	3	24787	4.62	4.28	3.88	3.73	3.53	3.34	2.67	2.62	56.92	2.89	3.63	49.10	0.124	351	176		16.9		1.13	M
33	4	32337	5.88	5.49	5.13	4.73	4.83	4.19	3.81	4.66	46.90	3.50	4.93	42.68	0.124	446	223		15.1		1.11	M
34	2	17741	4.29	3.95	4.00	3.54	3.24	3.19	2.62	2.52	43.65	3.76	3.67	40.36	0.124	367	183		13.2		1.08	M
34	3	24728	5.72	5.37	5.34	4.86	4.75	4.48	3.70	3.23	51.40	3.20	4.66	45.68	0.124	315	158		14.8		1.07	M
34	4	32113	7.31	6.86	6.50	6.21	5.74	5.65	4.84	4.57	59.43	2.76	5.65	50.57	0.124	276	138		16.2		1.09	M
35	2	17662	4.18	3.71	3.70	3.25	2.87	2.91	2.24	2.43	42.01	3.91	3.62	39.15	0.124	394	197		12.9		1.13	M
35	3	24810	5.61	5.11	4.92	4.57	4.43	4.11	3.49	3.16	50.60	3.25	4.59	45.17	0.124	328	164		14.7		1.12	M
35	4	32383	7.09	6.50	6.08	5.70	5.66	5.02	4.16	5.48	48.59	3.38	5.88	43.83	0.124	355	177		14.5		1.13	M
36	2	17539	4.62	4.13	4.06	3.73	3.38	3.30	2.81	2.84	46.19	3.56	3.89	42.18	0.124	313	157		13.3		1.13	M
36	3	24737	6.15	5.73	5.73	5.02	4.83	4.56	3.91	3.52	43.39	3.79	5.27	40.17	0.124	359	180		13.0		1.07	M
36	4	32279	7.64	7.07	6.59	6.08	5.91	5.60	4.91	4.78	53.97	3.04	6.12	47.31	0.124	292	146		15.1		1.12	M
37	2	17581	4.73	4.19	4.09	3.83	3.47	3.43	2.85	2.69	51.32	3.20	3.85	45.64	0.124	271	136		14.0		1.14	M
37	3	24741	6.32	5.76	5.55	5.15	4.83	4.57	3.91	3.60	48.16	3.41	5.26	43.54	0.124	307	154		13.7		1.12	M
37	4	32205	7.80	7.04	6.71	6.28	6.17	5.89	4.85	5.21	62.28	2.64	5.92	52.15	0.124	248	124		16.3		1.13	M
38	2	17512	4.23	3.80	3.79	3.31	3.16	2.96	2.41	2.27	41.24	3.98	3.68	38.57	0.124	395	198		12.7		1.11	M
38	3	24614	5.77	5.29	5.04	4.51	4.43	4.07	3.48	2.94	45.28	3.63	4.89	41.54	0.124	361	181		13.6		1.12	M
38	4	32228	7.36	6.68	6.32	5.82	5.23	5.01	4.25	4.12	42.92	3.83	6.33	39.83	0.124	397	198		13.3		1.13	M
39	2	17512	4.07	3.59	3.40	3.19	2.84	2.85	2.26	1.95	51.24	3.21	3.32	45.58	0.124	315	157		14.7		1.16	M
39	3	24581	5.55	5.02	4.83	4.38	4.15	3.92	3.27	2.67	45.98	3.57	4.68	42.03	0.124	368	184		13.9		1.13	M
39	4	32268	6.92	6.41	5.97	5.50	5.49	4.72	4.15	4.65	42.61	3.86	5.96	39.60	0.124	426	213		13.5		1.12	M
40	2	17466	4.89	4.31	4.21	3.80	3.35	3.39	2.55	2.48	44.89	3.66	4.15	41.26	0.124	306	153		12.8		1.15	M
40	3	24535	6.59	6.00	5.73	5.08	4.78	4.58	3.68	3.06	43.93	3.74	5.63	40.57	0.124	327	164		12.8		1.12	M
40	4	32291	8.30	7.51	7.04	6.53	6.57	5.83	5.09	4.47	49.09	3.35	6.86	44.16	0.124	299	149		13.9		1.14	M

Table A2.1 Analysis of Slab Properties

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
41	2	17411	4.95	4.34	4.38	3.73	3.47	3.38	2.51	2.10	40.00	4.11	4.34	37.62	0.123	350	175		11.8		1.14	M
41	3	24545	6.70	6.00	5.76	5.12	4.89	4.42	3.61	3.13	39.45	4.17	5.89	37.20	0.123	372	186		11.9		1.14	M
41	4	32022	8.41	7.51	7.04	6.60	6.20	5.73	4.49	5.49	46.39	3.54	7.07	42.32	0.124	313	156		13.3		1.16	M
42	2	17430	4.45	4.04	3.85	3.67	3.21	3.15	2.45	2.20	47.16	3.48	3.72	42.86	0.124	315	158		13.6		1.13	M
42	3	24467	6.21	5.76	5.49	4.96	4.83	4.45	3.61	3.16	45.80	3.59	5.24	41.90	0.124	329	164		13.3		1.10	M
42	4	32062	7.80	7.25	6.65	6.37	5.94	5.50	4.75	4.15	48.87	3.36	6.46	44.02	0.124	317	159		14.1		1.12	M
43	2	17352	4.73	4.19	3.94	3.80	3.38	3.38	2.63	2.43	56.10	2.93	3.74	48.61	0.124	244	122		14.7		1.16	M
43	3	24490	6.37	5.79	5.61	5.12	4.83	4.53	3.68	3.15	45.27	3.63	5.40	41.53	0.124	325	163		13.1		1.12	M
43	4	32085	8.08	7.33	6.71	6.34	6.20	5.34	4.64	4.94	43.39	3.79	6.93	40.18	0.124	355	177		12.9		1.15	M
44	2	17443	4.45	4.07	4.06	3.51	3.01	3.08	2.51	2.45	38.38	4.28	3.94	36.36	0.123	413	207		11.9		1.09	M
44	3	24545	6.15	5.64	5.46	4.86	4.61	4.30	3.48	2.97	42.16	3.90	5.32	39.26	0.124	370	185		12.7		1.11	M
44	4	32286	7.80	7.22	6.50	6.37	6.40	5.56	4.37	4.66	55.42	2.96	6.19	48.20	0.124	278	139		15.2		1.14	M
45	2	17581	4.18	3.80	4.15	3.38	3.18	2.98	2.14	2.40	34.15	4.81	3.80	32.91	0.123	526	263		11.3		1.05	M
45	3	24833	5.66	5.23	4.80	4.54	4.32	4.07	3.49	3.34	53.51	3.07	4.55	47.02	0.124	306	153		15.2		1.13	M
45	4	32245	7.09	6.47	6.29	5.63	5.77	5.29	3.88	6.48	51.87	3.17	5.76	45.99	0.124	328	164		15.1		1.11	M
46	2	17685	4.40	3.98	4.00	3.38	3.27	3.06	2.45	2.42	39.15	4.20	3.88	36.97	0.123	412	206		12.2		1.10	M
46	3	24636	5.93	5.40	5.07	4.54	4.38	3.94	3.40	3.29	40.71	4.04	5.17	38.17	0.123	404	202		12.6		1.13	M
46	4	32091	7.36	6.68	6.08	5.82	5.66	5.21	4.64	4.94	55.83	2.94	5.82	48.45	0.124	291	146	11.00	15.6	14,139,995	1.15	M
47	2	17567	4.12	3.77	3.70	3.38	2.98	2.95	2.30	2.27	43.62	3.77	3.53	40.34	0.124	378	189		13.3		1.10	M
47	3	24741	5.55	5.20	4.89	4.44	4.21	3.87	3.21	2.93	42.72	3.85	4.78	39.68	0.124	406	203		13.3		1.10	M
47	4	32245	7.09	6.53	6.02	5.66	5.71	4.87	4.53	5.24	45.52	3.61	6.00	41.71	0.124	382	191		14.0		1.13	M
48	2	17649	3.85	3.47	3.64	3.09	2.67	2.73	2.12	1.88	37.39	4.39	3.43	35.57	0.123	501	251		12.3		1.08	M
48	3	24860	5.22	4.87	4.41	4.09	3.92	3.52	2.92	2.64	43.76	3.76	4.47	40.44	0.124	421	210		13.8		1.13	M
48	4	32377	6.65	6.06	5.76	5.21	5.37	4.32	3.69	5.00	37.39	4.39	5.92	35.57	0.123	532	266		12.6		1.13	M
49	2	17548	3.90	3.56	3.58	3.25	2.84	2.88	2.15	1.98	44.77	3.67	3.32	41.17	0.124	386	193		13.8		1.09	M
49	3	24696	5.28	4.90	4.71	4.38	4.15	3.89	3.24	2.53	48.64	3.38	4.38	43.87	0.124	363	182		14.7		1.10	M
49	4	32194	6.65	6.24	5.82	5.50	4.97	4.92	4.10	3.58	52.88	3.11	5.36	46.63	0.124	342	171		15.6		1.10	M
50	2	17672	4.34	3.89	3.70	3.38	3.24	2.99	2.29	2.16	45.38	3.62	3.67	41.61	0.124	344	172		13.4		1.14	M
50	3	24718	5.83	5.26	4.98	4.47	4.29	3.91	3.26	2.84	41.81	3.93	5.05	39.00	0.124	397	199		12.9		1.14	M
50	4	32119	7.20	6.59	5.97	5.63	5.43	5.00	4.06	4.02	51.08	3.22	5.88	45.48	0.124	328	164		14.9		1.15	M
51	2	17672	4.40	3.98	3.88	3.54	3.33	3.20	2.58	2.46	48.41	3.39	3.65	43.71	0.124	314	157		13.9		1.12	M
51	3	24764	5.88	5.35	5.16	4.70	4.41	4.06	3.43	3.32	42.05	3.91	5.09	39.18	0.124	392	196		12.9		1.12	M
51	4	32400	7.36	6.77	6.29	5.76	5.66	5.14	4.37	4.43	46.98	3.50	6.17	42.73	0.124	356	178		14.1		1.13	M
52	2	17548	4.34	3.89	4.03	3.44	3.13	3.01	2.47	2.32	37.05	4.43	3.87	35.30	0.123	448	224		11.8		1.10	M
52	3	24814	5.83	5.29	5.01	4.57	4.43	3.91	3.32	3.19	41.16	3.99	5.07	38.51	0.124	407	204		12.8		1.13	M
52	4	32383	7.36	6.71	6.32	5.70	5.46	4.99	4.34	4.57	42.45	3.87	6.35	39.48	0.124	404	202		13.2		1.13	M
53	2	17558	4.62	4.22	4.12	3.73	3.41	3.25	2.57	2.43	42.35	3.88	3.99	39.40	0.124	350	175		12.6		1.11	M
53	3	24673	6.21	5.73	5.43	4.96	4.69	4.36	3.52	3.20	44.52	3.69	5.29	40.99	0.124	343	172		13.2		1.11	M
53	4	32314	7.80	7.19	6.77	6.34	5.97	5.65	4.55	5.11	50.43	3.26	6.39	45.06	0.124	309	154		14.4		1.12	M
54	2	17598	3.79	3.44	3.43	3.09	2.62	2.69	2.06	2.01	41.69	3.94	3.29	38.91	0.124	437	218		13.3		1.10	M
54	3	24696	5.17	4.78	4.68	4.09	3.98	3.55	2.90	2.72	38.38	4.28	4.58	36.36	0.123	504	252		12.7		1.09	M
54	4	32200	6.48	6.03	5.61	5.25	5.06	4.61	3.58	4.35	47.83	3.44	5.40	43.32	0.124	393	197		14.8		1.11	M
55	2	17672	3.90	3.53	3.46	3.12	2.93	2.66	2.19	2.27	39.63	4.15	3.43	37.33	0.123	457	228		12.8		1.12	M
55	3	24682	5.22	4.81	4.62	4.25	4.07	3.68	2.99	2.75	43.50	3.78	4.47	40.26	0.124	421	210		13.7		1.11	M

Table A2.1 Analysis of Slab Properties

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
55	4	32103	6.59	6.03	5.58	5.18	4.86	4.48	3.85	4.03	44.51	3.69	5.61	40.98	0.124	421	211		14.1		1.14	M
56	2	17466	4.23	3.86	3.79	3.44	3.21	3.01	2.53	2.56	43.14	3.81	3.63	39.99	0.124	372	186		13.1		1.11	M
56	3	24818	5.66	5.29	5.04	4.60	4.43	4.07	3.32	3.15	45.28	3.63	4.80	41.54	0.124	371	186		13.7		1.10	M
56	4	32245	7.14	6.62	6.32	5.70	5.66	5.21	4.22	4.98	48.34	3.40	5.93	43.66	0.124	353	177		14.4		1.10	M
57	2	17649	4.62	4.19	4.38	3.73	3.50	3.24	2.65	2.53	36.28	4.53	4.14	34.67	0.123	436	218		11.4		1.08	M
57	3	24686	6.10	5.67	5.16	4.96	4.80	4.30	3.72	3.38	50.17	3.28	5.01	44.88	0.124	303	152		14.2		1.13	M
57	4	32268	7.69	7.04	6.47	6.08	6.06	5.35	4.84	4.92	48.84	3.36	6.37	44.00	0.124	324	162		14.2		1.14	M
58	2	17590	4.45	4.07	3.94	3.67	3.44	3.29	2.85	2.64	50.53	3.25	3.64	45.12	0.124	294	147		14.2		1.11	M
58	3	24578	5.93	5.49	5.28	4.86	4.69	4.38	3.74	3.68	49.38	3.33	4.89	44.36	0.124	316	158		14.2		1.10	M
58	4	32068	7.36	6.83	6.41	5.99	5.71	5.46	4.75	5.17	54.48	3.02	5.88	47.63	0.124	298	149		15.3		1.11	M
59	2	17466	4.07	3.71	4.00	3.44	3.01	2.78	2.14	2.01	32.14	5.11	3.74	31.19	0.123	589	294		10.9		1.06	M
59	3	24686	5.55	5.20	4.71	4.54	4.24	3.89	3.01	2.49	48.64	3.38	4.60	43.87	0.124	345	173		14.4		1.12	M
59	4	32245	6.87	6.44	6.26	5.76	5.51	4.96	4.49	4.44	42.86	3.83	5.91	39.79	0.124	426	213		13.6		1.08	M
60	2	17453	4.62	4.01	4.09	3.51	3.01	3.09	2.21	2.07	38.02	4.32	4.10	36.07	0.123	403	202		11.7		1.14	M
60	3	24549	6.32	5.70	5.49	4.92	4.55	4.21	3.37	2.58	39.38	4.17	5.56	37.15	0.123	395	197		12.1		1.13	M
60	4	32068	8.02	7.16	6.74	6.44	6.37	5.22	4.66	5.46	40.36	4.07	7.01	37.90	0.123	393	197		12.4		1.15	M
61	2	17476	4.95	4.42	4.27	3.99	3.61	3.49	2.79	2.39	47.01	3.50	4.15	42.75	0.124	285	143		13.1		1.14	M
61	3	24595	6.65	6.18	5.76	5.34	5.12	4.76	3.93	3.25	48.74	3.37	5.51	43.93	0.124	286	143		13.6		1.11	M
61	4	32263	8.52	7.78	7.40	6.76	6.82	5.84	4.92	4.33	42.40	3.88	7.35	39.44	0.124	349	174		12.6		1.12	M
62	2	17434	3.85	3.56	3.49	3.19	3.04	2.84	2.25	2.29	46.36	3.54	3.24	42.30	0.124	372	186		14.1		1.09	M
62	3	24513	5.39	4.96	4.74	4.38	4.12	3.88	3.29	2.52	47.23	3.48	4.51	42.91	0.124	366	183		14.3		1.11	M
62	4	32131	6.76	6.24	5.91	5.70	5.69	5.11	4.13	5.01	58.03	2.83	5.27	49.76	0.124	305	153		16.4		1.11	M
63	2	17535	3.96	3.65	3.85	3.12	2.59	2.89	2.12	2.13	37.47	4.39	3.53	35.63	0.123	483	241		12.2		1.06	M
63	3	24499	5.50	5.17	4.80	4.54	4.26	4.07	3.31	2.62	53.51	3.07	4.42	47.02	0.124	311	155		15.3		1.10	M
63	4	31942	7.03	6.50	6.05	5.70	5.71	5.17	4.22	3.79	55.20	2.98	5.59	48.07	0.124	307	153		15.7		1.12	M
64	2	17283	4.40	3.95	3.88	3.57	3.30	3.13	2.47	2.29	45.14	3.64	3.73	41.44	0.124	334	167		13.2		1.12	M
64	3	24228	6.04	5.67	5.43	5.05	4.89	4.37	3.65	3.15	44.82	3.67	5.13	41.21	0.124	344	172		13.2		1.09	M
64	4	31942	7.69	7.13	6.77	6.24	5.71	5.68	4.64	4.31	51.41	3.20	6.26	45.69	0.124	303	151		14.6		1.11	M
65	2	17329	4.40	4.01	3.94	3.44	2.98	2.99	2.49	2.23	38.42	4.28	3.89	36.39	0.123	415	207		11.9		1.11	M
65	3	24326	6.04	5.55	5.25	4.86	4.80	4.27	3.43	3.09	46.28	3.55	5.08	42.25	0.124	332	166		13.5		1.12	M
65	4	32034	7.75	7.10	6.53	6.18	6.20	5.39	4.39	4.21	48.55	3.38	6.43	43.80	0.124	322	161	12.00	14.1	8,035,768	1.14	M

Table A2.1 Analysis of Slab Properties

Test No.	Drop Height	Load, lbs.	D0 mils	D12 mils	D18 mils	D24 mils	D30 mils	D36 mils	D48 mils	D60 mils	Radius Relative Stiffness, in	Slab dimension ratio	Adjusted D0, mils	Adjusted radius of relative stiffness, in	coefficient of deflection for D0	dynamic k-value, pci	static k-value, pci	Measured Slab Thickness, in.	Computed Slab Thickness, in	Computed Slab Modulus, psi	Mid-Slab Bending Ratio	Test Code
Statistical Summary of Data (all drop heights)																						
Maximum											67.42	5.11	7.85	54.86	0.1242	601	300		17.10	14,139,995	1.23	
Minimum											32.14	2.44	3.06	31.19	0.1228	235	118		10.94	8,035,768	1.05	
Average											45.54	3.67	5.03	41.53	0.1237	362	181		13.50	10,905,891	1.12	
Standard Deviation											6.01	0.47	1.07	4.14	0.0002	65	33		1.17	3,050,465	0.03	
Coeff. of Variation											142%	151%	164%	133%	101%	154%	154%		123%	136%	107%	
Design Value																	150					

Pavement Thickness Report
U.S. Army Corps of Engineers
PCASE Version 2.09.02

Design Name :	PCC/AC
Design Type :	Airfield
Pavement Type :	Rigid
Traffic Area :	Area B
Analysis Type :	K
Depth of Frost (in) :	0
Wander Width (in) :	140
% Load Transfer :	25
Effective K (pci) :	262
Reduced Sub Effective K (pci) :	0
Layers Count :	4
Joint Spacing :	15 to 20 ft
Dowel Spacing :	15.00 in
Dowel Length :	20.00 in
Dowel Diameter:	1.00 to 1.25 in

Date : 7/9/2014

Layer Information

Layer Type	Material Type	Frost Code	Flexural Strength (psi)	% Steel	Analysis	Non frost Design Thickness (in)	Reduced Subgrade Strength (in)	Limited Subgrade Penetration (in)	K Strength (pci)
PCC	N/A	NFS	650	0	Compute	15.12	0	0	0
Stabilized Base	AC Stab-GW,GP,GM,GC	NFS	0	0	Manual	4	0	0	0
Base	Unbound Crushed Stone	NFS	0	0	Manual	12	0	0	0
Natural Subgrade	Cohesive Cut	NFS	0	0	Manual	0	0	0	150

Traffic Information

NAS WHIDBEY ISLAND
Pattern Name : P8A APRON

Vehicles	Weight (lb) Traffic Area A, B	Weight (lb) Traffic Area C, D	ACN	Passes Traffic Area A, B, C	Passes Traffic Area D	Equivalent Passes
C-40A CLIPPER	171000	128250	49	13940	139	2548
FA-18F	66000	49500	25	198840	1988	2
P-8A POSEIDON	189700	142275	59	46940	469	46940
P-8A POSEIDON	189700	142275	59	13900	139	13900

APPENDIX E
Results of Analytical Testing

APPENDIX E
RESULTS OF ANALYTICAL TESTING

Soil Sampling

Chemical analytical testing was conducted on soil samples obtained from the borings (GEI-1A-14 through GEI-20A-14) by taking a composited sample obtained from depths of 2½ and 5 feet bgs. Portions of selected samples were placed in laboratory-prepared vials or jars for chemical analytical testing at OnSite Environmental, Inc. (OnSite). The remaining portion of each sample was placed in a plastic bag and used for field screening (visual, water sheen screening and headspace vapor screening). Field screening methods are described below.

Visual and headspace vapor field screening completed for the samples obtained from borings did not indicate evidence of contamination in the borings.

Each of the soil samples obtained for chemical analysis was placed in a cooler with ice for transport to OnSite's laboratory in Redmond, Washington. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory.

Each of the soil samples was submitted to OnSite for chemical analysis of the following:

- Total Resource Conservation and Recovery Act (RCRA) Metals by SW 846 EPA Method 6010C;
- Volatile Organic Compounds (VOCs) by SW 846 EPA Method 8260C;
- Semivolatile Organic Compounds (SVOCs) by SW 846 EPA Method 8270D;
- Total Petroleum Hydrocarbons-Diesel Range Organics/Gasoline Range Organics (TPH-DRO/GRO) by SW 846 EPA Method 8015D;
- Polycyclic Aromatic Hydrocarbons (PAHs) by SW 846 EPA Method 8310; and
- Polychlorinated Biphenyl Compounds (PCBs)/Pesticides by SW 846 EPA Method 8082A/8081B.

A composite sample of the drill cuttings from one to two soil disposal drums were submitted to OnSite for chemical analysis of the following;

- Petroleum Hydrocarbon screening by Method NWTPH-HCID; and
- Total RCRA Metals by SW 846 EPA Method 6010C.

Additionally, one soil sample (GEI-20A-14, S1-2) was also submitted for chemical analysis of hexavalent chromium by EPA Method 7196A.

Chemical Analytical Results

VOCs, SVOCs, petroleum hydrocarbons, PAHs and PCBs either were not detected or were detected at concentrations less than the applicable Model Toxics Control Act (MTCA) Method A or B cleanup levels (if established). Hexavalent chromium was not detected in the soil sample (GEI-20A-14 S1-2) submitted for chemical analysis of hexavalent chromium. Additional metals either were not detected or were detected at concentrations similar to natural background levels and/or less than the MTCA Method A cleanup levels.

Chemical analytical results are summarized in Table E-1 and presented in the attached laboratory reports.

Field Screening Methods

Soil samples obtained from the borings were screened in the field for evidence of contamination using: (1) visual examination; (2) water sheen screening; and (3) headspace vapor screening with a photoionization detector (PID).

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines.

Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

No Sheen (NS)	No visible sheen on water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly.
Moderate Sheen (MS)	Light to heavy sheen, may have some color/iridescence; spread is irregular to flowing; few remaining areas of no sheen on water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag, and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted into the bag, and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in parts per million (ppm) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm is used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

REFERENCES

U.S. Environmental Protection Agency (USEPA), "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

USEPA, "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," EPA-540-R-08-01. June 2008.

USEPA, "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," EPA-540-R-10-011. January 2010.

Table E-1

Chemical Analytical Results

P-259 P-8A Aircraft Apron Expansion - Design Part A
Naval Air Station Whidbey Island
Oak Harbor, Washington

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] / Sample Date	GEI-1A-14 S1-2 5/22/2014	GEI-2A-14 S1-2 5/21/2014	GEI-3A-14 S1-2 5/20/2014	GEI-4A-14 S1-2 5/19/2014	GEI-5A-14 S1-2 5/20/2014	GEI-6A-14 S1-2 5/19/2014	GEI-7A-14 S1-2 5/20/2014	GEI-8A-14 S1-2 5/19/2014	GEI-9A-14 S1-2 5/20/2014	GEI-10A-14 S1-2 5/20/2014	GEI-11A-14 S1-2 5/19/2014	GEI-12A-14 S1-2 5/19/2014	GEI-13A-14 S1-2 5/21/2014
Hydrocarbon Identification[2] (mg/kg)	Diesel Range			8.5 U	6.3 U	6.7 U	5.9 U	6.3 U	6.1 U	7.5 U	8.2 U	7.6 U	10 U	9.6 U	8.3 U	6.3 U
	Gasoline Range			36 U	32 U	33 U	29 U	30 U	31 U	30 U	33 U	35 U	40 U	36 U	33 U	35 U
	Lube Oil Range			71 U	63 U	65 U	57 U	59 U	62 U	60 U	66 U	70 U	80 U	72 U	65 U	70 U
Total Metals[3] (mg/kg)	Arsenic			14 U	13 U	13 U	11 U	12 U	**15**	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Barium	16,000		**120**	**36**	**120**	**79**	**30**	**79**	**64**	**65**	**100**	**110**	**150**	**90**	**110**
	Cadmium			0.71 U	0.63 U	0.65 U	0.57 U	0.59 U	0.62 U	0.60 U	0.66 U	0.70 U	0.80 U	0.72 U	0.65 U	0.70 U
	Chromium	2,000		**66**	**29**	**53**	**38**	**20**	**52**	**44**	**40**	**56**	**63**	**68**	**53**	**65**
	Lead			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Mercury			0.36 U	0.32 U	0.33 U	0.29 U	0.30 U	0.31 U	0.30 U	0.33 U	0.35 U	0.40 U	0.36 U	0.32 U	0.35 U
	Selenium			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Silver			1.4 U	1.3 U	1.3 U	1.1 U	1.2 U	1.2 U	1.2 U	1.3 U	1.4 U	1.6 U	1.4 U	1.3 U	1.4 U
PCBs[4] (mg/kg)	PCB-aroclor 1016			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1221			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1232			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1242			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1248			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1254			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
	PCB-aroclor 1260			0.071 U	0.063 U	0.065 U	0.057 U	0.059 U	0.062 U	0.060 U	0.066 U	0.070 U	0.080 U	0.072 U	0.065 U	0.070 U
Pesticides[5] (ug/kg)	4,4'-DDD			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	4,4'-DDE			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	4,4'-DDT			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Aldrin			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Alpha-BHC			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	alpha-Chlordane (cis)			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Beta-BHC			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Delta-BHC			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Dieldrin			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Endosulfan I			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Endosulfan II			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Endosulfan Sulfate			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Endrin			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Endrin Aldehyde			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Endrin Ketone			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	gamma-Chlordane (relic CAS #)			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Heptachlor			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Heptachlor Epoxide			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Lindane (Gamma-BHC)			7.1 U	6.3 U	6.5 U	5.7 U	5.9 U	6.2 U	6.0 U	6.6 U	7.0 U	8.0 U	7.2 U	6.5 U	7.0 U
	Methoxychlor			14 U	13 U	13 U	11 U	12 U	12 U	12 U	13 U	14 U	16 U	14 U	13 U	14 U
	Toxaphene			71 U	63 U	65 U	57 U	59 U	62 U	60 U	66 U	70 U	80 U	72 U	65 U	70 U
VOCs[6] (mg/kg)	1,1,1,2-Tetrachloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1,1-Trichloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1,2,2-Tetrachloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1,2-Trichloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1-Dichloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1-Dichloroethene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,1-Dichloropropene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2,3-Trichlorobenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2,3-Trichloropropane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2,4-Trichlorobenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] / Sample Date	GEI-1A-14 S1-2 5/22/2014	GEI-2A-14 S1-2 5/21/2014	GEI-3A-14 S1-2 5/20/2014	GEI-4A-14 S1-2 5/19/2014	GEI-5A-14 S1-2 5/20/2014	GEI-6A-14 S1-2 5/19/2014	GEI-7A-14 S1-2 5/20/2014	GEI-8A-14 S1-2 5/19/2014	GEI-9A-14 S1-2 5/20/2014	GEI-10A-14 S1-2 5/20/2014	GEI-11A-14 S1-2 5/19/2014	GEI-12A-14 S1-2 5/19/2014	GEI-13A-14 S1-2 5/21/2014
	1,2,4-Trimethylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2-Dibromo-3-Chloropropane			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	1,2-dibromoethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2-Dichloroethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,2-Dichloropropane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,3,5-Trimethylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,3-Dichloropropane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	2,2-Dichloropropane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	2-Butanone (MEK)			0.0062 U	0.0053 U	0.0044 U	**0.0060**	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	2-Chloroethyl vinyl ether			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	2-Chlorotoluene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	2-Hexanone			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	4-Chlorotoluene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Acetone			0.0062 U	0.0053 U	**0.0050**	**0.023**	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Benzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Bromobenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Bromochloromethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Bromodichloromethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Bromoform (Tribromomethane)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Bromomethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Carbon Disulfide			0.0012 U	**0.0046**	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Carbon Tetrachloride			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Chlorobenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
VOCs[6] (mg/kg)	Chloroethane			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Chloroform			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Chloromethane			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	cis-1,2-Dichloroethene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Cis-1,3-Dichloropropene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Dibromochloromethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Dibromomethane			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Dichlorodifluoromethane (CFC-12)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Ethylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Hexachlorobutadiene			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Isopropylbenzene (Cumene)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Methyl Iodide (Iodomethane)			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Methyl t-butyl ether			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Methylene Chloride			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Naphthalene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	n-Butylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	n-Propylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	p-Isopropyltoluene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Sec-Butylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Styrene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Tert-Butylbenzene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Tetrachloroethene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Toluene			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U
	Trans-1,2-Dichloroethene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Trans-1,3-Dichloropropene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Trichloroethene			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Trichlorofluoromethane (CFC-11)			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Vinyl Acetate			0.0062 U	0.0053 U	0.0044 U	0.0052 U	0.0052 U	0.0048 U	0.0046 U	0.0069 U	0.0070 U	0.0080 U	0.0065 U	0.0085 U	0.0069 U

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] Sample Date	GEI-1A-14 S1-2 5/22/2014	GEI-2A-14 S1-2 5/21/2014	GEI-3A-14 S1-2 5/20/2014	GEI-4A-14 S1-2 5/19/2014	GEI-5A-14 S1-2 5/20/2014	GEI-6A-14 S1-2 5/19/2014	GEI-7A-14 S1-2 5/20/2014	GEI-8A-14 S1-2 5/19/2014	GEI-9A-14 S1-2 5/20/2014	GEI-10A-14 S1-2 5/20/2014	GEI-11A-14 S1-2 5/19/2014	GEI-12A-14 S1-2 5/19/2014	GEI-13A-14 S1-2 5/21/2014
VOCs[6] (mg/kg)	Vinyl Chloride			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
	Xylene, m-,p-			0.0025 U	0.0021 U	0.0017 U	0.0021 U	0.0021 U	0.0019 U	0.0018 U	0.0028 U	0.0028 U	0.0032 U	0.0026 U	0.0034 U	0.0027 U
	Xylene, o-			0.0012 U	0.0011 U	0.00087 U	0.0010 U	0.0010 U	0.00097 U	0.00092 U	0.0014 U	0.0014 U	0.0016 U	0.0013 U	0.0017 U	0.0014 U
SVOCs[7] (mg/kg)	1,2,4-Trichlorobenzene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	1,2-Dichlorobenzene (o-Dichlorobenzene)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	1,2-Diphenylhydrazine			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	1,3-Dichlorobenzene (m-Dichlorobenzene)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	1,3-Dinitrobenzene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	1,4-Dichlorobenzene (p-Dichlorobenzene)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,3,4,6-Tetrachlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,3,5,6-Tetrachlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,3-DICHLOROANILINE			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,4,5-Trichlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,4,6-Trichlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,4-Dichlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,4-Dimethylphenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,4-Dinitrophenol			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	2,4-Dinitrotoluene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2,6-Dinitrotoluene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2-Chloronaphthalene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2-Chlorophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2-Nitroaniline			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	2-Nitrophenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	3 & 4 Methylphenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	3,3'-Dichlorobenzidine			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	3-Nitroaniline			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	4,6-Dinitro-2-Methylphenol			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	4-Bromophenyl phenyl ether			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	4-Chloro-3-Methylphenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	4-Chloroaniline			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	4-Chlorophenyl-Phenylether			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	4-Nitroaniline			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	4-Nitrophenol (p-Nitrophenol)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Aniline			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	Benzene, 1,4-Dinitro-			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Benzidine			0.48 U	0.42 U	0.43 U	0.38 U	0.39 U	0.41 U	0.40 U	0.44 U	0.47 U	0.53 U	0.48 U	0.43 U	0.46 U
	Benzyl Alcohol			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	Bis(2-Chloroethoxy)Methane			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Bis(2-Chloroethyl)Ether			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Bis(2-chloroisopropyl) ether			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Bis(2-Ethylhexyl) Phthalate			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Butyl benzyl phthalate			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Carbazole			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Dibenzofuran			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Dibutyl phthalate			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Diethyl phthalate			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	Dimethyl phthalate			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Di-N-Octyl Phthalate			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Hexachlorobenzene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Hexachlorobutadiene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Hexachlorocyclopentadiene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Hexachloroethane			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Hexanedioic Acid, Bis(2-Ethylhexyl) Ester			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Isophorone			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Nitrobenzene			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1]	GEI-1A-14 S1-2	GEI-2A-14 S1-2	GEI-3A-14 S1-2	GEI-4A-14 S1-2	GEI-5A-14 S1-2	GEI-6A-14 S1-2	GEI-7A-14 S1-2	GEI-8A-14 S1-2	GEI-9A-14 S1-2	GEI-10A-14 S1-2	GEI-11A-14 S1-2	GEI-12A-14 S1-2	GEI-13A-14 S1-2
			Sample Date	5/22/2014	5/21/2014	5/20/2014	5/19/2014	5/20/2014	5/19/2014	5/20/2014	5/19/2014	5/20/2014	5/20/2014	5/19/2014	5/19/2014	5/21/2014
SVOCs[7] (mg/kg)	N-Nitrosodimethylamine			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	N-Nitrosodi-n-propylamine			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	N-Nitrosodiphenylamine (as diphenylamine)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	o-Cresol (2-methylphenol)			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	O-DINITROBENZENE			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Pentachlorophenol			0.24 U	0.21 U	0.22 U	0.19 U	0.20 U	0.21 U	0.20 U	0.22 U	0.23 U	0.27 U	0.24 U	0.22 U	0.23 U
	Phenol			0.048 U	0.042 U	0.043 U	0.038 U	0.039 U	0.041 U	0.040 U	0.044 U	0.047 U	0.053 U	0.048 U	0.043 U	0.046 U
	Pyridine			0.48 U	0.42 U	0.43 U	0.38 U	0.39 U	0.41 U	0.40 U	0.44 U	0.47 U	0.53 U	0.48 U	0.43 U	0.46 U
PAHs[8] (mg/kg)	1-Methylnaphthalene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	2-Methylnaphthalene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Acenaphthene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Acenaphthylene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Anthracene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Benzo(a)anthracene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Benzo(a)pyrene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Benzo(b)fluoranthene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Benzo(ghi)perylene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Benzo(j,k)fluoranthene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Chrysene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Dibenzo(a,h)anthracene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Fluoranthene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Fluorene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Indeno(1,2,3-cd)pyrene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Naphthalene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Phenanthrene			0.0095 U	0.0084 U	0.0087 U	0.0076 U	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U
	Pyrene			0.0095 U	0.0084 U	0.0087 U	**0.0089**	0.0079 U	0.0082 U	0.0080 U	0.0088 U	0.0094 U	0.011 U	0.0096 U	0.0087 U	0.0093 U

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] / Sample Date	GEI-14A-14 S1-2 5/21/2014	GEI-15A-14 S1-2 5/21/2014	GEI-16A-14 S1-2 5/20/2014	GEI-17A-14 S1-2 5/21/2014	GEI-18A-14 S1-2 5/21/2014	GEI-19A-14 S1-2 5/22/2014	GEI-20A-14 S1-2 5/22/2014	DRUM 3870-3871 5/20/2014	DRUM 3872-3873 5/21/2014	DRUM 3874-3875 5/21/2014	DRUM 3878-3879 5/22/2014	DRUM 3880-3881 5/22/2014	DRUM 3884-3885 5/21/2014
Hydrocarbon Identification[2] (mg/kg)	Diesel Range			8.7 U	11 U	17 U	7.9 U	7.2 U	11 U	9.1 U	66 U	81 U	65 U	62 U	63 U	160 U
	Gasoline Range			36 U	**97**	**84**	32 U	33 U	35 U	35 U	27 U	32 U	26 U	25 U	25 U	63 U
	Lube Oil Range			71 U	**610**	**510**	64 U	67 U	**150**	70 U	130 U	160 U	130 U	120 U	130 U	320 U
Total Metals[3] (mg/kg)	Arsenic			14 U	18 U	**30**	13 U	13 U	14 U	14 U	13 U	16 U	13 U	12 U	13 U	16 U
	Barium	16,000		**110**	**91**	**160**	**100**	**90**	**82**	**140**	**44**	**130**	**33**	**51**	**44**	**46**
	Cadmium			0.71 U	0.92 U	1.1 U	0.64 U	0.66 U	0.71 U	0.70 U	0.66 U	0.81 U	0.65 U	0.62 U	0.63 U	1.6 U
	Chromium	2,000		**54**	**33**	**55**	**55**	**51**	**47**	**78** [9]	**24**	**74**	**22**	**45**	**35**	**21**
	Lead			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	6.6 U	8.1 U	6.5 U	6.2 U	6.3 U	16 U
	Mercury			0.36 U	0.46 U	0.57 U	0.32 U	0.33 U	0.35 U	0.35 U	0.33 U	0.41 U	0.32 U	0.31 U	0.31 U	0.79 U
	Selenium			14 U	18 U	23 U	13 U	13 U	14 U	14 U	13 U	16 U	13 U	12 U	13 U	31 U
	Silver			1.4 U	1.8 U	2.3 U	1.3 U	1.3 U	1.4 U	1.4 U	1.3 U	1.6 U	1.3 U	1.2 U	1.3 U	3.1 U
PCBs[4] (mg/kg)	PCB-aroclor 1016			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1221			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1232			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1242			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1248			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1254			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
	PCB-aroclor 1260			0.071 U	0.092 U	0.11 U	0.064 U	0.066 U	0.071 U	0.070 U	NA	NA	NA	NA	NA	NA
Pesticides[5] (ug/kg)	4,4'-DDD			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	4,4'-DDE			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	4,4'-DDT			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Aldrin			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Alpha-BHC			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	alpha-Chlordane (cis)			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Beta-BHC			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Delta-BHC			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Dieldrin			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Endosulfan I			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Endosulfan II			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Endosulfan Sulfate			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Endrin			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Endrin Aldehyde			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Endrin Ketone			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	gamma-Chlordane (relic CAS #)			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Heptachlor			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Heptachlor Epoxide			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Lindane (Gamma-BHC)			7.1 U	9.2 U	11 U	6.4 U	6.6 U	7.1 U	7.0 U	NA	NA	NA	NA	NA	NA
	Methoxychlor			14 U	18 U	23 U	13 U	13 U	14 U	14 U	NA	NA	NA	NA	NA	NA
	Toxaphene			71 U	92 U	110 U	64 U	66 U	71 U	70 U	NA	NA	NA	NA	NA	NA
VOCs[6] (mg/kg)	1,1,1,2-Tetrachloroethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1,1-Trichloroethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1,2,2-Tetrachloroethane			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1,2-Trichloroethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1-Dichloroethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1-Dichloroethene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,1-Dichloropropene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2,3-Trichlorobenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2,3-Trichloropropane			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2,4-Trichlorobenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1]	GEI-14A-14 S1-2	GEI-15A-14 S1-2	GEI-16A-14 S1-2	GEI-17A-14 S1-2	GEI-18A-14 S1-2	GEI-19A-14 S1-2	GEI-20A-14 S1-2	DRUM 3870-3871	DRUM 3872-3873	DRUM 3874-3875	DRUM 3878-3879	DRUM 3880-3881	DRUM 3884-3885
			Sample Date	5/21/2014	5/21/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/21/2014
VOCs[6] (mg/kg)	1,2,4-Trimethylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2-Dibromo-3-Chloropropane			0.0080 U	0.0087 U	0.82 U	0.0087 U	0.0061 U	0.45 U	0.0082 U	NA	NA	NA	NA	NA	NA
	1,2-dibromoethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene (o-Dichlorobenzene)			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2-Dichloroethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,2-Dichloropropane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,3,5-Trimethylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene (m-Dichlorobenzene)			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,3-Dichloropropane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene (p-Dichlorobenzene)			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	2,2-Dichloropropane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	2-Butanone (MEK)			0.0080 U	0.0087 U	**0.59**	0.0087 U	0.0061 U	**0.58 J**	0.0082 U	NA	NA	NA	NA	NA	NA
	2-Chloroethyl vinyl ether			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	2-Chlorotoluene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	2-Hexanone			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	4-Chlorotoluene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	Acetone			0.0080 U	**0.072**	**0.99**	0.0087 U	0.0061 U	**2.1 J**	**0.030**	NA	NA	NA	NA	NA	NA
	Benzene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Bromobenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Bromochloromethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Bromodichloromethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Bromoform (Tribromomethane)			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Bromomethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Carbon Disulfide			0.0016 U	0.0017 U	**0.017**	0.0017 U	0.0012 U	**0.0052**	0.0016 U	NA	NA	NA	NA	NA	NA
	Carbon Tetrachloride			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Chlorobenzene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Chloroethane			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	Chloroform			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Chloromethane			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	cis-1,2-Dichloroethene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Cis-1,3-Dichloropropene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Dibromochloromethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Dibromomethane			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Dichlorodifluoromethane (CFC-12)			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Ethylbenzene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	**0.028**	0.0016 U	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene			0.0080 U	0.0087 U	0.82 U	0.0087 U	0.0061 U	0.45 U	0.0082 U	NA	NA	NA	NA	NA	NA
	Isopropylbenzene (Cumene)			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Methyl Iodide (Iodomethane)			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	Methyl t-butyl ether			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Methylene Chloride			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA
	Naphthalene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	n-Butylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	n-Propylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	p-Isopropyltoluene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Sec-Butylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Styrene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Tert-Butylbenzene			0.0016 U	0.0017 U	0.16 U	0.0017 U	0.0012 U	0.089 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Tetrachloroethene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Toluene			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	**0.052**	0.0082 U	NA	NA	NA	NA	NA	NA
	Trans-1,2-Dichloroethene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Trans-1,3-Dichloropropene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Trichloroethene			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Trichlorofluoromethane (CFC-11)			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Vinyl Acetate			0.0080 U	0.0087 U	0.019 U	0.0087 U	0.0061 U	0.0098 U	0.0082 U	NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1]	GEI-14A-14 S1-2	GEI-15A-14 S1-2	GEI-16A-14 S1-2	GEI-17A-14 S1-2	GEI-18A-14 S1-2	GEI-19A-14 S1-2	GEI-20A-14 S1-2	DRUM 3870-3871	DRUM 3872-3873	DRUM 3874-3875	DRUM 3878-3879	DRUM 3880-3881	DRUM 3884-3885
			Sample Date	5/21/2014	5/21/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/21/2014
VOCs[6] (mg/kg)	Vinyl Chloride			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
	Xylene, m-,p-			0.0032 U	0.0035 U	0.0075 U	0.0035 U	0.0024 U	0.0039 U	0.0033 U	NA	NA	NA	NA	NA	NA
	Xylene, o-			0.0016 U	0.0017 U	0.0037 U	0.0017 U	0.0012 U	0.0020 U	0.0016 U	NA	NA	NA	NA	NA	NA
SVOCs[7] (mg/kg)	1,2,4-Trichlorobenzene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene (o-Dichlorobenzene)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	1,2-Diphenylhydrazine			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene (m-Dichlorobenzene)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	1,3-Dinitrobenzene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene (p-Dichlorobenzene)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,3,4,6-Tetrachlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,3,5,6-Tetrachlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,3-DICHLOROANILINE			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,4,5-Trichlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,4,6-Trichlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,4-Dichlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,4-Dimethylphenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,4-Dinitrophenol			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2-Chlorophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2-Nitroaniline			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	2-Nitrophenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	3 & 4 Methylphenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	3-Nitroaniline			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	4,6-Dinitro-2-Methylphenol			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	4-Bromophenyl phenyl ether			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	4-Chloro-3-Methylphenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	4-Chloroaniline			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	4-Chlorophenyl-Phenylether			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	4-Nitroaniline			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	4-Nitrophenol (p-Nitrophenol)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Aniline			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	Benzene, 1,4-Dinitro-			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Benzidine			0.47 U	0.61 U	0.76 U	0.43 U	0.44 U	0.47 U	0.47 U	NA	NA	NA	NA	NA	NA
	Benzyl Alcohol			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	Bis(2-Chloroethoxy)Methane			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Bis(2-Chloroethyl)Ether			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl) ether			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Bis(2-Ethylhexyl) Phthalate			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Butyl benzyl phthalate			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Carbazole			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Dibenzofuran			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Dibutyl phthalate			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Diethyl phthalate			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	Dimethyl phthalate			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Di-N-Octyl Phthalate			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Hexachlorocyclopentadiene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Hexachloroethane			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Hexanedioic Acid, Bis(2-Ethylhexyl) Ester			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Isophorone			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Nitrobenzene			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1]	GEI-14A-14 S1-2	GEI-15A-14 S1-2	GEI-16A-14 S1-2	GEI-17A-14 S1-2	GEI-18A-14 S1-2	GEI-19A-14 S1-2	GEI-20A-14 S1-2	DRUM 3870-3871	DRUM 3872-3873	DRUM 3874-3875	DRUM 3878-3879	DRUM 3880-3881	DRUM 3884-3885
			Sample Date	5/21/2014	5/21/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/20/2014	5/21/2014	5/21/2014	5/22/2014	5/22/2014	5/21/2014
SVOCs[7] (mg/kg)	N-Nitrosodimethylamine			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	N-Nitrosodi-n-propylamine			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	N-Nitrosodiphenylamine (as diphenylamine)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	o-Cresol (2-methylphenol)			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	O-DINITROBENZENE			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Pentachlorophenol			0.24 U	0.31 U	0.38 U	0.21 U	0.22 U	0.24 U	0.23 U	NA	NA	NA	NA	NA	NA
	Phenol			0.047 U	0.061 U	0.076 U	0.043 U	0.044 U	0.047 U	0.047 U	NA	NA	NA	NA	NA	NA
	Pyridine			0.47 U	0.61 U	0.76 U	0.43 U	0.44 U	0.47 U	0.47 U	NA	NA	NA	NA	NA	NA
PAHs[8] (mg/kg)	1-Methylnaphthalene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Acenaphthene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Acenaphthylene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Anthracene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Benzo(ghi)perylene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Benzo(j,k)fluoranthene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Chrysene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Fluoranthene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Fluorene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Naphthalene			0.0095 U	0.012 U	0.015 U	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Phenanthrene			0.0095 U	0.012 U	**0.015**	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA
	Pyrene			0.0095 U	0.012 U	**0.022**	0.0086 U	0.0089 U	0.0094 U	0.0093 U	NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] Sample Date	DRUM 3886-3887 5/20/2014	DRUM 5023-5024 5/21/2014	DRUM 5025-5026 5/21/2014	DRUM 5027-5028 5/21/2014	DRUM 5029-5030 5/21/2014	DRUM 5031 5/21/2014
Hydrocarbon Identification[2] (mg/kg)	Diesel Range			68 U	69 U	79 U	71 U	72 U	77 U
	Gasoline Range			27 U	28 U	32 U	28 U	29 U	31 U
	Lube Oil Range			140 U	140 U	160 U	140 U	140 U	150 U
Total Metals[3] (mg/kg)	Arsenic			14 U	14 U	16 U	14 U	14 U	15 U
	Barium	16,000		**67**	**100**	**100**	**110**	**140**	**140**
	Cadmium			0.68 U	0.69 U	0.79 U	0.71 U	0.72 U	0.77 U
	Chromium	2,000		**36**	**58**	**57**	**61**	**68**	**73**
	Lead			6.8 U	6.9 U	7.9 U	7.1 U	7.2 U	7.7 U
	Mercury			0.34 U	0.35 U	0.40 U	0.35 U	0.36 U	0.38 U
	Selenium			14 U	14 U	16 U	14 U	14 U	15 U
	Silver			1.4 U	1.4 U	1.6 U	1.4 U	1.4 U	1.5 U
PCBs[4] (mg/kg)	PCB-aroclor 1016			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1221			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1232			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1242			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1248			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1254			NA	NA	NA	NA	NA	NA
	PCB-aroclor 1260			NA	NA	NA	NA	NA	NA
Pesticides[5] (ug/kg)	4,4'-DDD			NA	NA	NA	NA	NA	NA
	4,4'-DDE			NA	NA	NA	NA	NA	NA
	4,4'-DDT			NA	NA	NA	NA	NA	NA
	Aldrin			NA	NA	NA	NA	NA	NA
	Alpha-BHC			NA	NA	NA	NA	NA	NA
	alpha-Chlordane (cis)			NA	NA	NA	NA	NA	NA
	Beta-BHC			NA	NA	NA	NA	NA	NA
	Delta-BHC			NA	NA	NA	NA	NA	NA
	Dieldrin			NA	NA	NA	NA	NA	NA
	Endosulfan I			NA	NA	NA	NA	NA	NA
	Endosulfan II			NA	NA	NA	NA	NA	NA
	Endosulfan Sulfate			NA	NA	NA	NA	NA	NA
	Endrin			NA	NA	NA	NA	NA	NA
	Endrin Aldehyde			NA	NA	NA	NA	NA	NA
	Endrin Ketone			NA	NA	NA	NA	NA	NA
	gamma-Chlordane (relic CAS #)			NA	NA	NA	NA	NA	NA
	Heptachlor			NA	NA	NA	NA	NA	NA
	Heptachlor Epoxide			NA	NA	NA	NA	NA	NA
	Lindane (Gamma-BHC)			NA	NA	NA	NA	NA	NA
	Methoxychlor			NA	NA	NA	NA	NA	NA
	Toxaphene			NA	NA	NA	NA	NA	NA
VOCs[6] (mg/kg)	1,1,1,2-Tetrachloroethane			NA	NA	NA	NA	NA	NA
	1,1,1-Trichloroethane			NA	NA	NA	NA	NA	NA
	1,1,2,2-Tetrachloroethane			NA	NA	NA	NA	NA	NA
	1,1,2-Trichloroethane			NA	NA	NA	NA	NA	NA
	1,1-Dichloroethane			NA	NA	NA	NA	NA	NA
	1,1-Dichloroethene			NA	NA	NA	NA	NA	NA
	1,1-Dichloropropene			NA	NA	NA	NA	NA	NA
	1,2,3-Trichlorobenzene			NA	NA	NA	NA	NA	NA
	1,2,3-Trichloropropane			NA	NA	NA	NA	NA	NA
	1,2,4-Trichlorobenzene			NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] Sample Date	DRUM 3886-3887 5/20/2014	DRUM 5023-5024 5/21/2014	DRUM 5025-5026 5/21/2014	DRUM 5027-5028 5/21/2014	DRUM 5029-5030 5/21/2014	DRUM 5031 5/21/2014
VOCs[6] (mg/kg)	1,2,4-Trimethylbenzene			NA	NA	NA	NA	NA	NA
	1,2-Dibromo-3-Chloropropane			NA	NA	NA	NA	NA	NA
	1,2-dibromoethane			NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene (o-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	1,2-Dichloroethane			NA	NA	NA	NA	NA	NA
	1,2-Dichloropropane			NA	NA	NA	NA	NA	NA
	1,3,5-Trimethylbenzene			NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene (m-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	1,3-Dichloropropane			NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene (p-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	2,2-Dichloropropane			NA	NA	NA	NA	NA	NA
	2-Butanone (MEK)			NA	NA	NA	NA	NA	NA
	2-Chloroethyl vinyl ether			NA	NA	NA	NA	NA	NA
	2-Chlorotoluene			NA	NA	NA	NA	NA	NA
	2-Hexanone			NA	NA	NA	NA	NA	NA
	4-Chlorotoluene			NA	NA	NA	NA	NA	NA
	4-Methyl-2-Pentanone (Methyl isobutyl ketone)			NA	NA	NA	NA	NA	NA
	Acetone			NA	NA	NA	NA	NA	NA
	Benzene			NA	NA	NA	NA	NA	NA
	Bromobenzene			NA	NA	NA	NA	NA	NA
	Bromochloromethane			NA	NA	NA	NA	NA	NA
	Bromodichloromethane			NA	NA	NA	NA	NA	NA
	Bromoform (Tribromomethane)			NA	NA	NA	NA	NA	NA
	Bromomethane			NA	NA	NA	NA	NA	NA
	Carbon Disulfide			NA	NA	NA	NA	NA	NA
	Carbon Tetrachloride			NA	NA	NA	NA	NA	NA
	Chlorobenzene			NA	NA	NA	NA	NA	NA
	Chloroethane			NA	NA	NA	NA	NA	NA
	Chloroform			NA	NA	NA	NA	NA	NA
	Chloromethane			NA	NA	NA	NA	NA	NA
	cis-1,2-Dichloroethene			NA	NA	NA	NA	NA	NA
	Cis-1,3-Dichloropropene			NA	NA	NA	NA	NA	NA
	Dibromochloromethane			NA	NA	NA	NA	NA	NA
	Dibromomethane			NA	NA	NA	NA	NA	NA
	Dichlorodifluoromethane (CFC-12)			NA	NA	NA	NA	NA	NA
	Ethylbenzene			NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene			NA	NA	NA	NA	NA	NA
	Isopropylbenzene (Cumene)			NA	NA	NA	NA	NA	NA
	Methyl Iodide (Iodomethane)			NA	NA	NA	NA	NA	NA
	Methyl t-butyl ether			NA	NA	NA	NA	NA	NA
	Methylene Chloride			NA	NA	NA	NA	NA	NA
	Naphthalene			NA	NA	NA	NA	NA	NA
	n-Butylbenzene			NA	NA	NA	NA	NA	NA
	n-Propylbenzene			NA	NA	NA	NA	NA	NA
	p-Isopropyltoluene			NA	NA	NA	NA	NA	NA
	Sec-Butylbenzene			NA	NA	NA	NA	NA	NA
	Styrene			NA	NA	NA	NA	NA	NA
	Tert-Butylbenzene			NA	NA	NA	NA	NA	NA
	Tetrachloroethene			NA	NA	NA	NA	NA	NA
	Toluene			NA	NA	NA	NA	NA	NA
	Trans-1,2-Dichloroethene			NA	NA	NA	NA	NA	NA
	Trans-1,3-Dichloropropene			NA	NA	NA	NA	NA	NA
	Trichloroethene			NA	NA	NA	NA	NA	NA
	Trichlorofluoromethane (CFC-11)			NA	NA	NA	NA	NA	NA
	Vinyl Acetate			NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] Sample Date	DRUM 3886-3887 5/20/2014	DRUM 5023-5024 5/21/2014	DRUM 5025-5026 5/21/2014	DRUM 5027-5028 5/21/2014	DRUM 5029-5030 5/21/2014	DRUM 5031 5/21/2014
VOCs[6] (mg/kg)	Vinyl Chloride			NA	NA	NA	NA	NA	NA
	Xylene, m-,p-			NA	NA	NA	NA	NA	NA
	Xylene, o-			NA	NA	NA	NA	NA	NA
SVOCs[7] (mg/kg)	1,2,4-Trichlorobenzene			NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene (o-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	1,2-Diphenylhydrazine			NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene (m-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	1,3-Dinitrobenzene			NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene (p-Dichlorobenzene)			NA	NA	NA	NA	NA	NA
	2,3,4,6-Tetrachlorophenol			NA	NA	NA	NA	NA	NA
	2,3,5,6-Tetrachlorophenol			NA	NA	NA	NA	NA	NA
	2,3-DICHLOROANILINE			NA	NA	NA	NA	NA	NA
	2,4,5-Trichlorophenol			NA	NA	NA	NA	NA	NA
	2,4,6-Trichlorophenol			NA	NA	NA	NA	NA	NA
	2,4-Dichlorophenol			NA	NA	NA	NA	NA	NA
	2,4-Dimethylphenol			NA	NA	NA	NA	NA	NA
	2,4-Dinitrophenol			NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene			NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene			NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene			NA	NA	NA	NA	NA	NA
	2-Chlorophenol			NA	NA	NA	NA	NA	NA
	2-Nitroaniline			NA	NA	NA	NA	NA	NA
	2-Nitrophenol			NA	NA	NA	NA	NA	NA
	3 & 4 Methylphenol			NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine			NA	NA	NA	NA	NA	NA
	3-Nitroaniline			NA	NA	NA	NA	NA	NA
	4,6-Dinitro-2-Methylphenol			NA	NA	NA	NA	NA	NA
	4-Bromophenyl phenyl ether			NA	NA	NA	NA	NA	NA
	4-Chloro-3-Methylphenol			NA	NA	NA	NA	NA	NA
	4-Chloroaniline			NA	NA	NA	NA	NA	NA
	4-Chlorophenyl-Phenylether			NA	NA	NA	NA	NA	NA
	4-Nitroaniline			NA	NA	NA	NA	NA	NA
	4-Nitrophenol (p-Nitrophenol)			NA	NA	NA	NA	NA	NA
	Aniline			NA	NA	NA	NA	NA	NA
	Benzene, 1,4-Dinitro-			NA	NA	NA	NA	NA	NA
	Benzidine			NA	NA	NA	NA	NA	NA
	Benzyl Alcohol			NA	NA	NA	NA	NA	NA
	Bis(2-Chloroethoxy)Methane			NA	NA	NA	NA	NA	NA
	Bis(2-Chloroethyl)Ether			NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl) ether			NA	NA	NA	NA	NA	NA
	Bis(2-Ethylhexyl) Phthalate			NA	NA	NA	NA	NA	NA
	Butyl benzyl phthalate			NA	NA	NA	NA	NA	NA
	Carbazole			NA	NA	NA	NA	NA	NA
	Dibenzofuran			NA	NA	NA	NA	NA	NA
	Dibutyl phthalate			NA	NA	NA	NA	NA	NA
	Diethyl phthalate			NA	NA	NA	NA	NA	NA
	Dimethyl phthalate			NA	NA	NA	NA	NA	NA
	Di-N-Octyl Phthalate			NA	NA	NA	NA	NA	NA
	Hexachlorobenzene			NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene			NA	NA	NA	NA	NA	NA
	Hexachlorocyclopentadiene			NA	NA	NA	NA	NA	NA
	Hexachloroethane			NA	NA	NA	NA	NA	NA
	Hexanedioic Acid, Bis(2-Ethylhexyl) Ester			NA	NA	NA	NA	NA	NA
	Isophorone			NA	NA	NA	NA	NA	NA
	Nitrobenzene			NA	NA	NA	NA	NA	NA

Method	Analyte	MTCA Method A or B Cleanup Levels	Sample ID[1] Sample Date	DRUM 3886-3887 5/20/2014	DRUM 5023-5024 5/21/2014	DRUM 5025-5026 5/21/2014	DRUM 5027-5028 5/21/2014	DRUM 5029-5030 5/21/2014	DRUM 5031 5/21/2014
SVOCs[7] (mg/kg)	N-Nitrosodimethylamine			NA	NA	NA	NA	NA	NA
	N-Nitrosodi-n-propylamine			NA	NA	NA	NA	NA	NA
	N-Nitrosodiphenylamine (as diphenylamine)			NA	NA	NA	NA	NA	NA
	o-Cresol (2-methylphenol)			NA	NA	NA	NA	NA	NA
	O-DINITROBENZENE			NA	NA	NA	NA	NA	NA
	Pentachlorophenol			NA	NA	NA	NA	NA	NA
	Phenol			NA	NA	NA	NA	NA	NA
	Pyridine			NA	NA	NA	NA	NA	NA
PAHs[8] (mg/kg)	1-Methylnaphthalene			NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene			NA	NA	NA	NA	NA	NA
	Acenaphthene			NA	NA	NA	NA	NA	NA
	Acenaphthylene			NA	NA	NA	NA	NA	NA
	Anthracene			NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene			NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene			NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene			NA	NA	NA	NA	NA	NA
	Benzo(ghi)perylene			NA	NA	NA	NA	NA	NA
	Benzo(j,k)fluoranthene			NA	NA	NA	NA	NA	NA
	Chrysene			NA	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene			NA	NA	NA	NA	NA	NA
	Fluoranthene			NA	NA	NA	NA	NA	NA
	Fluorene			NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene			NA	NA	NA	NA	NA	NA
	Naphthalene			NA	NA	NA	NA	NA	NA
	Phenanthrene			NA	NA	NA	NA	NA	NA
	Pyrene			NA	NA	NA	NA	NA	NA

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 30, 2014

Lindsay Flangas
GeoEngineers, Inc.
8410 154th Avenue NE
Redmond, WA 98052

Re: Analytical Data for Project 0144-444-00
Laboratory Reference No. 1405-166

Dear Lindsay:

Enclosed are the analytical results and associated quality control data for samples submitted on May 21, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

Case Narrative

Samples were collected on May 19 and 20, 2014 and received by the laboratory on May 21, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The surrogate recovery is outside of the control limits on the high end for sample GEI-16A-14 S1-2. However, since the sample in non-detect, no further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Semivolatiles EPA 8270D/SIM Analysis

Sample GEI-3A-14 S1-2, GEI-6A-14 S1-2, GEI-12A-14 S1-2, GEI-9A-14 S1-2, GEI-16A-14 S1-2 and the method blank had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-4A-14 S1-2	05-166-01	Soil	5-19-14	5-21-14	
GEI-3A-14 S1-2	05-166-03	Soil	5-20-14	5-21-14	
Drum 3886-3887	05-166-04	Soil	5-20-14	5-21-14	
GEI-5A-14 S1-2	05-166-05	Soil	5-20-14	5-21-14	
Drum 3870-3871	05-166-06	Soil	5-20-14	5-21-14	
GEI-6A-14 S1-2	05-166-07	Soil	5-19-14	5-21-14	
GEI-8A-14 S1-2	05-166-08	Soil	5-19-14	5-21-14	
GEI-11A-14 S1-2	05-166-09	Soil	5-19-14	5-21-14	
GEI-12A-14 S1-2	05-166-10	Soil	5-19-14	5-21-14	
GEI-7A-14 S1-2	05-166-11	Soil	5-20-14	5-21-14	
GEI-9A-14 S1-2	05-166-12	Soil	5-20-14	5-21-14	
GEI-10A-14 S1-2	05-166-13	Soil	5-20-14	5-21-14	
GEI-16A-14 S1-2	05-166-14	Soil	5-20-14	5-21-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Drum 3886-3887**					
Laboratory ID:	05-166-04					
Gasoline Range Organics	**ND**	27	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	68	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	140	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*69*	*50-150*				
Client ID:	**Drum 3870-3871**					
Laboratory ID:	05-166-06					
Gasoline Range Organics	**ND**	27	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	66	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
Gasoline	**ND**	5.9	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*115*	*71-121*				
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
Gasoline	**ND**	6.7	NWTPH-Gx	5-21-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*113*	*71-121*				
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
Gasoline	**ND**	6.3	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*71-121*				
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
Gasoline	**ND**	6.1	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*120*	*71-121*				
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
Gasoline	**ND**	8.2	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*118*	*71-121*				
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
Gasoline	**ND**	9.6	NWTPH-Gx	5-21-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*114*	*71-121*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
Gasoline	**ND**	8.3	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*107*	*71-121*				
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
Gasoline	**ND**	7.5	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*112*	*71-121*				
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
Gasoline	**ND**	7.6	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*113*	*71-121*				
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
Gasoline	**ND**	10	NWTPH-Gx	5-21-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*118*	*71-121*				
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
Gasoline	**ND**	17	NWTPH-Gx	5-21-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*134*	*71-121*				Q

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
Diesel Range Organics	**ND**	29	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	57	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*69*	*50-150*				
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
Diesel Range Organics	**ND**	33	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	65	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
Diesel Range Organics	**ND**	30	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	59	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
Diesel Range Organics	**ND**	31	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	62	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*63*	*50-150*				
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
Diesel Range Organics	**ND**	33	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	66	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*68*	*50-150*				
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
Diesel Range Organics	**ND**	36	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	72	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*55*	*50-150*				

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Date of Report: May 30, 2014
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Laboratory Reference: 1405-166
Project: 0144-444-00

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
Diesel Range Organics	**ND**	33	NWTPH-Dx	5-29-14	5-29-14	
Lube Oil Range Organics	**ND**	65	NWTPH-Dx	5-29-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*76*	*50-150*				
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
Diesel Range Organics	**ND**	30	NWTPH-Dx	5-29-14	5-29-14	
Lube Oil Range Organics	**ND**	60	NWTPH-Dx	5-29-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
Diesel Range Organics	**ND**	35	NWTPH-Dx	5-29-14	5-29-14	
Lube Oil Range Organics	**ND**	70	NWTPH-Dx	5-29-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*69*	*50-150*				
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
Diesel Range Organics	**ND**	40	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	80	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
Diesel Range Organics	**84**	57	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**510**	110	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*66*	*50-150*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Acetone	0.023	0.0052	EPA 8260C	5-23-14	5-23-14	Y
Iodomethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Butanone	0.0060	0.0052	EPA 8260C	5-23-14	5-23-14	Y
Bromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0021	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*65-129*				
Toluene-d8	*108*	*77-122*				
4-Bromofluorobenzene	*103*	*73-124*				

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Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
Dichlorodifluoromethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Acetone	0.0050	0.0044	EPA 8260C	5-23-14	5-23-14	Y
Iodomethane	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
1,1,2-Trichloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.00087	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*65-129*				
Toluene-d8	*103*	*77-122*				
4-Bromofluorobenzene	*99*	*73-124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0021	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*65-129*				
Toluene-d8	*110*	*77-122*				
4-Bromofluorobenzene	*109*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
Dichlorodifluoromethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0019	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*65-129*				
Toluene-d8	*99*	*77-122*				
4-Bromofluorobenzene	*97*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0028	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0069	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*65-129*				
Toluene-d8	*104*	*77-122*				
4-Bromofluorobenzene	*102*	*73-124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0026	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0065	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*65-129*				
Toluene-d8	*104*	*77-122*				
4-Bromofluorobenzene	*105*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
1,1,2-Trichloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0034	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0085	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0017	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*65-129*				
Toluene-d8	*101*	*77-122*				
4-Bromofluorobenzene	*96*	*73-124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
Dichlorodifluoromethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0018	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*65-129*				
Toluene-d8	*107*	*77-122*				
4-Bromofluorobenzene	*105*	*73-124*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0028	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0070	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*65-129*				
Toluene-d8	*105*	*77-122*				
4-Bromofluorobenzene	*102*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0032	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0080	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*65-129*				
Toluene-d8	*107*	*77-122*				
4-Bromofluorobenzene	*104*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
Dichlorodifluoromethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.019	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.019	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Acetone	0.99	0.82	EPA 8260C	5-23-14	5-23-14	Y
Iodomethane	ND	0.019	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	0.017	0.0037	EPA 8260C	5-23-14	5-23-14	Y
Methylene Chloride	ND	0.019	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.019	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
2-Butanone	0.59	0.019	EPA 8260C	5-23-14	5-23-14	Y
Bromochloromethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.019	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.019	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.019	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
1,1,2-Trichloroethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.019	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0075	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0037	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.16	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.82	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.82	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.16	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*65-129*				
Toluene-d8	*98*	*77-122*				
4-Bromofluorobenzene	*75*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
n-Nitrosodimethylamine	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Pyrene	**0.0089**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.038	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0076	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*92*	*24 - 105*				
Phenol-d6	*95*	*34 - 101*				
Nitrobenzene-d5	*87*	*32 - 102*				
2-Fluorobiphenyl	*88*	*44 -100*				
2,4,6-Tribromophenol	*53*	*34 - 124*				
Terphenyl-d14	*89*	*47 - 114*				

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Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
n-Nitrosodimethylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.43	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
2,4-Dinitrophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.43	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*103*	*24 - 105*				
Phenol-d6	*106*	*34 - 101*				Q
Nitrobenzene-d5	*94*	*32 - 102*				
2-Fluorobiphenyl	*96*	*44 -100*				
2,4,6-Tribromophenol	*55*	*34 - 124*				
Terphenyl-d14	*98*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
n-Nitrosodimethylamine	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.39	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.39	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.039	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*95*	*24 - 105*				
Phenol-d6	*100*	*34 - 101*				
Nitrobenzene-d5	*90*	*32 - 102*				
2-Fluorobiphenyl	*88*	*44 -100*				
2,4,6-Tribromophenol	*50*	*34 - 124*				
Terphenyl-d14	*90*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
n-Nitrosodimethylamine	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.41	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.41	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.041	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0082	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*105*	*24 - 105*				
Phenol-d6	*110*	*34 - 101*				Q
Nitrobenzene-d5	*99*	*32 - 102*				
2-Fluorobiphenyl	*100*	*44 -100*				
2,4,6-Tribromophenol	*57*	*34 - 124*				
Terphenyl-d14	*106*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
n-Nitrosodimethylamine	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.44	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
2,4-Dinitrophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.44	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.044	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0088	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*94*	*24 - 105*				
Phenol-d6	*101*	*34 - 101*				
Nitrobenzene-d5	*90*	*32 - 102*				
2-Fluorobiphenyl	*88*	*44 -100*				
2,4,6-Tribromophenol	*51*	*34 - 124*				
Terphenyl-d14	*95*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
n-Nitrosodimethylamine	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.48	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
4-Chloroaniline	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
1-Methylnaphthalene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Hexachlorocyclopentadiene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
3-Nitroaniline	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
4-Nitrophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Anthracene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Carbazole	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Benzidine	**ND**	0.48	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Butylbenzylphthalate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Chrysene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.048	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo(j,k)fluoranthene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[a]pyrene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Dibenz[a,h]anthracene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Benzo[g,h,i]perylene	**ND**	0.0096	EPA 8270D/SIM	5-22-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*94*	*24 - 105*				
Phenol-d6	*99*	*34 - 101*				
Nitrobenzene-d5	*86*	*32 - 102*				
2-Fluorobiphenyl	*87*	*44 -100*				
2,4,6-Tribromophenol	*46*	*34 - 124*				
Terphenyl-d14	*89*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
n-Nitrosodimethylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.43	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
4-Chloroaniline	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
3-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
2,4-Dinitrophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
4-Nitrophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Carbazole	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Benzidine	**ND**	0.43	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Butylbenzylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.22	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Chrysene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.043	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0087	EPA 8270D/SIM	5-22-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*101*	*24 - 105*				
Phenol-d6	*104*	*34 - 101*				Q
Nitrobenzene-d5	*95*	*32 - 102*				
2-Fluorobiphenyl	*92*	*44 -100*				
2,4,6-Tribromophenol	*53*	*34 - 124*				
Terphenyl-d14	*96*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.40	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
4-Chloroaniline	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
3-Nitroaniline	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
4-Nitrophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Carbazole	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Benzidine	**ND**	0.40	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Chrysene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0080	EPA 8270D/SIM	5-22-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*91*	*24 - 105*				
Phenol-d6	*88*	*34 - 101*				
Nitrobenzene-d5	*80*	*32 - 102*				
2-Fluorobiphenyl	*81*	*44 -100*				
2,4,6-Tribromophenol	*44*	*34 - 124*				
Terphenyl-d14	*77*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.47	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
4-Chloroaniline	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
3-Nitroaniline	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
4-Nitrophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Carbazole	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Benzidine	**ND**	0.47	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Butylbenzylphthalate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.047	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	5-22-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*103*	*24 - 105*				
Phenol-d6	*107*	*34 - 101*				Q
Nitrobenzene-d5	*93*	*32 - 102*				
2-Fluorobiphenyl	*92*	*44 -100*				
2,4,6-Tribromophenol	*49*	*34 - 124*				
Terphenyl-d14	*98*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
n-Nitrosodimethylamine	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.53	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
4-Chloroaniline	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
1-Methylnaphthalene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
3-Nitroaniline	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
2,4-Dinitrophenol	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
4-Nitrophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Anthracene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Carbazole	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Benzidine	**ND**	0.53	EPA 8270D	5-22-14	5-23-14	
Pyrene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Butylbenzylphthalate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.27	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Chrysene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.053	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	5-22-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*94*	*24 - 105*				
Phenol-d6	*97*	*34 - 101*				
Nitrobenzene-d5	*84*	*32 - 102*				
2-Fluorobiphenyl	*81*	*44 -100*				
2,4,6-Tribromophenol	*40*	*34 - 124*				
Terphenyl-d14	*84*	*47 - 114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
n-Nitrosodimethylamine	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Pyridine	**ND**	0.76	EPA 8270D	5-22-14	5-23-14	
Phenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Aniline	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethyl)ether	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Chlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,3-Dichlorobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,4-Dichlorobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Benzyl alcohol	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
1,2-Dichlorobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Methylphenol (o-Cresol)	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroisopropyl)ether	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
n-Nitroso-di-n-propylamine	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Hexachloroethane	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Nitrobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Isophorone	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Nitrophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,4-Dimethylphenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
bis(2-Chloroethoxy)methane	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,4-Dichlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,2,4-Trichlorobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
4-Chloroaniline	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Hexachlorobutadiene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
4-Chloro-3-methylphenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,4,6-Trichlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,3-Dichloroaniline	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,4,5-Trichlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Chloronaphthalene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2-Nitroaniline	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,4-Dinitrobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Dimethylphthalate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,3-Dinitrobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,6-Dinitrotoluene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,2-Dinitrobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
3-Nitroaniline	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
2,4-Dinitrophenol	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
4-Nitrophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,4-Dinitrotoluene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Dibenzofuran	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Diethylphthalate	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
4-Chlorophenyl-phenylether	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
4-Nitroaniline	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Fluorene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
n-Nitrosodiphenylamine	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
1,2-Diphenylhydrazine	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
4-Bromophenyl-phenylether	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Hexachlorobenzene	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Pentachlorophenol	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Phenanthrene	**0.015**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Anthracene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Carbazole	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Di-n-butylphthalate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Benzidine	**ND**	0.76	EPA 8270D	5-22-14	5-23-14	
Pyrene	**0.022**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Butylbenzylphthalate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
bis-2-Ethylhexyladipate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
3,3'-Dichlorobenzidine	**ND**	0.38	EPA 8270D	5-22-14	5-23-14	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Chrysene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Di-n-octylphthalate	**ND**	0.076	EPA 8270D	5-22-14	5-23-14	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	5-22-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*48*	*24 - 105*				
Phenol-d6	*48*	*34 - 101*				
Nitrobenzene-d5	*51*	*32 - 102*				
2-Fluorobiphenyl	*53*	*44 -100*				
2,4,6-Tribromophenol	*26*	*34 - 124*				Q
Terphenyl-d14	*50*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
Aroclor 1016	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.057	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*51-138*				
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
Aroclor 1016	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*51-138*				
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
Aroclor 1016	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.059	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*51-138*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
Aroclor 1016	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.062	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*80*	*51-138*				
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
Aroclor 1016	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.066	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*80*	*51-138*				
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
Aroclor 1016	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.072	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*51-138*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
Aroclor 1016	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.065	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*51-138*				
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
Aroclor 1016	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.060	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*51-138*				
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
Aroclor 1016	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.070	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*51-138*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
Aroclor 1016	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.080	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*77*	*51-138*				
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
Aroclor 1016	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.11	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*76*	*51-138*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-4A-14 S1-2**					
Laboratory ID:	05-166-01					
alpha-BHC	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	11	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	11	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	5.7	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	11	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	11	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	57	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*80*	*37-110*				
DCB	*83*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-3A-14 S1-2**					
Laboratory ID:	05-166-03					
alpha-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	65	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*37-110*				
DCB	*77*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-5A-14 S1-2**					
Laboratory ID:	05-166-05					
alpha-BHC	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	5.9	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	59	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*37-110*				
DCB	*79*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-6A-14 S1-2**					
Laboratory ID:	05-166-07					
alpha-BHC	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	6.2	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	62	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*77*	*37-110*				
DCB	*87*	*42-114*				

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-8A-14 S1-2**					
Laboratory ID:	05-166-08					
alpha-BHC	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	6.6	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	66	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*72*	*37-110*				
DCB	*78*	*42-114*				

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-11A-14 S1-2**					
Laboratory ID:	05-166-09					
alpha-BHC	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	7.2	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	72	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*82*	*37-110*				
DCB	*90*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-12A-14 S1-2**					
Laboratory ID:	05-166-10					
alpha-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	6.5	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	13	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	65	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*76*	*37-110*				
DCB	*85*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-7A-14 S1-2**					
Laboratory ID:	05-166-11					
alpha-BHC	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	6.0	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	12	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	12	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	60	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*80*	*37-110*				
DCB	*88*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-9A-14 S1-2**					
Laboratory ID:	05-166-12					
alpha-BHC	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	7.0	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	14	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	70	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*79*	*37-110*				
DCB	*89*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-10A-14 S1-2**					
Laboratory ID:	05-166-13					
alpha-BHC	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	16	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	16	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	8.0	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	16	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	16	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	16	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	80	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*77*	*37-110*				
DCB	*86*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-16A-14 S1-2**					
Laboratory ID:	05-166-14					
alpha-BHC	**ND**	11	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	11	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	11	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	11	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	23	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	23	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	11	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	23	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	23	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	23	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	110	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*37-110*				
DCB	*76*	*42-114*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-01					
Client ID:	**GEI-4A-14 S1-2**					
Arsenic	**ND**	11	6010C	5-29-14	5-29-14	
Barium	**79**	2.9	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.57	6010C	5-29-14	5-29-14	
Chromium	**38**	0.57	6010C	5-29-14	5-29-14	
Lead	**ND**	5.7	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.29	7471B	5-23-14	5-23-14	
Selenium	**ND**	11	6010C	5-29-14	5-29-14	
Silver	**ND**	1.1	6010C	5-29-14	5-29-14	
Lab ID:	05-166-03					
Client ID:	**GEI-3A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**120**	3.3	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.65	6010C	5-29-14	5-29-14	
Chromium	**53**	0.65	6010C	5-29-14	5-29-14	
Lead	**ND**	6.5	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.33	7471B	5-23-14	5-23-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	

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Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-04					
Client ID:	**Drum 3886-3887**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**67**	3.4	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.68	6010C	5-29-14	5-29-14	
Chromium	**36**	0.68	6010C	5-29-14	5-29-14	
Lead	**ND**	6.8	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.34	7471B	5-23-14	5-23-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	
Lab ID:	05-166-05					
Client ID:	**GEI-5A-14 S1-2**					
Arsenic	**ND**	12	6010C	5-29-14	5-29-14	
Barium	**30**	3.0	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.59	6010C	5-29-14	5-29-14	
Chromium	**20**	0.59	6010C	5-29-14	5-29-14	
Lead	**ND**	5.9	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.30	7471B	5-23-14	5-23-14	
Selenium	**ND**	12	6010C	5-29-14	5-29-14	
Silver	**ND**	1.2	6010C	5-29-14	5-29-14	

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Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-06					
Client ID:	**Drum 3870-3871**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**44**	3.3	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.66	6010C	5-29-14	5-29-14	
Chromium	**24**	0.66	6010C	5-29-14	5-29-14	
Lead	**ND**	6.6	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.33	7471B	5-23-14	5-23-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	
Lab ID:	05-166-07					
Client ID:	**GEI-6A-14 S1-2**					
Arsenic	**15**	12	6010C	5-29-14	5-29-14	
Barium	**79**	3.1	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.62	6010C	5-29-14	5-29-14	
Chromium	**52**	0.62	6010C	5-29-14	5-29-14	
Lead	**ND**	6.2	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.31	7471B	5-23-14	5-23-14	
Selenium	**ND**	12	6010C	5-29-14	5-29-14	
Silver	**ND**	1.2	6010C	5-29-14	5-29-14	

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Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-08					
Client ID:	**GEI-8A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**65**	3.3	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.66	6010C	5-29-14	5-29-14	
Chromium	**40**	0.66	6010C	5-29-14	5-29-14	
Lead	**ND**	6.6	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.33	7471B	5-23-14	5-23-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	
Lab ID:	05-166-09					
Client ID:	**GEI-11A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**150**	3.6	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.72	6010C	5-29-14	5-29-14	
Chromium	**68**	0.72	6010C	5-29-14	5-29-14	
Lead	**ND**	7.2	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.36	7471B	5-23-14	5-23-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	

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Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-10					
Client ID:	**GEI-12A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**90**	3.2	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.65	6010C	5-29-14	5-29-14	
Chromium	**53**	0.65	6010C	5-29-14	5-29-14	
Lead	**ND**	6.5	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.32	7471B	5-23-14	5-23-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	
Lab ID:	05-166-11					
Client ID:	**GEI-7A-14 S1-2**					
Arsenic	**ND**	12	6010C	5-29-14	5-29-14	
Barium	**64**	3.0	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.60	6010C	5-29-14	5-29-14	
Chromium	**44**	0.60	6010C	5-29-14	5-29-14	
Lead	**ND**	6.0	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.30	7471B	5-23-14	5-23-14	
Selenium	**ND**	12	6010C	5-29-14	5-29-14	
Silver	**ND**	1.2	6010C	5-29-14	5-29-14	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-12					
Client ID:	**GEI-9A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**100**	3.5	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.70	6010C	5-29-14	5-29-14	
Chromium	**56**	0.70	6010C	5-29-14	5-29-14	
Lead	**ND**	7.0	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-23-14	5-23-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	
Lab ID:	05-166-13					
Client ID:	**GEI-10A-14 S1-2**					
Arsenic	**ND**	16	6010C	5-29-14	5-29-14	
Barium	**110**	4.0	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.80	6010C	5-29-14	5-29-14	
Chromium	**63**	0.80	6010C	5-29-14	5-29-14	
Lead	**ND**	8.0	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.40	7471B	5-23-14	5-23-14	
Selenium	**ND**	16	6010C	5-29-14	5-29-14	
Silver	**ND**	1.6	6010C	5-29-14	5-29-14	

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Date of Report: May 30, 2014
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Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-166-14					
Client ID:	**GEI-16A-14 S1-2**					
Arsenic	**30**	23	6010C	5-29-14	5-29-14	
Barium	**160**	5.7	6010C	5-29-14	5-29-14	
Cadmium	**ND**	1.1	6010C	5-29-14	5-29-14	
Chromium	**55**	1.1	6010C	5-29-14	5-29-14	
Lead	**ND**	11	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.57	7471B	5-23-14	5-23-14	
Selenium	**ND**	23	6010C	5-29-14	5-29-14	
Silver	**ND**	2.3	6010C	5-29-14	5-29-14	

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NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523S2					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*68*	*50-150*				

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NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521S1					
Gasoline	**ND**	5.0	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*71-121*				
Laboratory ID:	MB0521S2					
Gasoline	**ND**	5.0	NWTPH-Gx	5-21-14	5-21-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*109*	*71-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-158-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*106*	*109*	*71-121*			
Laboratory ID:	05-172-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*111*	*113*	*71-121*			

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NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-28-14	5-28-14	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Laboratory ID:	MB0529S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-29-14	5-29-14	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-29-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-166-05										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*85*	*77*	*50-150*			
Laboratory ID:	05-166-10										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*76*	*71*	*50-150*			

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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0523S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloromethane	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroethane	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Acetone	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Iodomethane	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methylene Chloride	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Vinyl Acetate	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Butanone	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Bromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chloroform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Benzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Trichloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Dibromomethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Toluene	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	

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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0523S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Hexanone	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Chlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Ethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
m,p-Xylene	ND	0.0020	EPA 8260C	5-23-14	5-23-14	
o-Xylene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Styrene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromoform	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Bromobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	5-23-14	5-23-14	
Naphthalene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*65-129*				
Toluene-d8	*108*	*77-122*				
4-Bromofluorobenzene	*108*	*73-124*				

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0523S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0600**	**0.0579**	0.0500	0.0500	120	116	56-141	4	15	
Benzene	**0.0539**	**0.0548**	0.0500	0.0500	108	110	70-121	2	15	
Trichloroethene	**0.0503**	**0.0513**	0.0500	0.0500	101	103	74-118	2	15	
Toluene	**0.0511**	**0.0525**	0.0500	0.0500	102	105	75-120	3	15	
Chlorobenzene	**0.0495**	**0.0490**	0.0500	0.0500	99	98	75-120	1	15	
Surrogate:										
Dibromofluoromethane					*99*	*104*	*65-129*			
Toluene-d8					*97*	*105*	*77-122*			
4-Bromofluorobenzene					*99*	*104*	*73-124*			

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SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0522S2					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Pyridine	**ND**	0.33	EPA 8270D	5-22-14	5-22-14	
Phenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Aniline	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Chlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Benzyl alcohol	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Hexachloroethane	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Nitrobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Isophorone	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Nitrophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
4-Chloroaniline	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2-Nitroaniline	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Dimethylphthalate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
3-Nitroaniline	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	

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Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0522S2					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
4-Nitrophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Dibenzofuran	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Diethylphthalate	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
4-Nitroaniline	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Pentachlorophenol	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Carbazole	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Di-n-butylphthalate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Benzidine	**ND**	0.33	EPA 8270D	5-22-14	5-22-14	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	5-22-14	5-22-14	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	5-22-14	5-22-14	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*104*	*24 - 105*				
Phenol-d6	*105*	*34 - 101*				Q
Nitrobenzene-d5	*101*	*32 - 102*				
2-Fluorobiphenyl	*97*	*44 -100*				
2,4,6-Tribromophenol	*59*	*34 - 124*				
Terphenyl-d14	*105*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-166-05										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	**1.20**	**0.983**	1.33	1.33	ND	90	74	43 - 104	20	25	
2-Chlorophenol	**1.05**	**0.826**	1.33	1.33	ND	79	62	41 - 104	24	32	
1,4-Dichlorobenzene	**0.415**	**0.345**	0.667	0.667	ND	62	52	23 - 95	18	42	
n-Nitroso-di-n-propylamine	**0.460**	**0.357**	0.667	0.667	ND	69	54	34 - 105	25	27	
1,2,4-Trichlorobenzene	**0.392**	**0.318**	0.667	0.667	ND	59	48	26 - 106	21	32	
4-Chloro-3-methylphenol	**0.978**	**0.857**	1.33	1.33	ND	74	64	52 - 109	13	20	
Acenaphthene	**0.454**	**0.398**	0.667	0.667	ND	68	60	51 - 104	13	21	
4-Nitrophenol	**0.952**	**0.887**	1.33	1.33	ND	72	67	52 - 121	7	22	
2,4-Dinitrotoluene	**0.480**	**0.438**	0.667	0.667	ND	72	66	53 - 115	9	22	
Pentachlorophenol	**0.433**	**0.408**	1.33	1.33	ND	33	31	29 - 131	6	28	
Pyrene	**0.592**	**0.569**	0.667	0.667	ND	89	85	41 - 123	4	35	
Surrogate:											
2-Fluorophenol						*84*	*67*	*24 - 105*			
Phenol-d6						*90*	*72*	*34 - 101*			
Nitrobenzene-d5						*80*	*66*	*32 - 102*			
2-Fluorobiphenyl						*84*	*69*	*44 -100*			
2,4,6-Tribromophenol						*57*	*48*	*34 - 124*			
Terphenyl-d14						*96*	*90*	*47 - 114*			

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1221	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1232	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1242	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1248	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1254	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Aroclor 1260	**ND**	0.050	EPA 8082A	5-22-14	5-22-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*114*	*51-138*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-179-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.452**	**0.402**	0.500	0.500	ND	**90**	**80**	49-136	12	14	
Surrogate:											
DCB						*104*	*97*	*51-138*			

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527S1					
alpha-BHC	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
gamma-BHC	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
beta-BHC	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
delta-BHC	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
Aldrin	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
gamma-Chlordane	**ND**	10	EPA 8081B	5-27-14	5-27-14	
alpha-Chlordane	**ND**	10	EPA 8081B	5-27-14	5-27-14	
4,4'-DDE	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endosulfan I	**ND**	5.0	EPA 8081B	5-27-14	5-27-14	
Dieldrin	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endrin	**ND**	10	EPA 8081B	5-27-14	5-27-14	
4,4'-DDD	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endosulfan II	**ND**	10	EPA 8081B	5-27-14	5-27-14	
4,4'-DDT	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endrin Aldehyde	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Methoxychlor	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endosulfan Sulfate	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Endrin Ketone	**ND**	10	EPA 8081B	5-27-14	5-27-14	
Toxaphene	**ND**	50	EPA 8081B	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*87*	*37-110*				
DCB	*92*	*42-114*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-166-05										
	MS	MSD	MS	MSD		MS	MSD				
gamma-BHC	**80.2**	**87.2**	100	100	ND	**80**	**87**	45-117	8	15	
Heptachlor	**72.4**	**80.6**	100	100	ND	**72**	**81**	57-101	11	16	
Aldrin	**80.2**	**87.4**	100	100	ND	**80**	**87**	50-119	9	16	
Dieldrin	**78.9**	**86.3**	100	100	ND	**79**	**86**	45-110	9	17	
Endrin	**79.5**	**86.7**	100	100	ND	**79**	**87**	56-117	9	18	
4,4'-DDT	**79.1**	**86.2**	100	100	ND	**79**	**86**	46-110	9	21	
Surrogate:											
TCMX						*70*	*77*	*37-110*			
DCB						*77*	*85*	*42-114*			

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-23&29-14
Date Analyzed: 5-23&29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0529SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-23-14
Date Analyzed:	5-23-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0523S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 5-29-14
Date Analyzed: 5-29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-166-05

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**25.2**	**27.6**	9	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**16.9**	**16.2**	5	0.50	
Lead	**ND**	**ND**	NA	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 5-23-14
Date Analyzed: 5-23-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-192-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 5-23&29-14
Date Analyzed: 5-23&29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-166-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**96.3**	96	**97.5**	98	1	
Barium	100	**122**	97	**129**	104	6	
Cadmium	50.0	**47.9**	96	**48.5**	97	1	
Chromium	100	**111**	95	**115**	98	3	
Lead	250	**242**	97	**244**	98	1	
Selenium	100	**95.9**	96	**98.9**	99	3	
Silver	25.0	**22.7**	91	**23.0**	92	1	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 5-23-14
Date Analyzed: 5-23-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-192-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.488**	98	**0.439**	88	11	

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Date of Report: May 30, 2014
Samples Submitted: May 21, 2014
Laboratory Reference: 1405-166
Project: 0144-444-00

% MOISTURE

Date Analyzed: 5-21-14

Client ID	Lab ID	% Moisture
GEI-4A-14 S1-2	05-166-01	12
GEI-3A-14 S1-2	05-166-03	23
Drum 3886-3887	05-166-04	26
GEI-5A-14 S1-2	05-166-05	15
Drum 3870-3871	05-166-06	25
GEI-6A-14 S1-2	05-166-07	19
GEI-8A-14 S1-2	05-166-08	25
GEI-11A-14 S1-2	05-166-09	30
GEI-12A-14 S1-2	05-166-10	23
GEI-7A-14 S1-2	05-166-11	17
GEI-9A-14 S1-2	05-166-12	29
GEI-10A-14 S1-2	05-166-13	37
GEI-16A-14 S1-2	05-166-14	56

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 05-166

Company: GeoEngineers
Project Number: 0144-444-00
Project Name: P-252 P-8A Hangar & Aircraft Apron
Project Manager: AJH/LCF
Sampled by: TKC/MWR

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	PAH 8310 (HOLD)					% Moisture
1	GEI-4A-14 S1-2	5/19	14:39	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X					X
~~2~~	~~Drum 3884-3885~~	~~5/19~~	~~17:15~~	~~Soil~~	~~1J~~	~~X~~												~~X~~					NOT RECEIVED				~~X~~
	~~GEI-4A-14 S1~~	~~5/19~~	~~14:25~~	~~Soil~~	~~2V~~																						
	~~GEI-4A-14 S2~~	~~5/19~~	~~14:37~~	~~Soil~~	~~2V~~																						
3	GEI-3A-14 S1-2	5/20	09:41	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X					X
4	Drum 3886-3887	5/20	12:47	Soil	1J	X												X									X
	~~GEI-3A-14 S-1~~	~~5/20~~	~~09:33~~	~~Soil~~	~~2V~~																						
	~~GEI-3A-14 S-2~~	~~5/20~~	~~09:41~~	~~Soil~~	~~2V~~																						
5	GEI-5A-14 S1-2	5/20	15:15	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X					X
6	Drum 3870-3871	5/20	16:15	Soil	1J	X												X									X

	Signature	Company	Date	Time
Relinquished	[signature]	GeoEngineers	5/20/14	
Received	T. Hoa	Spog	5/20/14	
Relinquished				
Received	[signature]	OSE	5/21/14	0715
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
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Chain of Custody

Company: GeoEngineers
Project Number: 0144-444-00
Project Name: P-252 P-8A Hangar & Aircraft Apron
Project Manager: AJH/LCF
Sampled by: TKC/MWR

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 05-166

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	PAH 8310 (HDLD)				% Moisture
	GEI-5A-14 S-1	5/20	15:10	Soil	2V																					
	GEI-5A-14 S-2	5/20	15:15	Soil	2V																					
7	GEI-6A-14 S 1/2	5/19	17:00	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X				X
	GEI-6A-14 S 1/2	5/19	17:00	Soil	4V																					
8	GEI-8A-14 S 1/2	5/19	15:00	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X				X
	GEI-8A-14 S 1/2	5/19	15:00	Soil	4V																					
9	GEI-11A-14 S 1/2	5/19	12:40	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X				X
	GEI-11A-14 S 1/2	5/19	12:40	Soil	4V																					
10	GEI-12A-14 S 1/2	5/19	13:40	Soil	~~2J~~ 6			X	X	X		X		X	X			X				X				X
	GEI-12A-14 S 1/2	5/19	13:40	Soil	4V																					

	Signature	Company	Date	Time
Relinquished	[signature] / Mark Ross	GeoEngineers	5/20/14	6:30
Received	[signature]	SAS	5/20/14	6:30
Relinquished	[signature]	SPEEDY	5/21/14	7:00 AM
Received	[signature]	CORE	5/21/14	0700
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

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Chain of Custody

Company: GeoEngineers
Project Number: 0144-444-00
Project Name: P-252 P-8A Hanger + Aircraft Apron
Project Manager: AJH / LCF
Sampled by: TKC / MWR

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 05-166

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	PAH 8310 (HOLD)				% Moisture
11	GEI-7A-14 S 1/2	5/20	12:10	S	~~7~~ 6			X	X	X		X		X	X			X				X				X
	GEI-7A-14 S 1/2	5/20	12:10		HV																					
12	GEI-9A-14 S 1/2	5/20	8:10	S	~~7~~ 6			X	X	X		X		X	X			X				X				X
	GEI-9A-14 S 1/2	5/20	8:10		HV																					
13	GEI-10A-14 S 1/2	5/20	9:50	S	~~7~~ 6			X	X	X		X		X	X			X				X				X
14	GEI-16A-14 S 1/2	5/20	14:40	S	~~7~~ 6			X	X	X		X		X	X			X				X				X
	GEI-10A-14 S 1/2	5/20	9:50		HV																					
	GEI-16A-14 S 1/2	5/20	14:40		HV																					

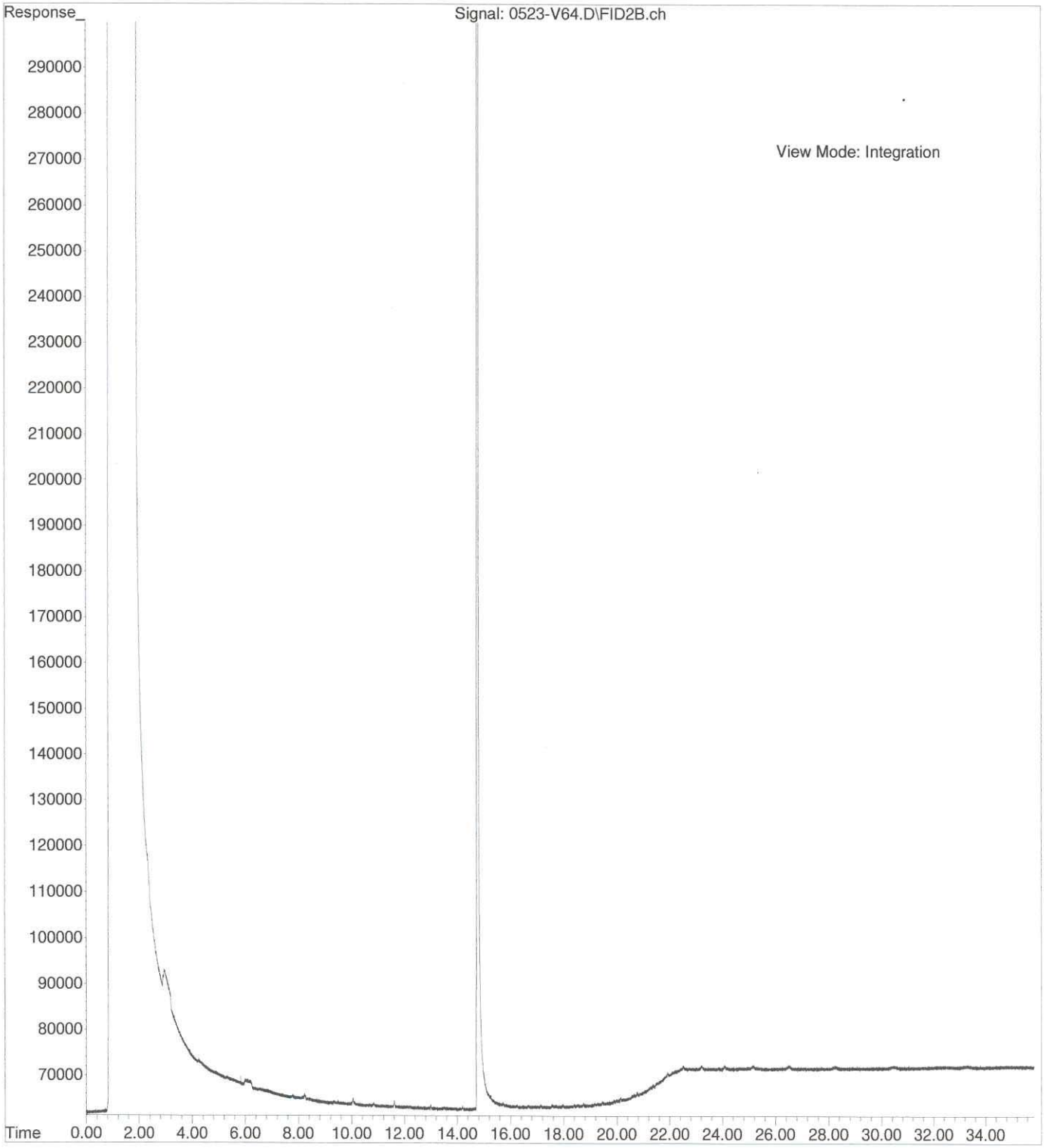
	Signature	Company	Date	Time
Relinquished	Mark Rose	GeoEngineers	5/20/14	1670
Received	[illegible]	Spry	5/20/14	1630
Relinquished				
Received	[illegible]	OSE	5/21/14	0715
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

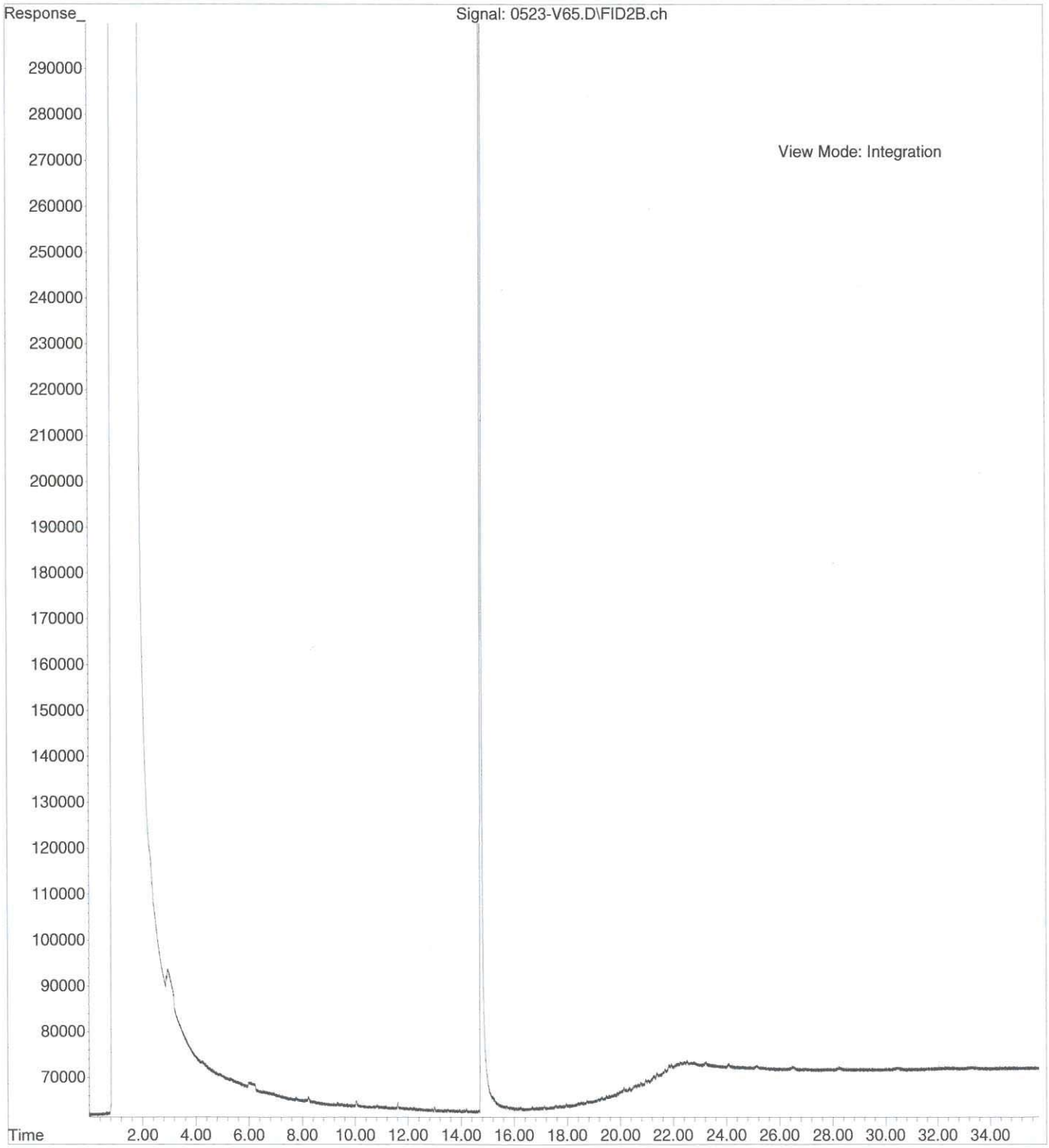
Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

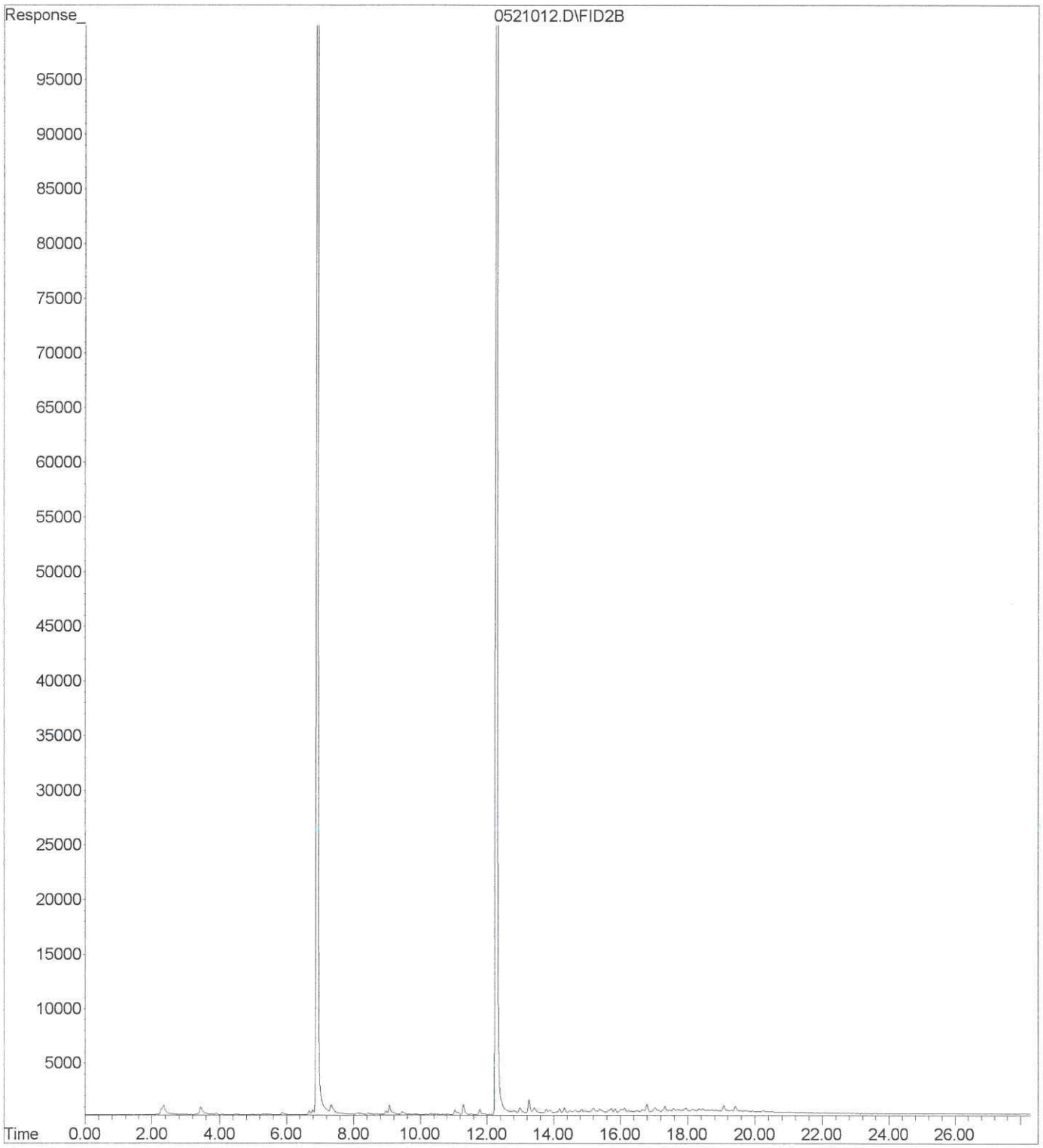
File :X:\DIESELS\VIGO\DATA\V140523.SEC\0523-V64.D
Operator :
Acquired : 23 May 2014 21:02 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-04
Misc Info :
Vial Number: 64



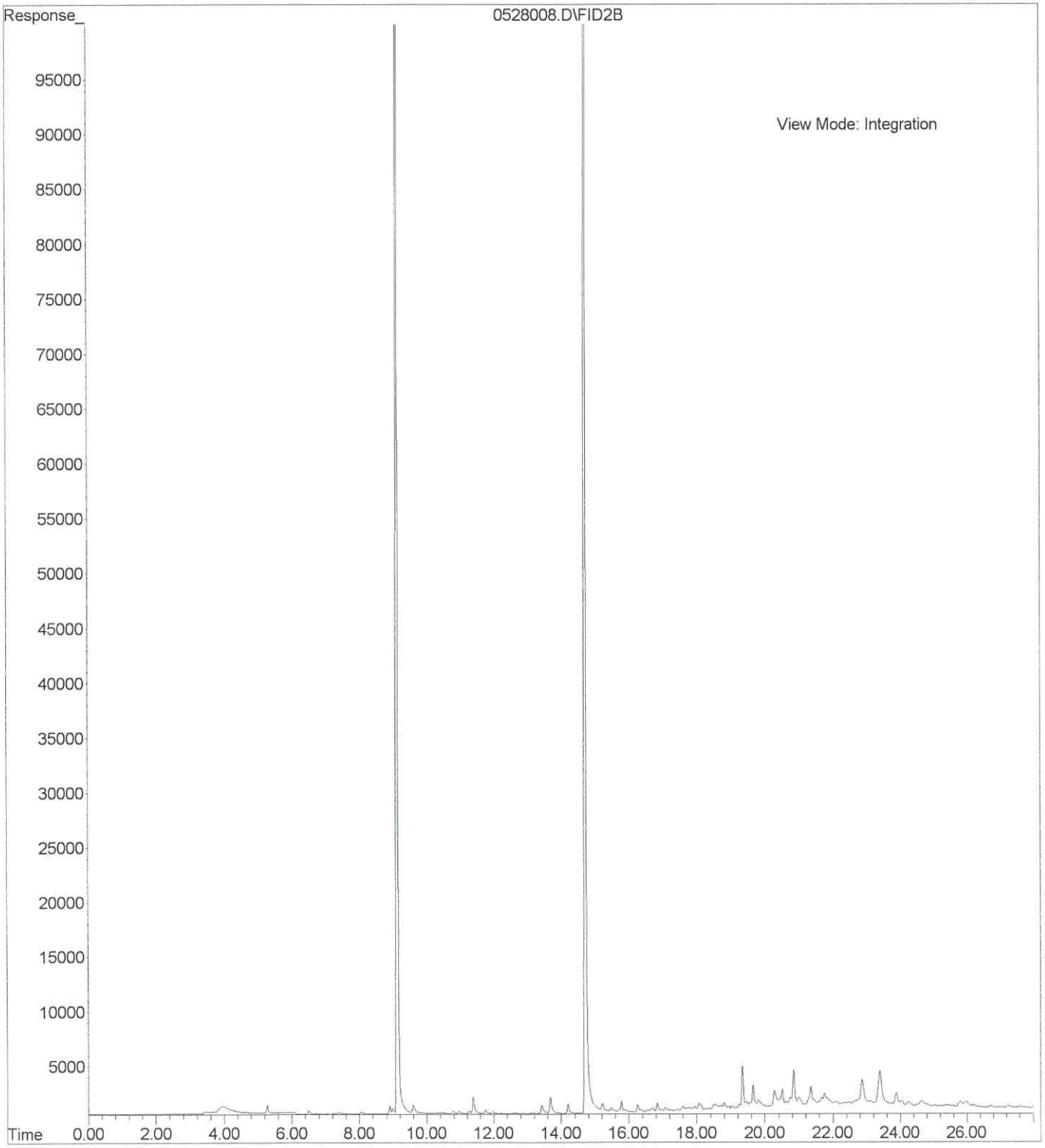
File :X:\DIESELS\VIGO\DATA\V140523.SEC\0523-V65.D
Operator :
Acquired : 23 May 2014 21:43 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-06
Misc Info :
Vial Number: 65



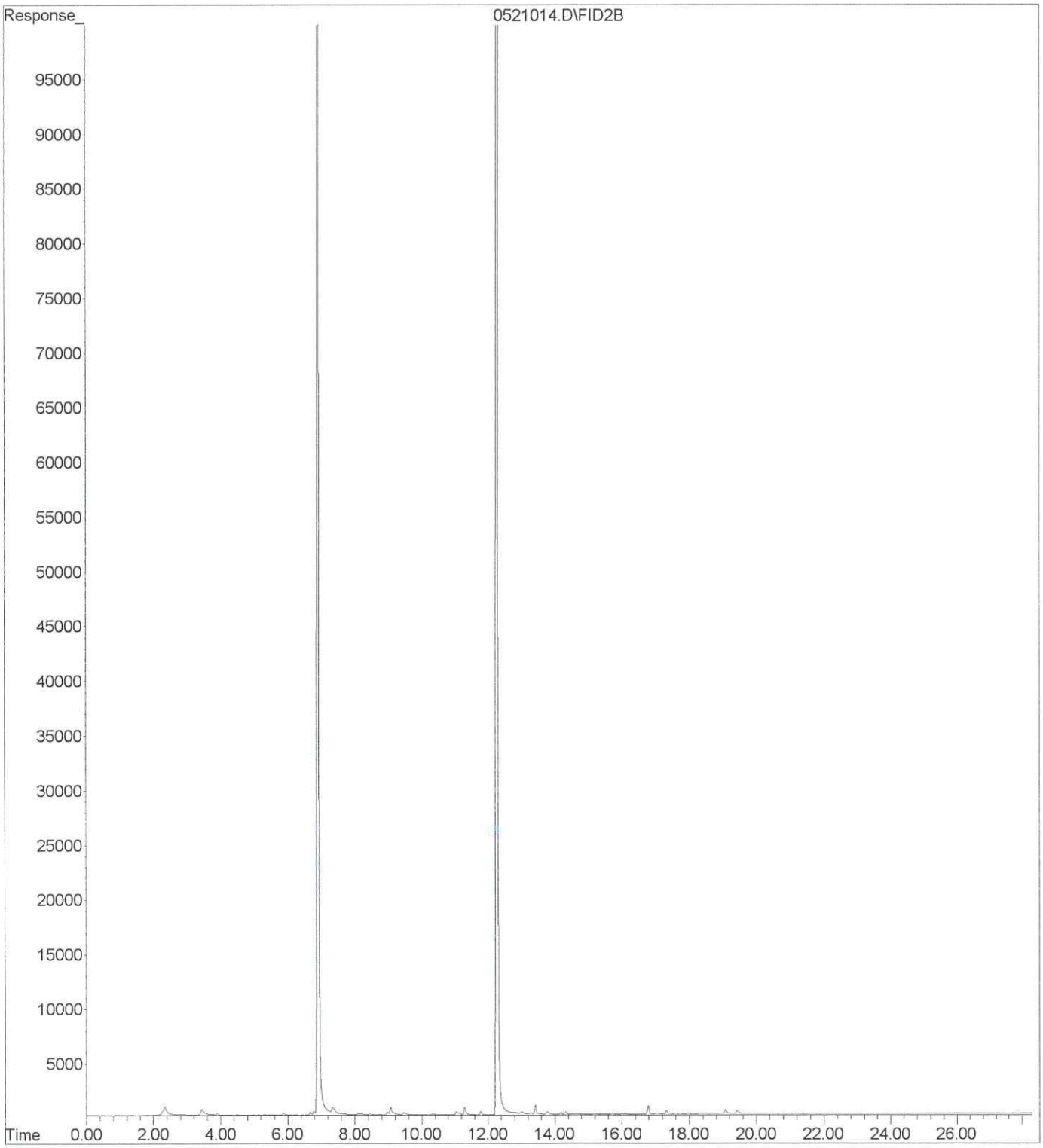
File : X:\BTEX\DARYL\DATA\D140521\0521012.D
Operator :
Acquired : 21 May 2014 18:39 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-01s
Misc Info : V2-34-26
Vial Number: 12



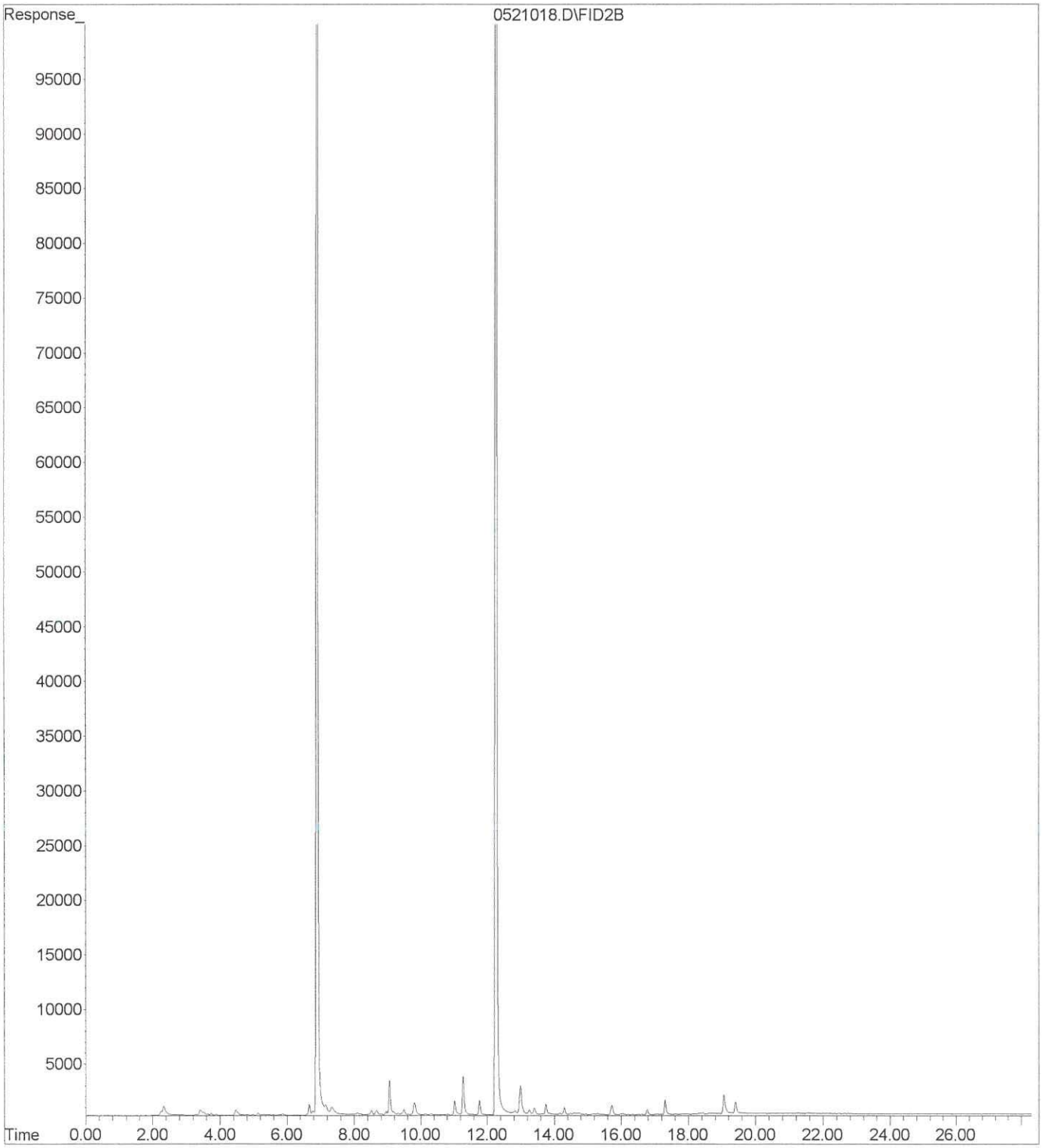
File : X:\BTEX\HOPE\DATA\H140528\0528008.D
Operator :
Acquired : 28 May 2014 14:08 using AcqMethod 140508B.M
Instrument : HOPE
Sample Name: 04-166-03s RRR
Misc Info : V2-34-26
Vial Number: 8



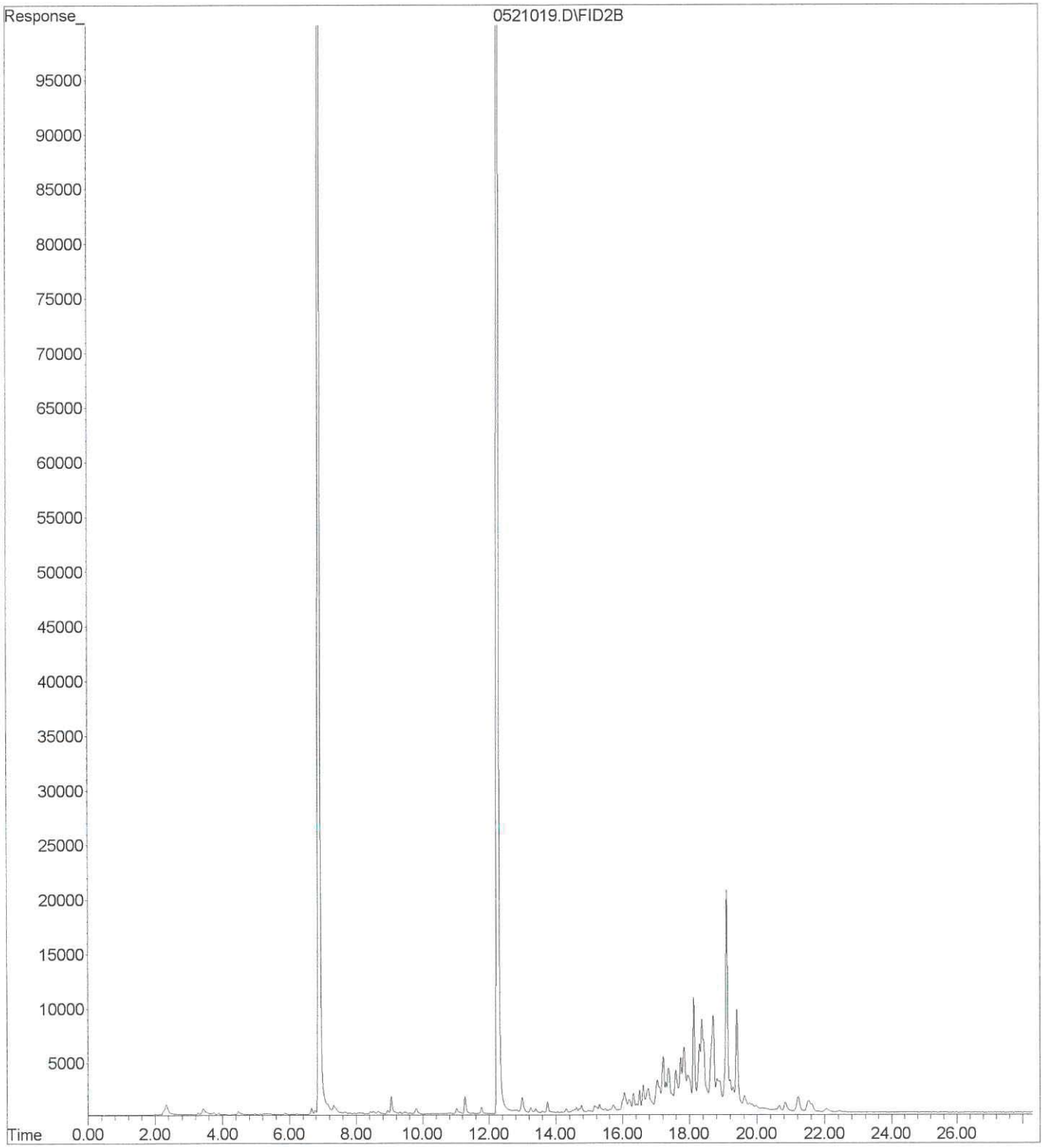
File : X:\BTEX\DARYL\DATA\D140521\0521014.D
Operator :
Acquired : 21 May 2014 19:46 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-05s
Misc Info : V2-34-26
Vial Number: 14



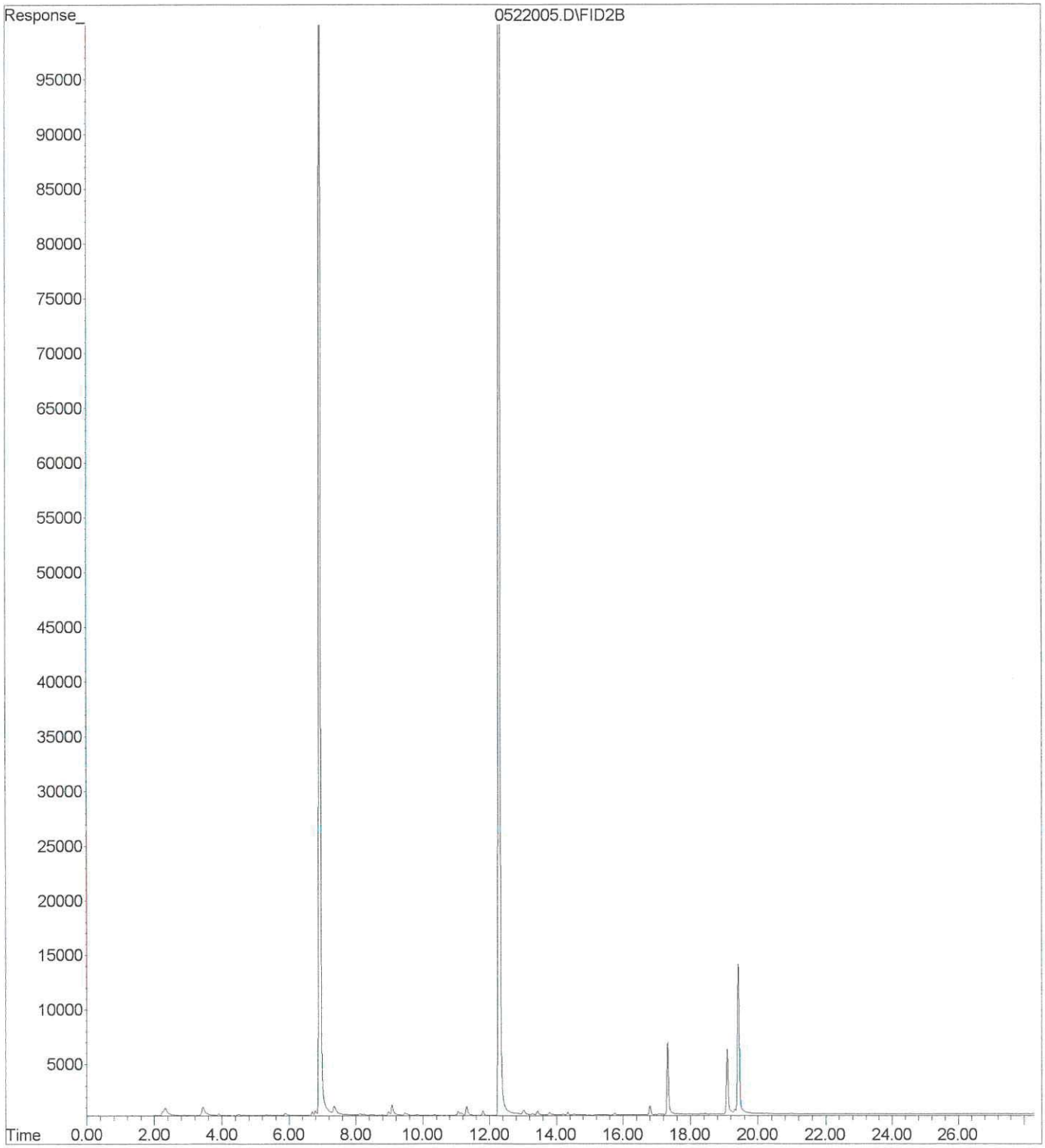
File : X:\BTEX\DARYL\DATA\D140521\0521018.D
Operator :
Acquired : 21 May 2014 21:59 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-07s
Misc Info : V2-34-26
Vial Number: 18



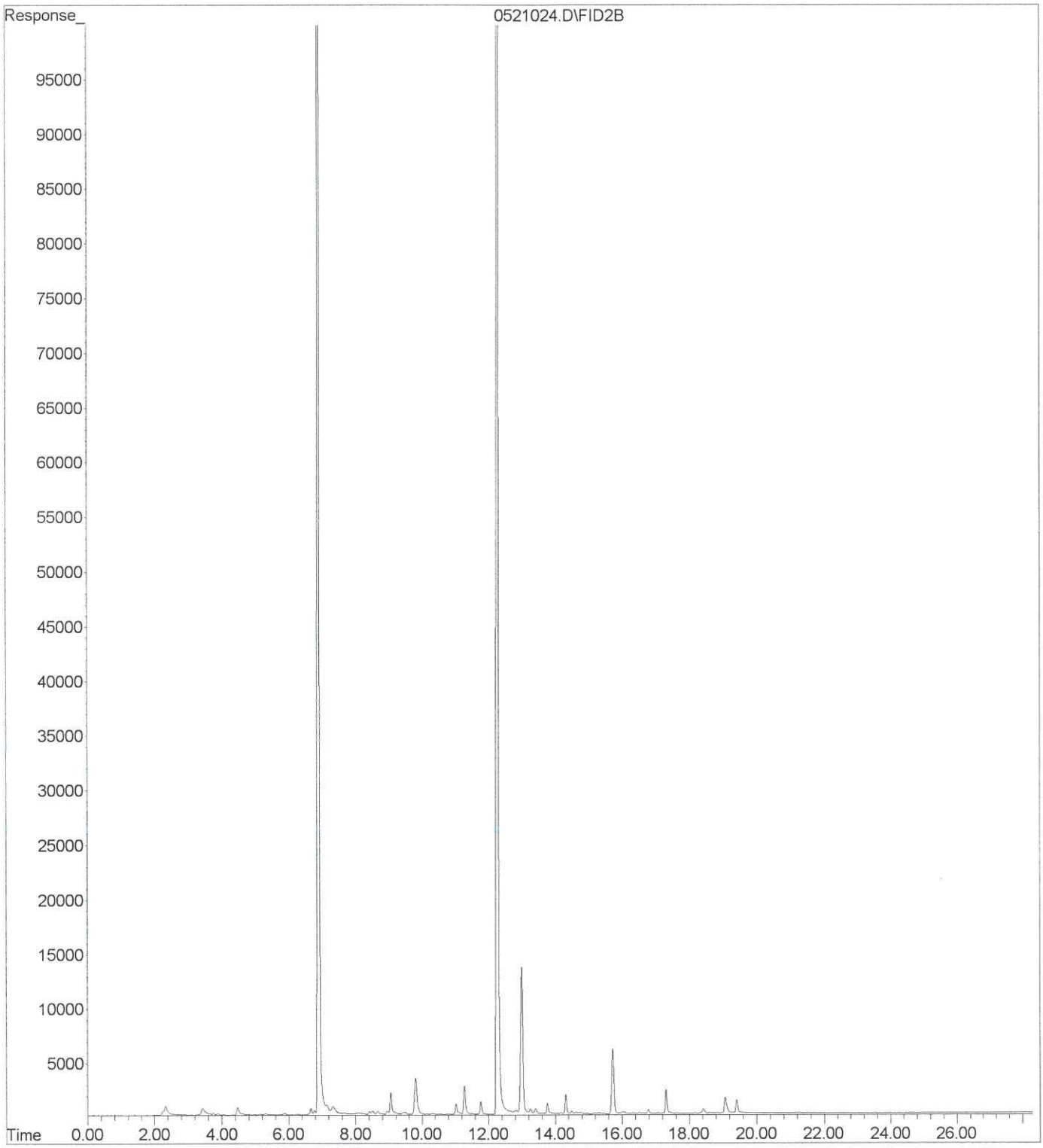
File : X:\BTEX\DARYL\DATA\D140521\0521019.D
Operator :
Acquired : 21 May 2014 22:33 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-08s
Misc Info : V2-34-26
Vial Number: 19



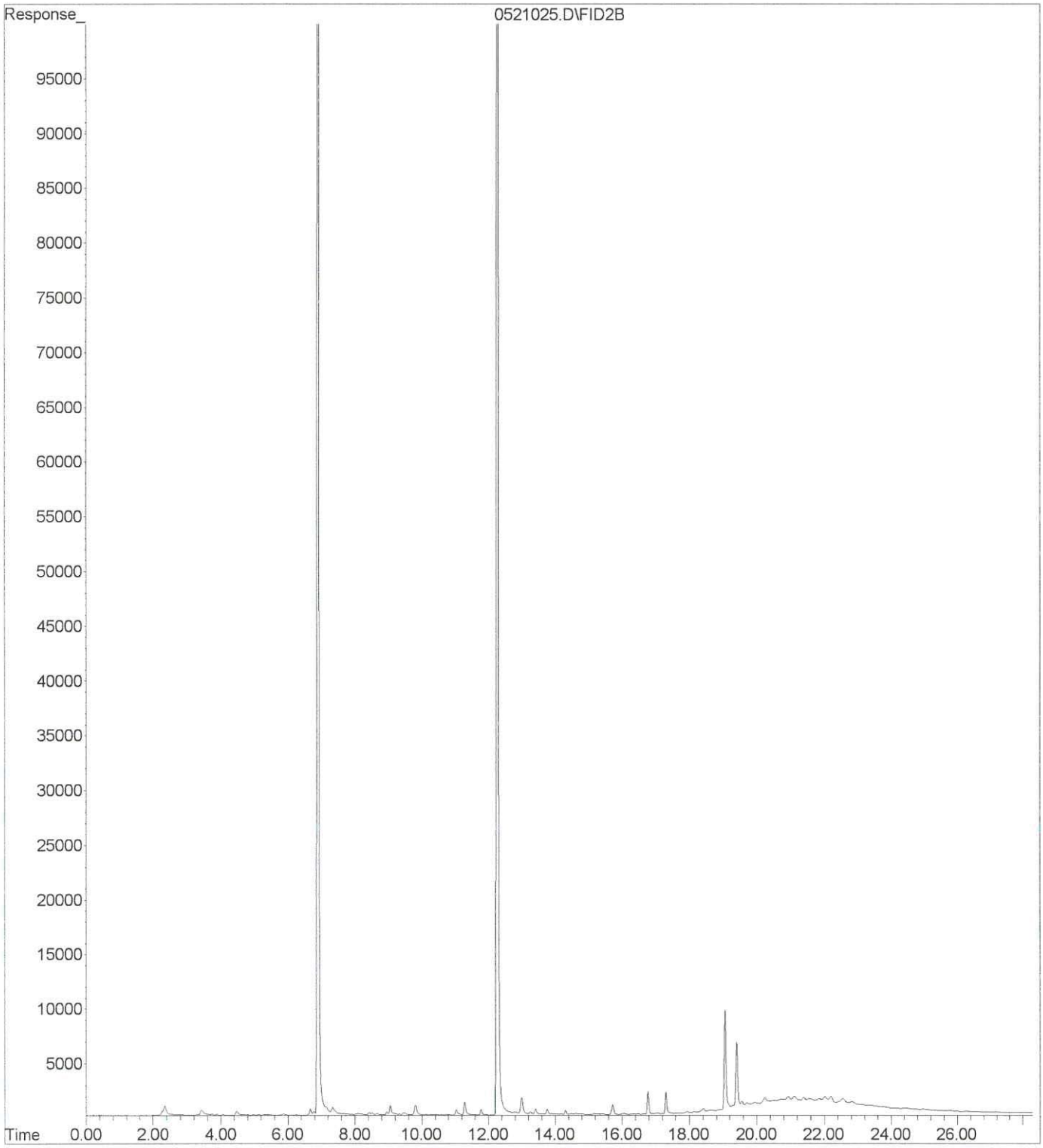
File : X:\BTEX\DARYL\DATA\D140522\0522005.D
Operator :
Acquired : 22 May 2014 13:48 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-09s RR
Misc Info : V2-34-26
Vial Number: 5



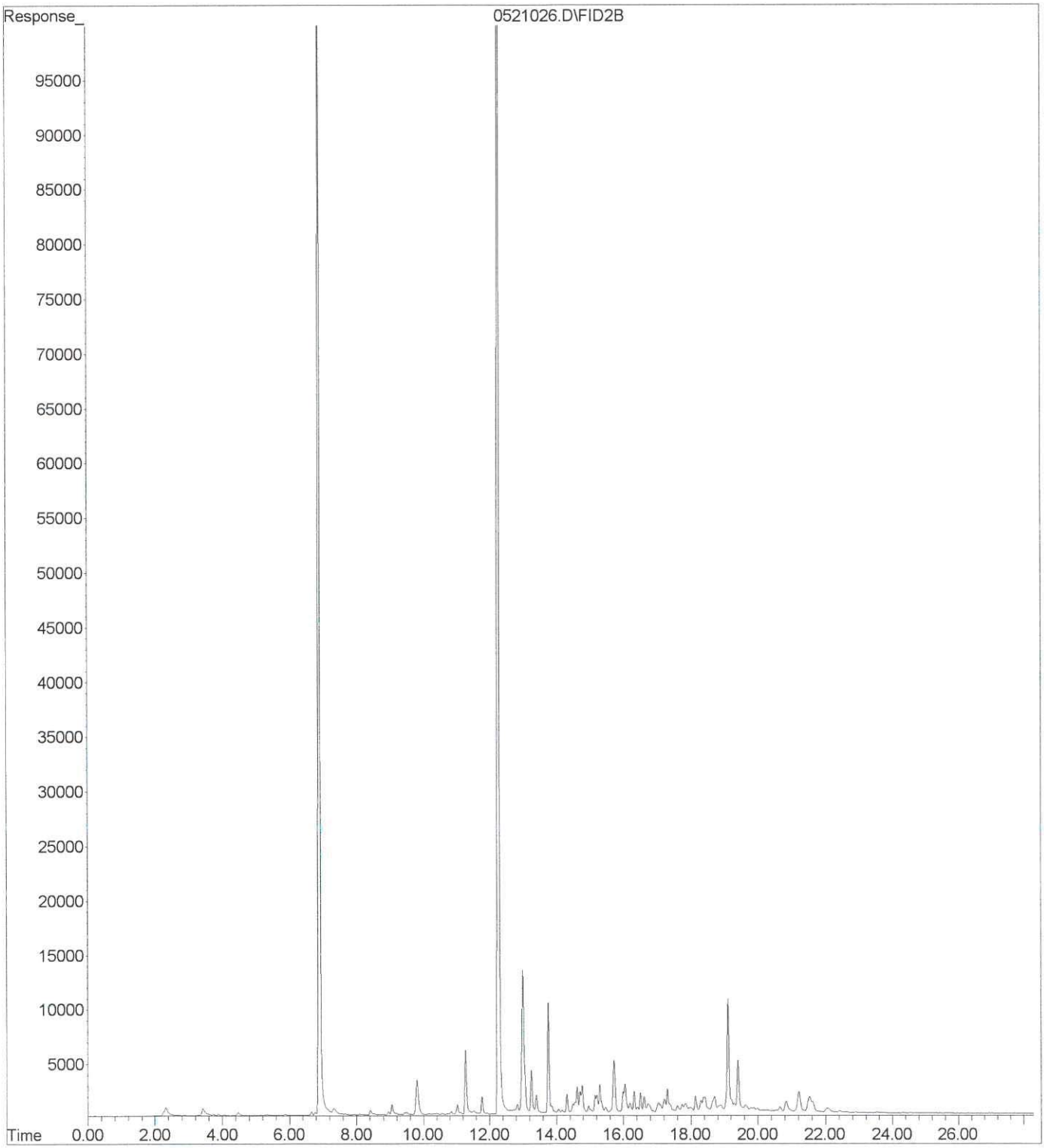
File : X:\BTEX\DARYL\DATA\D140521\0521024.D
Operator :
Acquired : 22 May 2014 1:19 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-10s
Misc Info : V2-34-26
Vial Number: 24



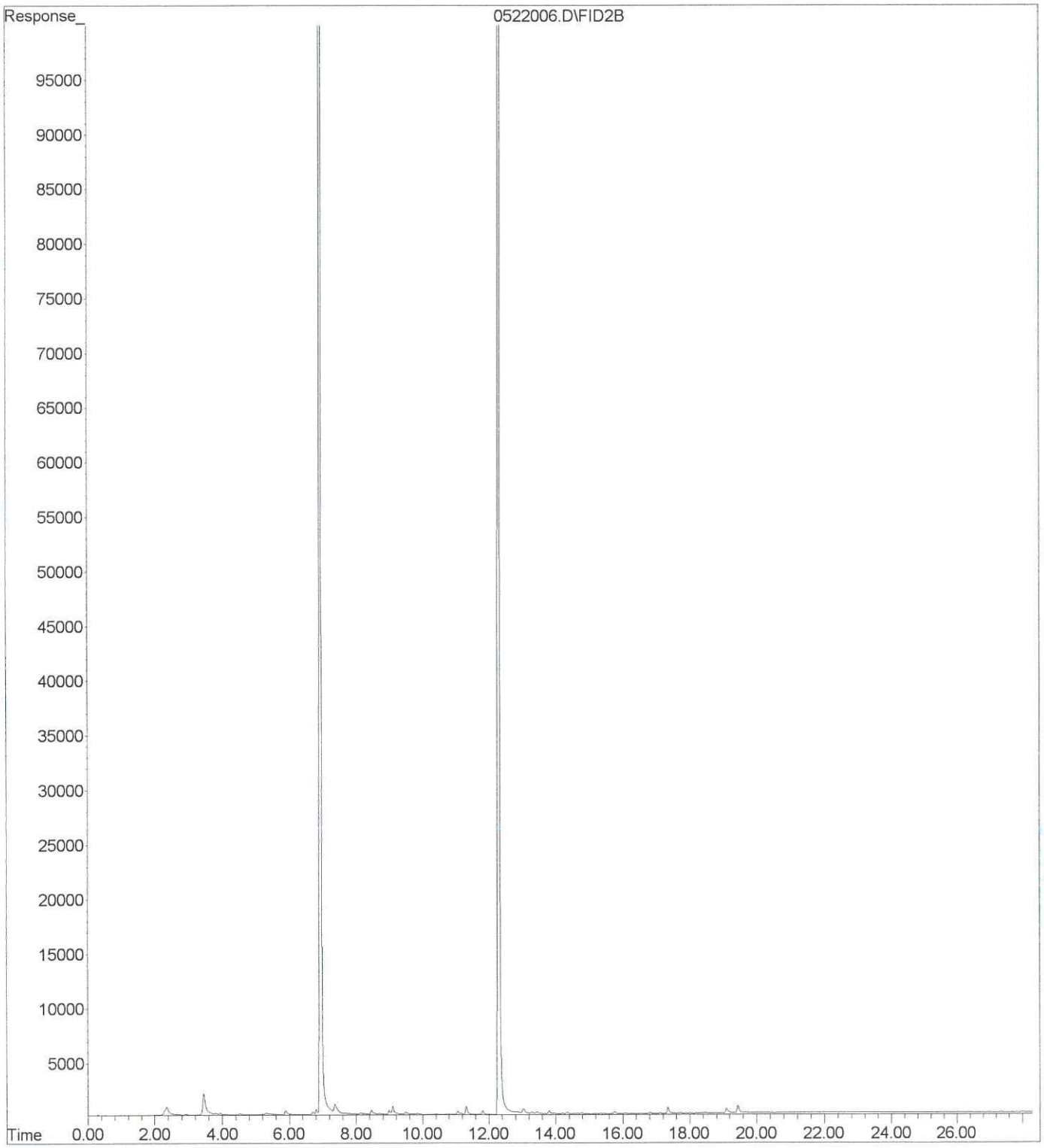
File : X:\BTEX\DARYL\DATA\D140521\0521025.D
Operator :
Acquired : 22 May 2014 1:52 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-11s
Misc Info : V2-34-26
Vial Number: 25



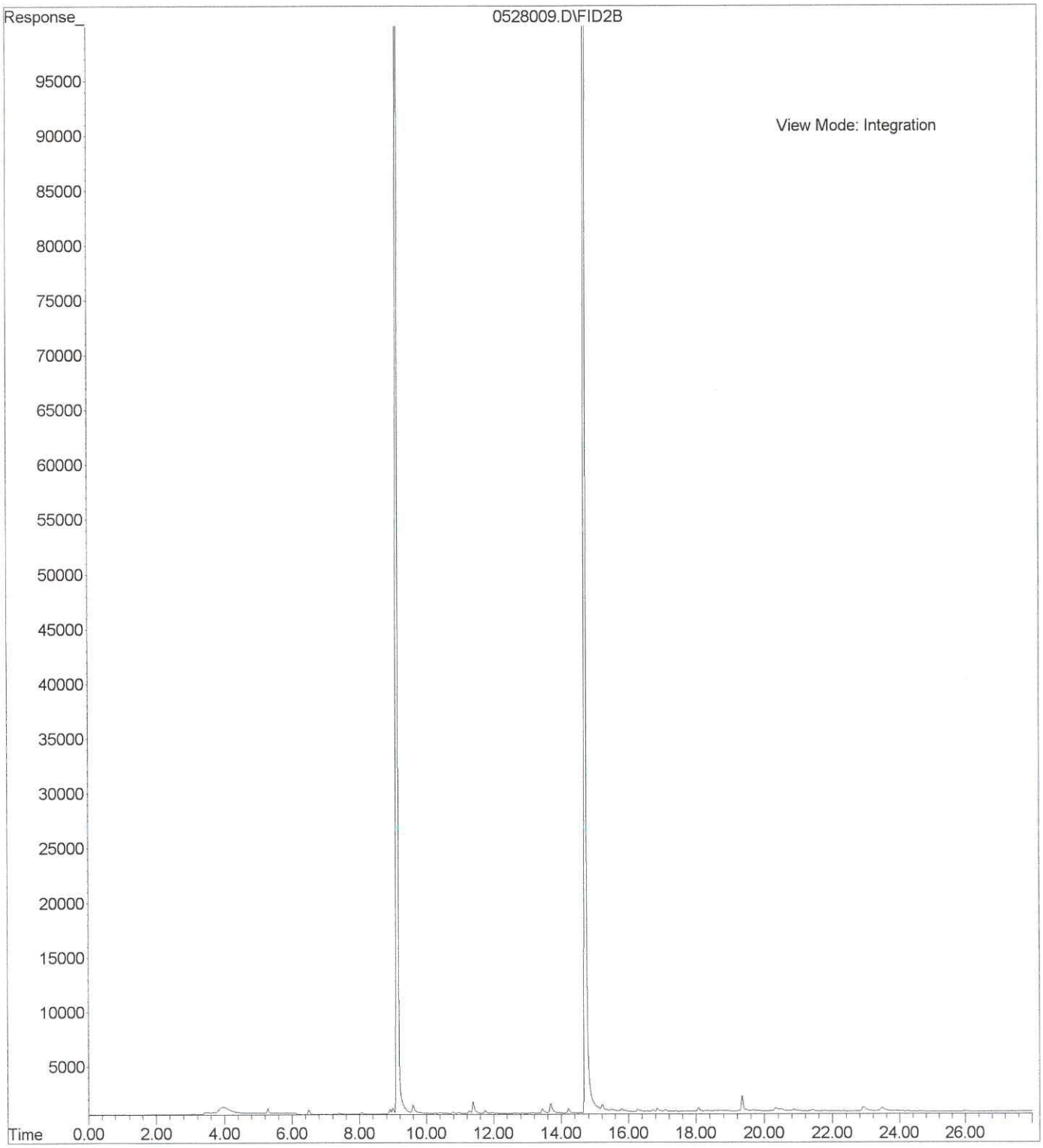
File : X:\BTEX\DARYL\DATA\D140521\0521026.D
Operator :
Acquired : 22 May 2014 2:26 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-12s
Misc Info : V2-34-26
Vial Number: 26



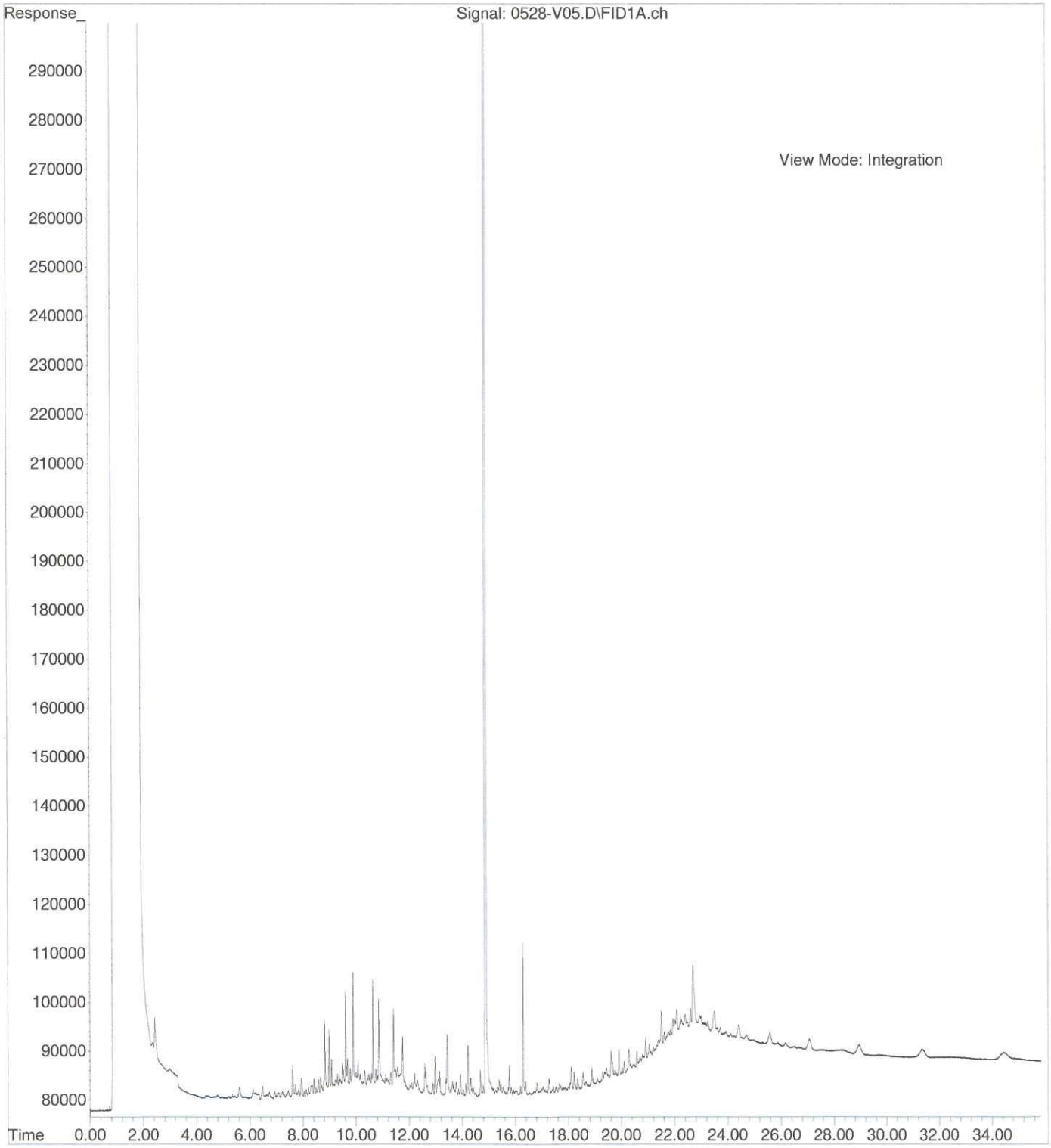
File : X:\BTEX\DARYL\DATA\D140522\0522006.D
Operator :
Acquired : 22 May 2014 14:26 using AcqMethod 140508B.M
Instrument : Daryl
Sample Name: 05-166-13s RR
Misc Info : V2-34-26
Vial Number: 6



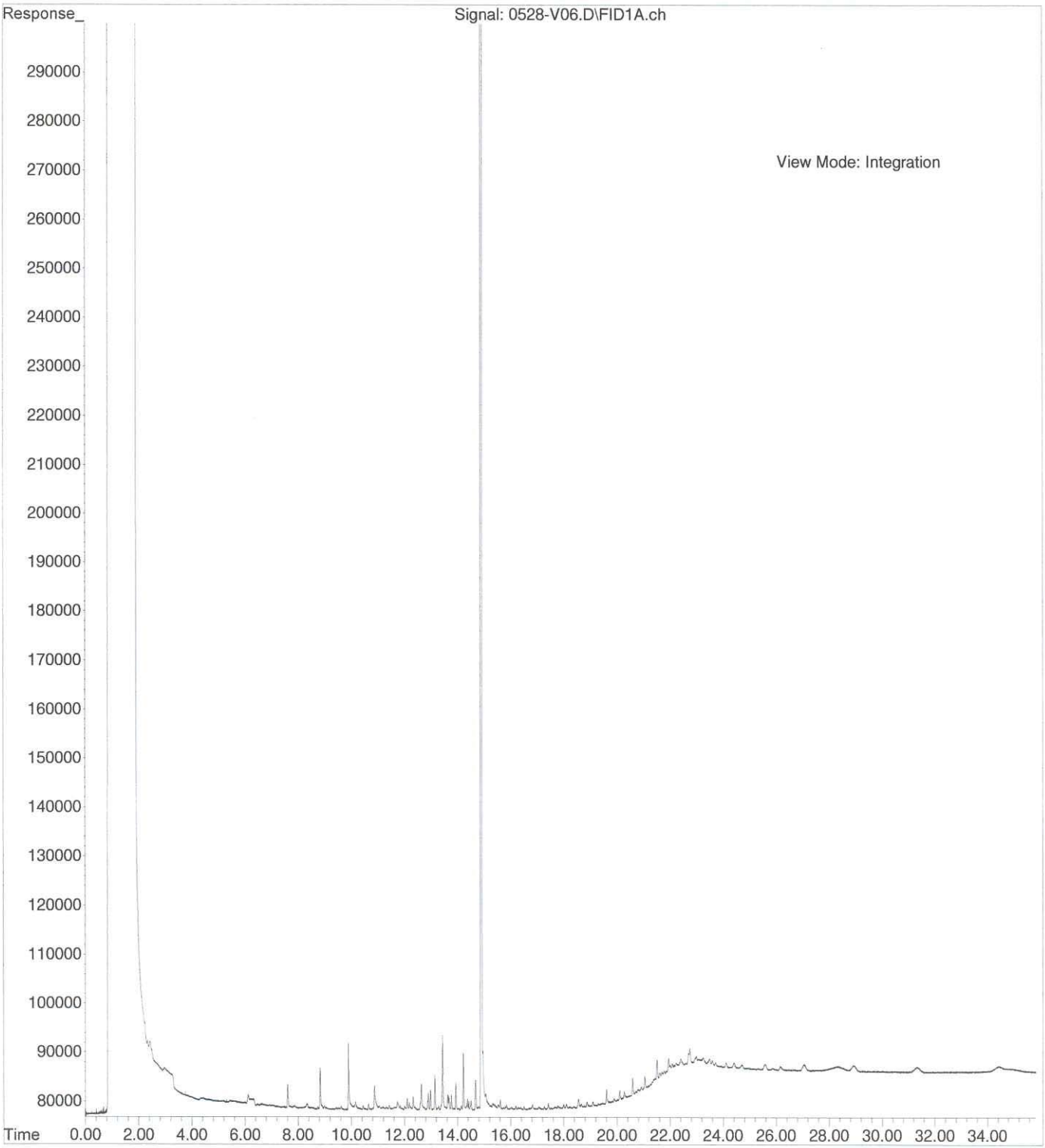
File : X:\BTEX\HOPE\DATA\H140528\0528009.D
Operator :
Acquired : 28 May 2014 14:42 using AcqMethod 140508B.M
Instrument : HOPE
Sample Name: 04-166-14s RRR
Misc Info : V2-34-26
Vial Number: 9



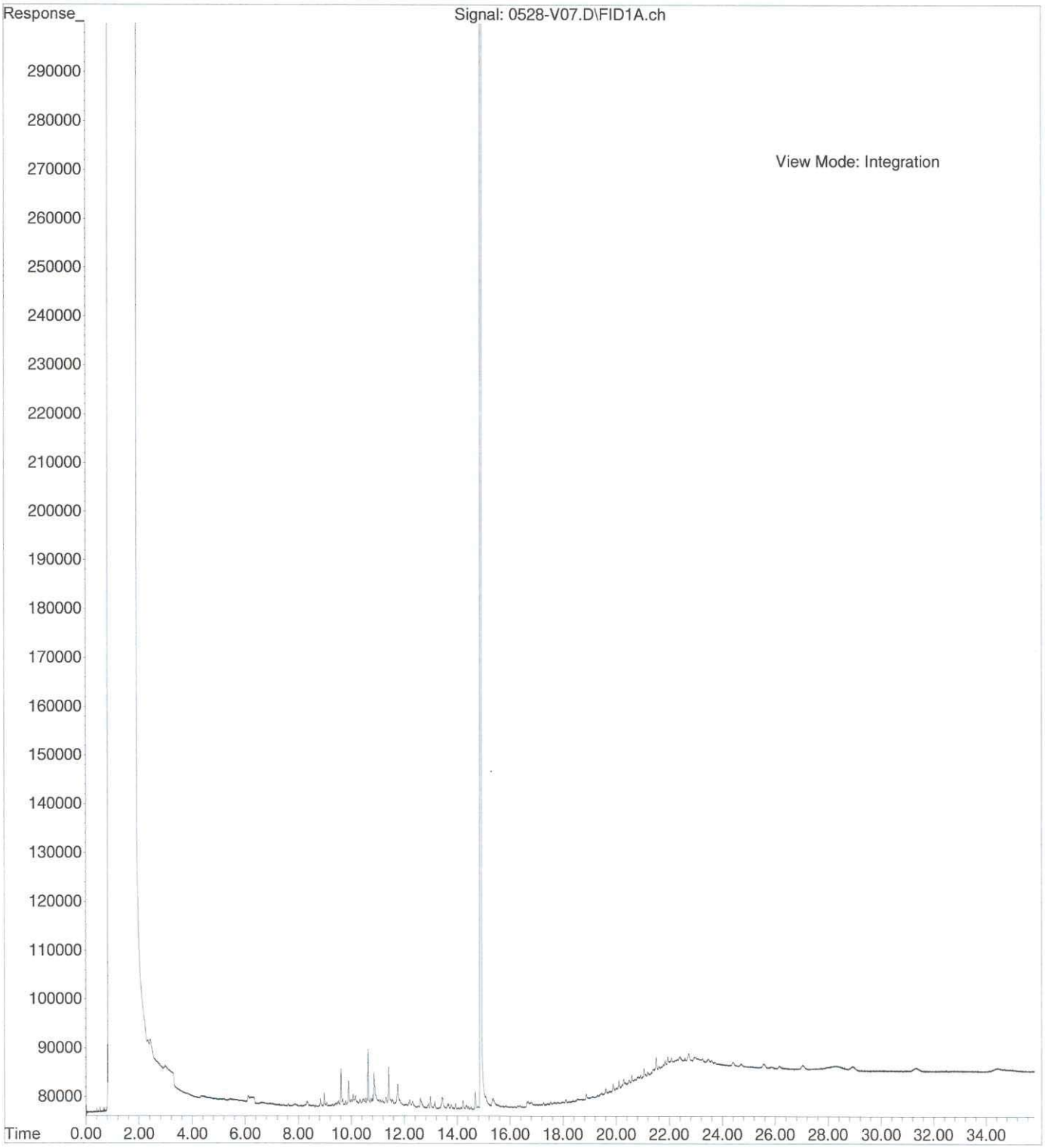
File :X:\DIESELS\VIGO\DATA\V140528\0528-V05.D
Operator :
Acquired : 28 May 2014 16:33 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-01
Misc Info :
Vial Number: 5



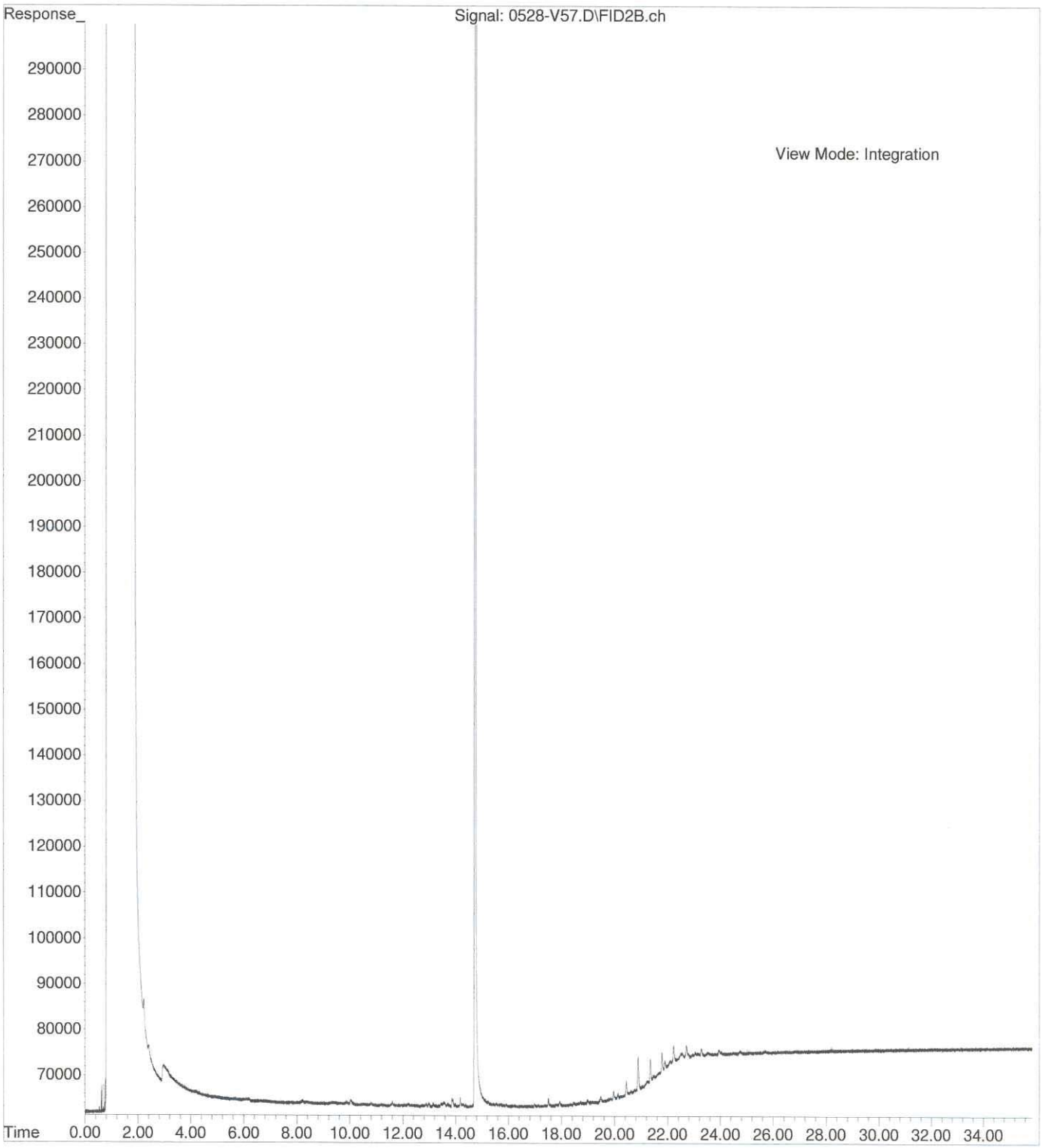
File :X:\DIESELS\VIGO\DATA\V140528\0528-V06.D
Operator :
Acquired : 28 May 2014 17:14 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-03
Misc Info :
Vial Number: 6



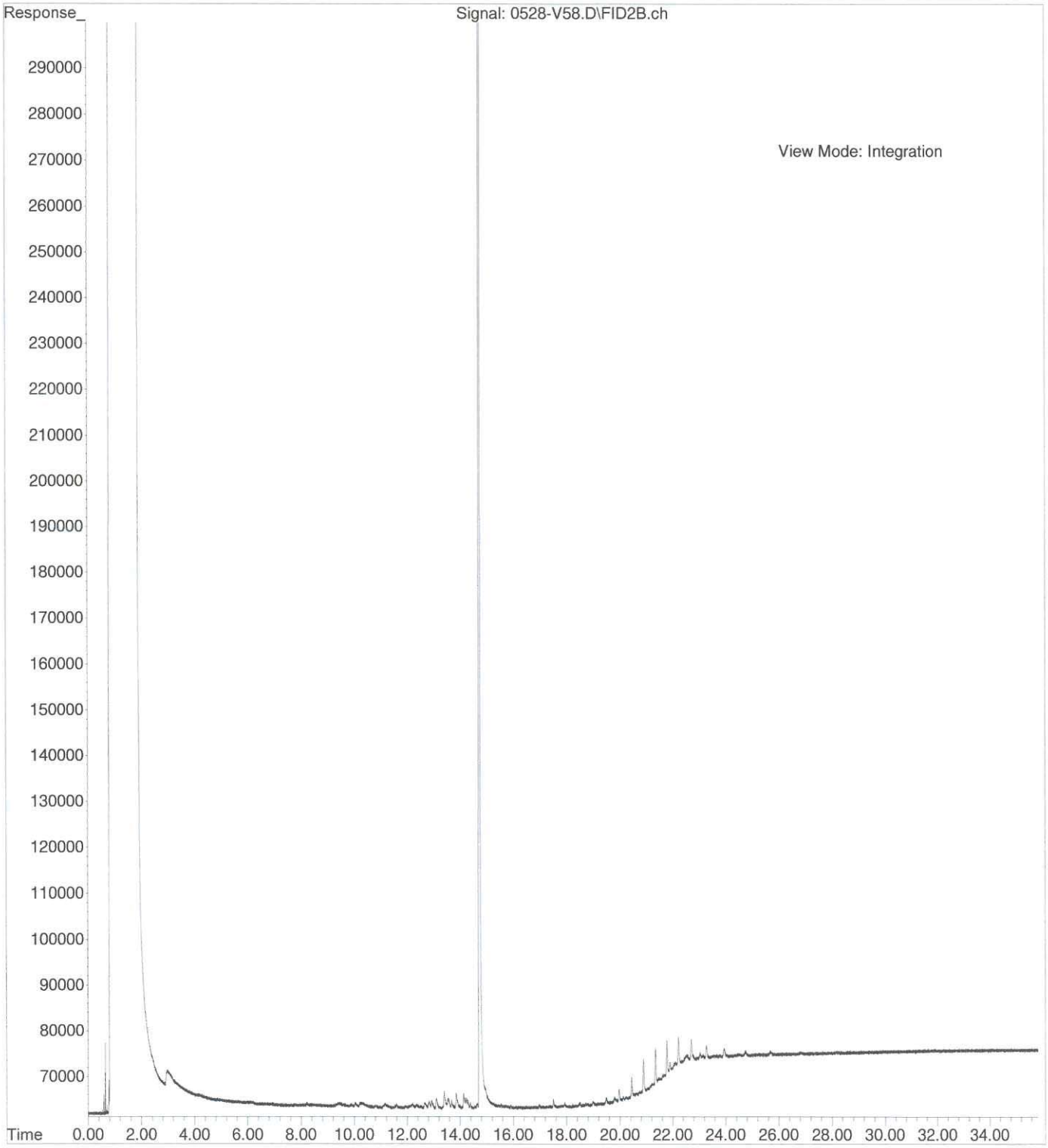
File :X:\DIESELS\VIGO\DATA\V140528\0528-V07.D
Operator :
Acquired : 28 May 2014 17:55 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-05
Misc Info :
Vial Number: 7



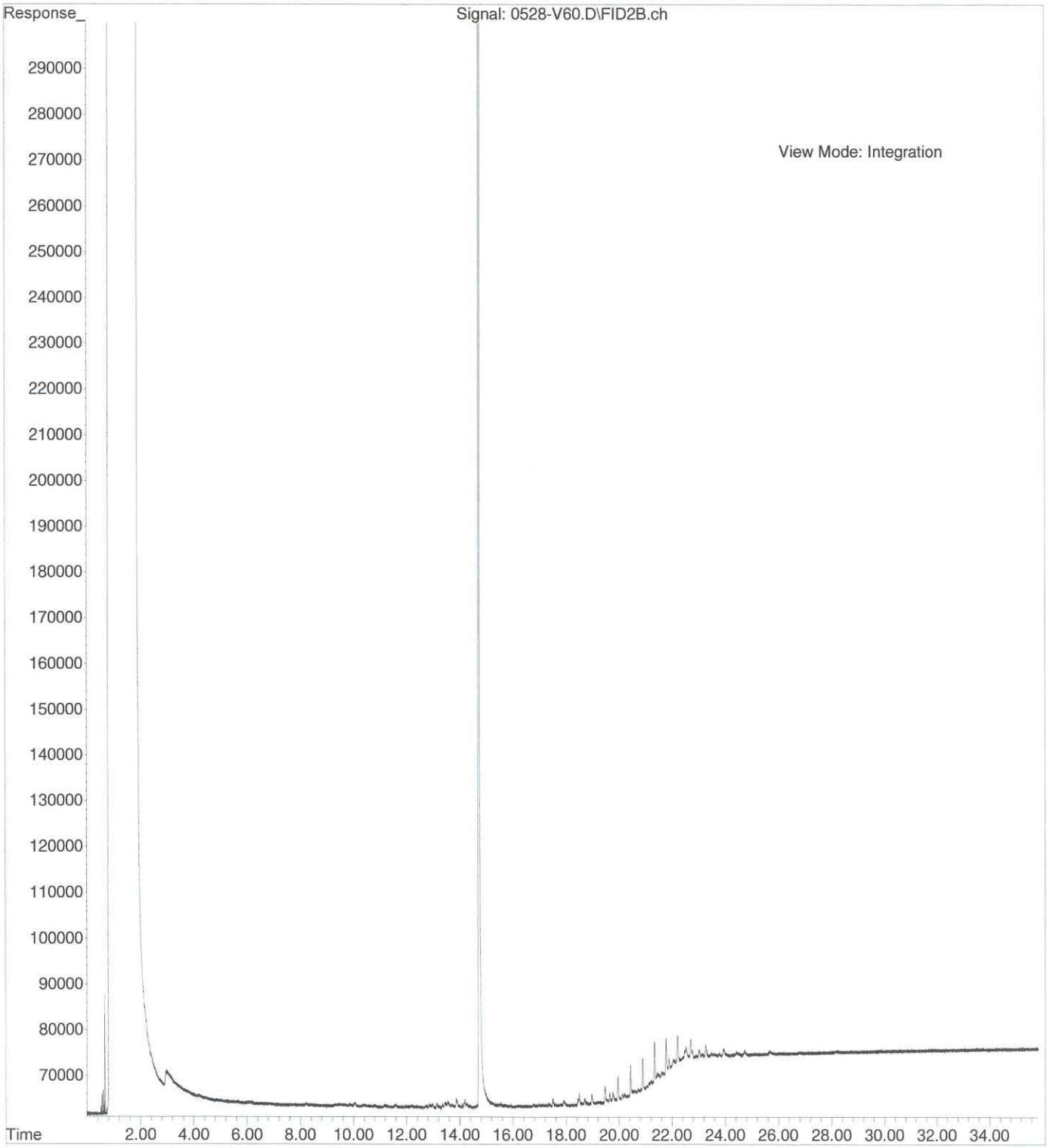
File :X:\DIESELS\VIGO\DATA\V140528.SEC\0528-V57.D
Operator :
Acquired : 28 May 2014 17:55 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-07
Misc Info :
Vial Number: 57



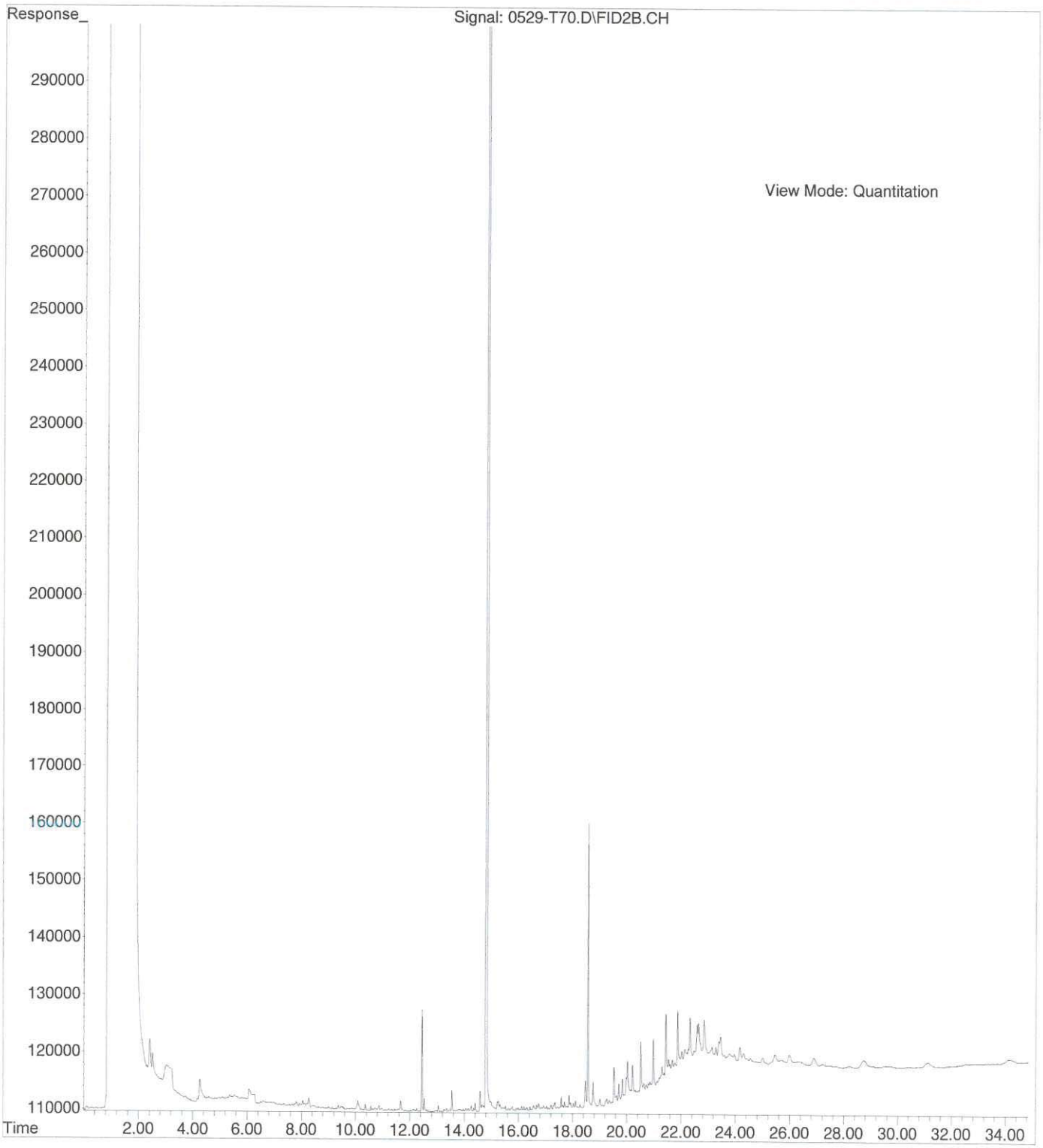
File :X:\DIESELS\VIGO\DATA\V140528.SEC\0528-V58.D
Operator :
Acquired : 28 May 2014 18:36 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-08
Misc Info :
Vial Number: 58



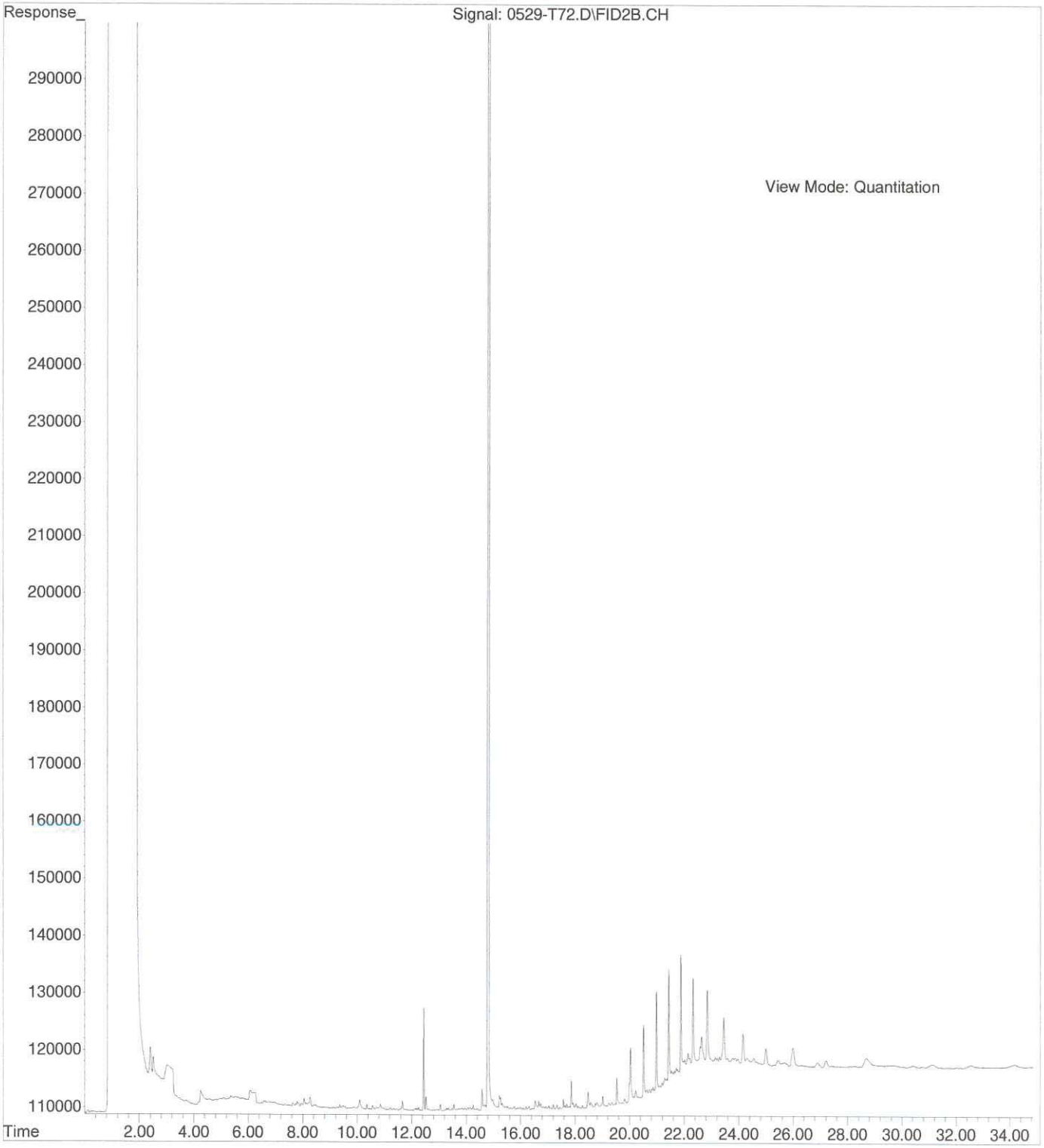
File :X:\DIESELS\VIGO\DATA\V140528.SEC\0528-V60.D
Operator :
Acquired : 28 May 2014 19:58 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-09
Misc Info :
Vial Number: 60



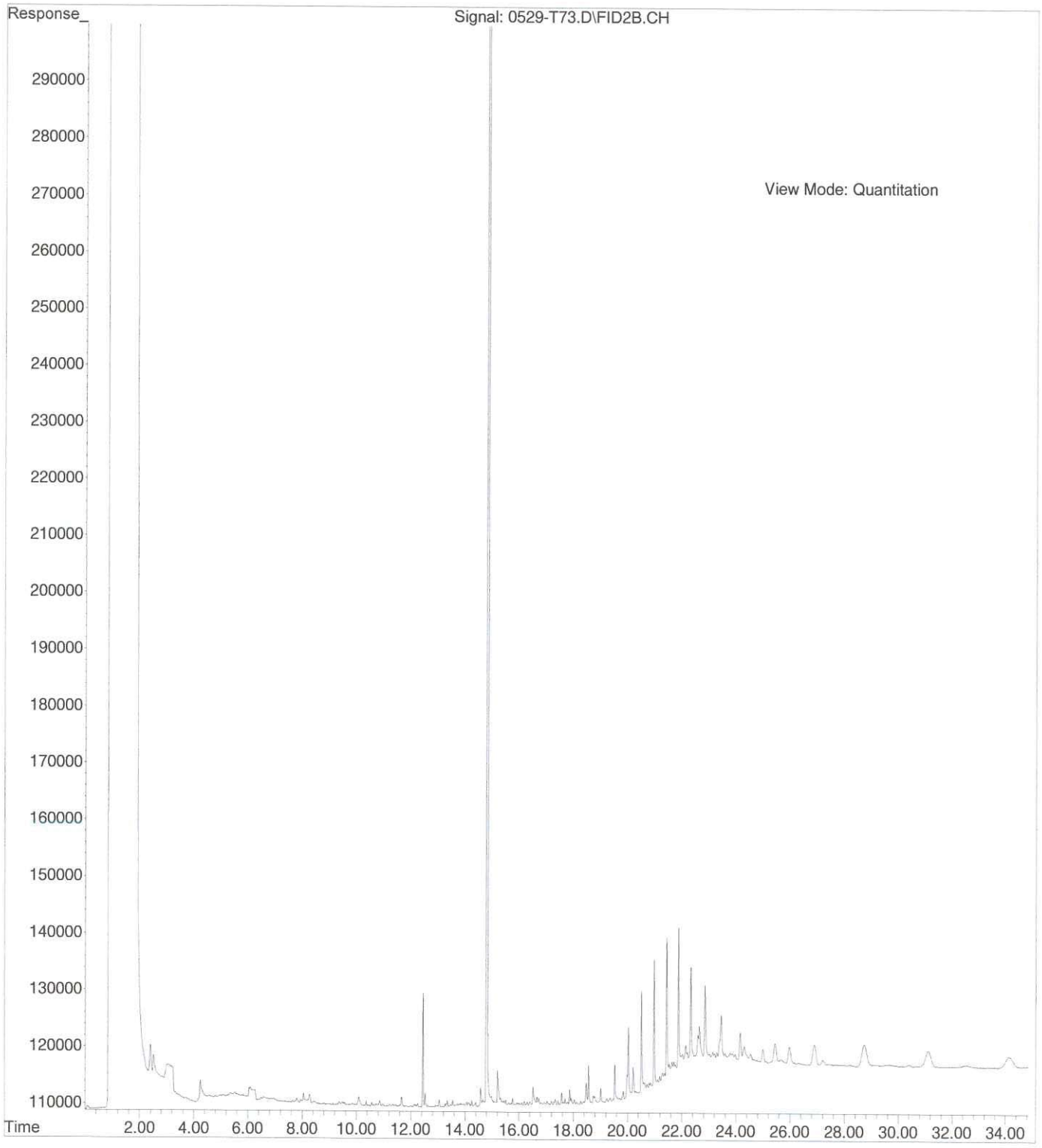
File :X:\DIESELS\TERI\DATA\T140529.SEC\0529-T70.D
Operator : ZT
Acquired : 30 May 2014 2:37 using AcqMethod T140401F.M
Instrument : Teri
Sample Name: 05-166-10 REX
Misc Info :
Vial Number: 70



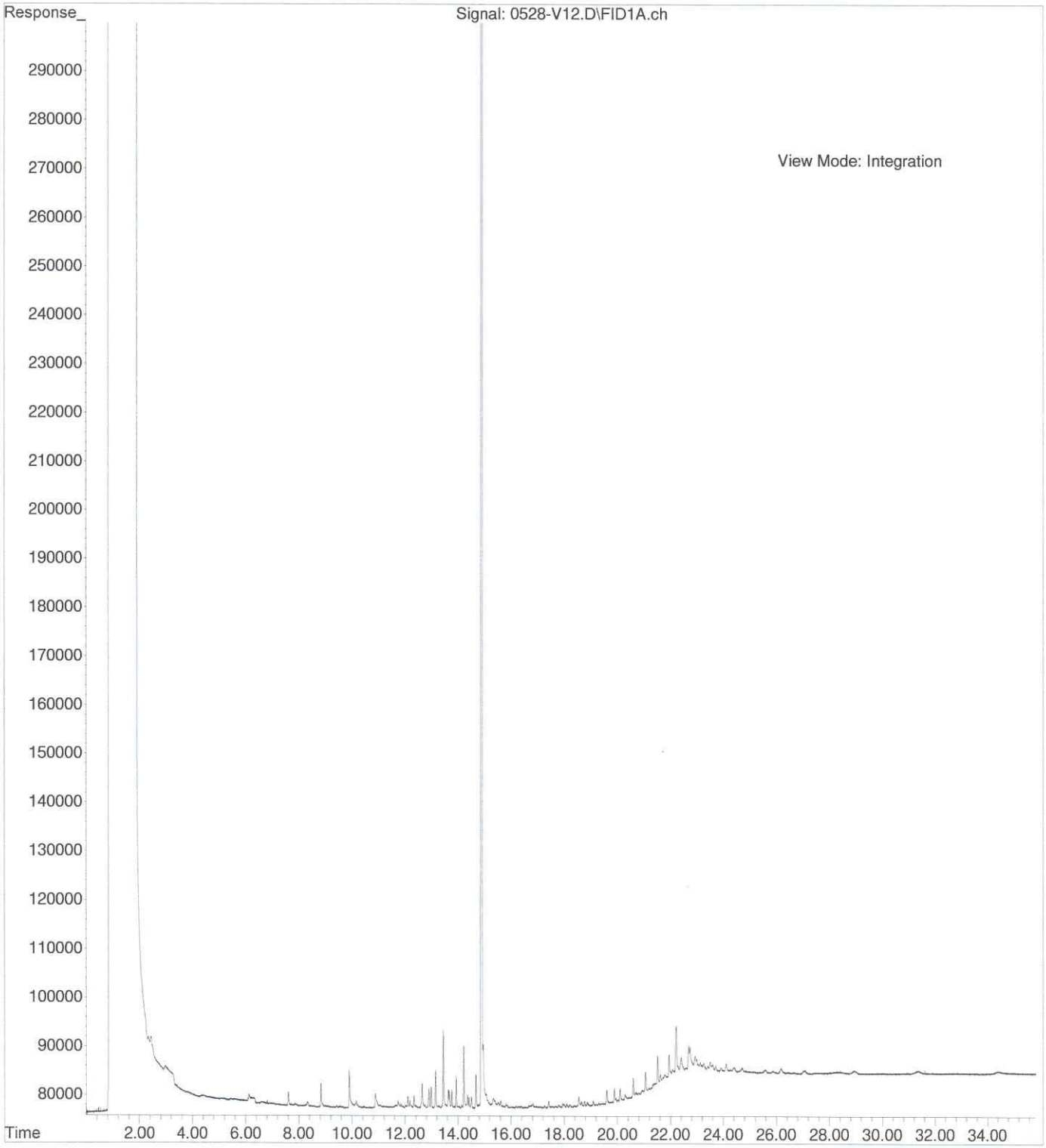
File :X:\DIESELS\TERI\DATA\T140529.SEC\0529-T72.D
Operator : ZT
Acquired : 30 May 2014 4:01 using AcqMethod T140401F.M
Instrument : Teri
Sample Name: 05-166-11 REX
Misc Info :
Vial Number: 72



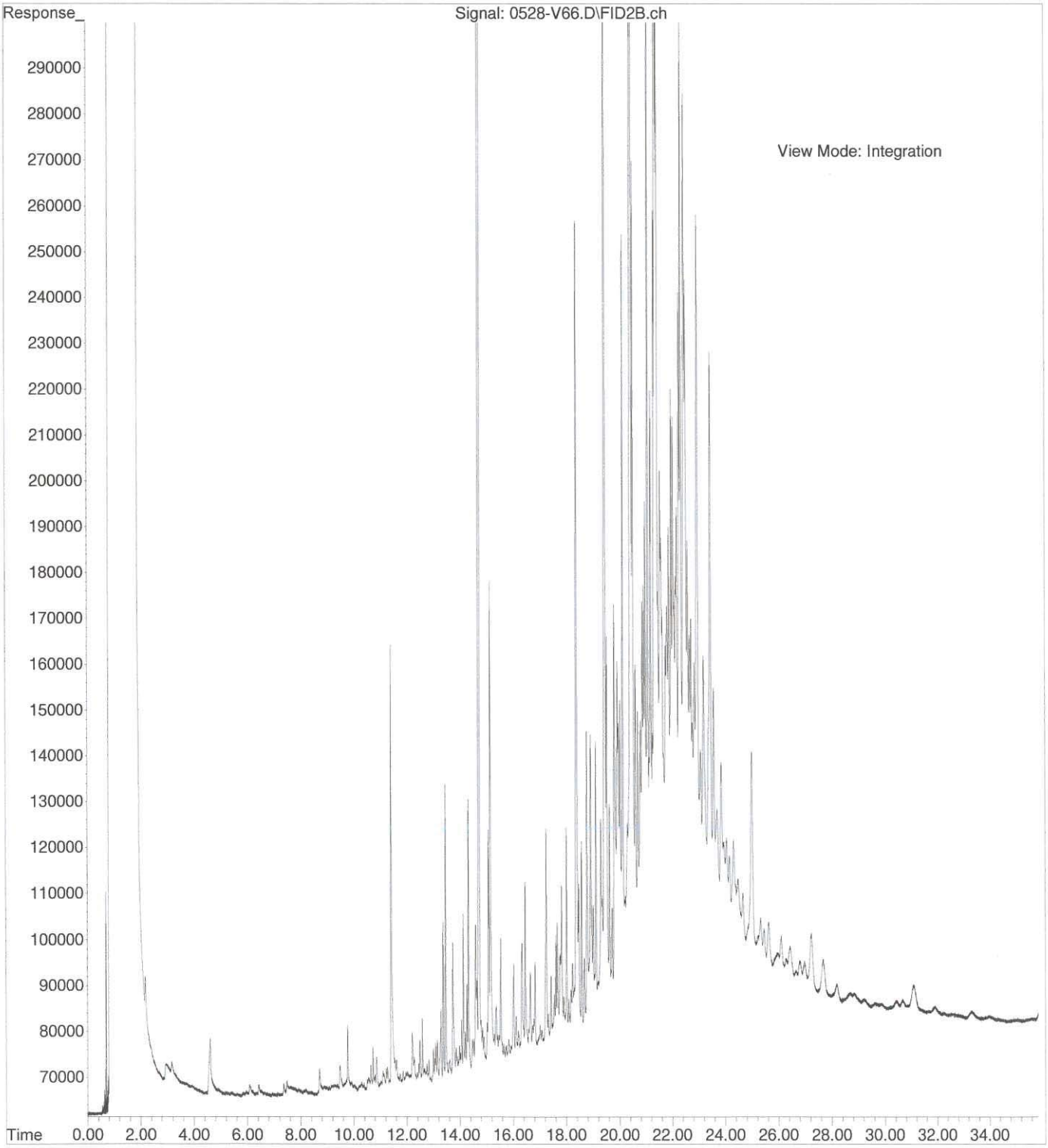
File :X:\DIESELS\TERI\DATA\T140529.SEC\0529-T73.D
Operator : ZT
Acquired : 30 May 2014 4:43 using AcqMethod T140401F.M
Instrument : Teri
Sample Name: 05-166-12 REX
Misc Info :
Vial Number: 73



File :X:\DIESELS\VIGO\DATA\V140528\0528-V12.D
Operator :
Acquired : 28 May 2014 21:19 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-13
Misc Info :
Vial Number: 12



File :X:\DIESELS\VIGO\DATA\V140528.SEC\0528-V66.D
Operator :
Acquired : 29 May 2014 00:03 using AcqMethod V140210F.M
Instrument : Vigo
Sample Name: 05-166-14
Misc Info :
Vial Number: 66



OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 5, 2014

Lindsay Flangas
GeoEngineers, Inc.
8410 154th Avenue NE
Redmond, WA 98052

Re: Analytical Data for Project 0144-444-00
Laboratory Reference No. 1405-195

Dear Lindsay:

Enclosed are the analytical results and associated quality control data for samples submitted on May 23, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

Case Narrative

Samples were collected on May 21 and 22, 2014 and received by the laboratory on May 23, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

The values reported for Acetone and 2-Butanone in sample GEI-19A-14 S1-2 exceed the calibration range and are therefore estimates. The sample was re-analyzed at the lowest possible dilution allowed by Method 5035A with non-detect results for both compounds.

Semivolatiles EPA 8270D/SIM Analysis

Sample GEI-17A-14 S1-2, GEI-18A-14 S1-2, GEI-13A-14 S1-2, GEI-1A-14 S1-2, GEI-2A-14 S1-2 and a matrix spike had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-17A-14 S1-2	05-195-01	Soil	5-21-14	5-23-14	
GEI-18A-14 S1-2	05-195-02	Soil	5-21-14	5-23-14	
GEI-13A-14 S1-2	05-195-03	Soil	5-21-14	5-23-14	
GEI-15A-14 S1-2	05-195-04	Soil	5-21-14	5-23-14	
GEI-14A-14 S1-2	05-195-05	Soil	5-21-14	5-23-14	
Drum 5023-5024	05-195-06	Soil	5-21-14	5-23-14	
Drum 5025-5026	05-195-07	Soil	5-21-14	5-23-14	
Drum 5027-5028	05-195-08	Soil	5-21-14	5-23-14	
Drum 5029-5030	05-195-09	Soil	5-21-14	5-23-14	
Drum 5031	05-195-10	Soil	5-21-14	5-23-14	
Drum 3884-3885	05-195-11	Soil	5-21-14	5-23-14	
GEI-20A-14 S1-2	05-195-21	Soil	5-22-14	5-23-14	
Drum 3878-3879	05-195-22	Soil	5-22-14	5-23-14	
GEI-19A-14 S1-2	05-195-23	Soil	5-22-14	5-23-14	
Drum 3880-3881	05-195-24	Soil	5-22-14	5-23-14	
GEI-1A-14 S1-2	05-195-25	Soil	5-21-14	5-23-14	
Drum 3874-3875	05-195-26	Soil	5-21-14	5-23-14	
Drum 3872-3873	05-195-27	Soil	5-21-14	5-23-14	
GEI-2A-14 S1-2	05-195-28	Soil	5-21-14	5-23-14	
Decon Water	05-195-31	Liquid	5-22-14	5-23-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Drum 5023-5024**					
Laboratory ID:	05-195-06					
Gasoline Range Organics	**ND**	28	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	69	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	140	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*67*	*50-150*				
Client ID:	**Drum 5025-5026**					
Laboratory ID:	05-195-07					
Gasoline Range Organics	**ND**	32	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	79	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	160	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*61*	*50-150*				
Client ID:	**Drum 5027-5028**					
Laboratory ID:	05-195-08					
Gasoline Range Organics	**ND**	28	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	71	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	140	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*62*	*50-150*				
Client ID:	**Drum 5029-5030**					
Laboratory ID:	05-195-09					
Gasoline Range Organics	**ND**	29	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	72	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	140	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*64*	*50-150*				
Client ID:	**Drum 5031**					
Laboratory ID:	05-195-10					
Gasoline Range Organics	**ND**	31	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	77	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	150	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
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NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Drum 3884-3885**					
Laboratory ID:	05-195-11					
Gasoline Range Organics	**ND**	63	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	160	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	320	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*58*	*50-150*				
Client ID:	**Drum 3878-3879**					
Laboratory ID:	05-195-22					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	62	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	120	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*76*	*50-150*				
Client ID:	**Drum 3880-3881**					
Laboratory ID:	05-195-24					
Gasoline Range Organics	**ND**	25	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	63	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*77*	*50-150*				

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NWTPH-HCID

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Drum 3874-3875**					
Laboratory ID:	05-195-26					
Gasoline Range Organics	**ND**	26	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	65	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	130	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*68*	*50-150*				
Client ID:	**Drum 3872-3873**					
Laboratory ID:	05-195-27					
Gasoline Range Organics	**ND**	32	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	81	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	160	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				

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NWTPH-HCID

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Decon Water**					
Laboratory ID:	05-195-31					
Gasoline Range Organics	**Detected**	0.11	NWTPH-HCID	5-27-14	5-27-14	
Diesel Range Organics	**Detected**	0.28	NWTPH-HCID	5-27-14	5-27-14	
Lube Oil Range Organics	**ND**	0.44	NWTPH-HCID	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				

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NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
Gasoline	**ND**	7.9	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*119*	*71-121*				
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
Gasoline	**ND**	7.2	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*111*	*71-121*				
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
Gasoline	**ND**	6.3	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*112*	*71-121*				
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
Gasoline	**ND**	11	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*118*	*71-121*				
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
Gasoline	**ND**	8.7	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*71-121*				
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
Gasoline	**ND**	9.1	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*113*	*71-121*				

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NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
Gasoline	**ND**	11	NWTPH-Gx	5-28-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*85*	*71-121*				
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
Gasoline	**ND**	8.5	NWTPH-Gx	5-28-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*71-121*				
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
Gasoline	**ND**	6.3	NWTPH-Gx	5-28-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*117*	*71-121*				

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NWTPH-Gx/BTEX

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Decon Water**					
Laboratory ID:	05-195-31					
Benzene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Toluene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
o-Xylene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Gasoline	**ND**	100	NWTPH-Gx	6-3-14	6-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*71-112*				

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NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
Diesel Range Organics	**ND**	32	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	64	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
Diesel Range Organics	**ND**	33	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	67	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*70*	*50-150*				
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
Diesel Range Organics	**ND**	35	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	70	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
Diesel Range Organics	**97**	46	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**610**	92	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*73*	*50-150*				
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
Diesel Range Organics	**ND**	36	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	71	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*65*	*50-150*				

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NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
Diesel Range Organics	**ND**	35	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	70	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*68*	*50-150*				
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
Diesel Range Organics	**ND**	35	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**150**	71	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*76*	*50-150*				
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
Diesel Range Organics	**ND**	36	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	71	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*63*	*50-150*				
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
Diesel Range Organics	**ND**	32	NWTPH-Dx	5-23-14	5-27-14	
Lube Oil Range Organics	**ND**	63	NWTPH-Dx	5-23-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				

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NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Decon Water**					
Laboratory ID:	05-195-31					
Diesel Range Organics	**0.57**	0.28	NWTPH-Dx	5-27-14	5-27-14	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
1,1,2-Trichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0035	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*65-129*				
Toluene-d8	*103*	*77-122*				
4-Bromofluorobenzene	*101*	*73-124*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0024	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*65-129*				
Toluene-d8	*99*	*77-122*				
4-Bromofluorobenzene	*98*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0027	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0069	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*65-129*				
Toluene-d8	*94*	*77-122*				
4-Bromofluorobenzene	*94*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Acetone	0.072	0.0087	EPA 8260C	5-27-14	5-27-14	Y
Iodomethane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	

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Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
1,1,2-Trichloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0035	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0087	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0017	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*65-129*				
Toluene-d8	*97*	*77-122*				
4-Bromofluorobenzene	*95*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0032	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0080	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*65-129*				
Toluene-d8	*100*	*77-122*				
4-Bromofluorobenzene	*95*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Acetone	0.030	0.0082	EPA 8260C	5-27-14	5-27-14	Y
Iodomethane	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0033	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0082	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*65-129*				
Toluene-d8	*101*	*77-122*				
4-Bromofluorobenzene	*98*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Acetone	2.1	0.0098	EPA 8260C	5-27-14	5-27-14	Y,E
Iodomethane	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	0.0052	0.0020	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
2-Butanone	0.58	0.0098	EPA 8260C	5-27-14	5-27-14	E
Bromochloromethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
Toluene	0.052	0.0098	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
1,1,2-Trichloroethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0098	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	0.028	0.0020	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0039	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,1,2,2-Tetrachloroethane	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichloropropane	ND	0.089	EPA 8260C	5-28-14	5-28-14	
n-Propylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
2-Chlorotoluene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
4-Chlorotoluene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,3,5-Trimethylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
tert-Butylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trimethylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
sec-Butylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,3-Dichlorobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
p-Isopropyltoluene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,4-Dichlorobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,2-Dichlorobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
n-Butylbenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,2-Dibromo-3-chloropropane	ND	0.45	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trichlorobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
Hexachlorobutadiene	ND	0.45	EPA 8260C	5-28-14	5-28-14	
Naphthalene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichlorobenzene	ND	0.089	EPA 8260C	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*65-129*				
Toluene-d8	*90*	*77-122*				
4-Bromofluorobenzene	*104*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Chloromethane	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Vinyl Chloride	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Bromomethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Chloroethane	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Acetone	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Iodomethane	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Carbon Disulfide	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Methylene Chloride	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Vinyl Acetate	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
2-Butanone	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Bromochloromethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Chloroform	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Benzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Trichloroethene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Dibromomethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Bromodichloromethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Methyl Isobutyl Ketone	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Toluene	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Tetrachloroethene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
2-Hexanone	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Dibromochloromethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Chlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Ethylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
m,p-Xylene	ND	0.0025	EPA 8260C	5-28-14	5-28-14	
o-Xylene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Styrene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Bromoform	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Isopropylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Bromobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
n-Propylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
2-Chlorotoluene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
4-Chlorotoluene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
tert-Butylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
sec-Butylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
n-Butylbenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	5-28-14	5-28-14	
Naphthalene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*65-129*				
Toluene-d8	*100*	*77-122*				
4-Bromofluorobenzene	*93*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	0.0046	0.0011	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0021	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*65-129*				
Toluene-d8	*105*	*77-122*				
4-Bromofluorobenzene	*103*	*73-124*				

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
n-Nitrosodimethylamine	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.43	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.43	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.043	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0086	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*103*	*24 - 105*				
Phenol-d6	*115*	*34 - 101*				Q
Nitrobenzene-d5	*95*	*32 - 102*				
2-Fluorobiphenyl	*94*	*44 -100*				
2,4,6-Tribromophenol	*51*	*34 - 124*				
Terphenyl-d14	*108*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
n-Nitrosodimethylamine	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.44	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
2,4-Dinitrophenol	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.44	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.22	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.044	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0089	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*100*	*24 - 105*				
Phenol-d6	*103*	*34 - 101*				Q
Nitrobenzene-d5	*93*	*32 - 102*				
2-Fluorobiphenyl	*91*	*44 -100*				
2,4,6-Tribromophenol	*49*	*34 - 124*				
Terphenyl-d14	*103*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.46	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.46	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*105*	*24 - 105*				
Phenol-d6	*110*	*34 - 101*				Q
Nitrobenzene-d5	*100*	*32 - 102*				
2-Fluorobiphenyl	*95*	*44 -100*				
2,4,6-Tribromophenol	*52*	*34 - 124*				
Terphenyl-d14	*107*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
n-Nitrosodimethylamine	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.61	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
2,4-Dinitrophenol	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.61	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.31	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.061	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.012	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*58*	*24 - 105*				
Phenol-d6	*70*	*34 - 101*				
Nitrobenzene-d5	*66*	*32 - 102*				
2-Fluorobiphenyl	*77*	*44 -100*				
2,4,6-Tribromophenol	*43*	*34 - 124*				
Terphenyl-d14	*79*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*96*	*24 - 105*				
Phenol-d6	*96*	*34 - 101*				
Nitrobenzene-d5	*85*	*32 - 102*				
2-Fluorobiphenyl	*89*	*44 -100*				
2,4,6-Tribromophenol	*57*	*34 - 124*				
Terphenyl-d14	*110*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
4-Chloroaniline	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
1-Methylnaphthalene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
3-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
4-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Carbazole	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Benzidine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Butylbenzylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	5-27-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*74*	*24 - 105*				
Phenol-d6	*70*	*34 - 101*				
Nitrobenzene-d5	*61*	*32 - 102*				
2-Fluorobiphenyl	*61*	*44 -100*				
2,4,6-Tribromophenol	*37*	*34 - 124*				
Terphenyl-d14	*72*	*47 - 114*				

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
4-Chloroaniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
3-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
4-Nitrophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Carbazole	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Benzidine	**ND**	0.47	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Butylbenzylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.047	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	5-27-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*78*	*24 - 105*				
Phenol-d6	*86*	*34 - 101*				
Nitrobenzene-d5	*69*	*32 - 102*				
2-Fluorobiphenyl	*88*	*44 -100*				
2,4,6-Tribromophenol	*49*	*34 - 124*				
Terphenyl-d14	*98*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
n-Nitrosodimethylamine	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.48	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
4-Chloroaniline	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
1-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Hexachlorocyclopentadiene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
3-Nitroaniline	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
4-Nitrophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Carbazole	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Benzidine	**ND**	0.48	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Butylbenzylphthalate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.048	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	5-27-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*104*	*24 - 105*				
Phenol-d6	*102*	*34 - 101*				Q
Nitrobenzene-d5	*90*	*32 - 102*				
2-Fluorobiphenyl	*96*	*44 -100*				
2,4,6-Tribromophenol	*46*	*34 - 124*				
Terphenyl-d14	*96*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
n-Nitrosodimethylamine	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Pyridine	**ND**	0.42	EPA 8270D	5-27-14	5-28-14	
Phenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Aniline	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethyl)ether	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Chlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,3-Dichlorobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,4-Dichlorobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Benzyl alcohol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
1,2-Dichlorobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Methylphenol (o-Cresol)	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroisopropyl)ether	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
n-Nitroso-di-n-propylamine	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Hexachloroethane	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Nitrobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Isophorone	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Nitrophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,4-Dimethylphenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
bis(2-Chloroethoxy)methane	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,4-Dichlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,2,4-Trichlorobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Naphthalene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
4-Chloroaniline	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Hexachlorobutadiene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
4-Chloro-3-methylphenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
1-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Hexachlorocyclopentadiene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,4,6-Trichlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,3-Dichloroaniline	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,4,5-Trichlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Chloronaphthalene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2-Nitroaniline	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,4-Dinitrobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Dimethylphthalate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,3-Dinitrobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,6-Dinitrotoluene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,2-Dinitrobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Acenaphthylene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
3-Nitroaniline	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Acenaphthene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
4-Nitrophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,4-Dinitrotoluene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Dibenzofuran	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Diethylphthalate	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
4-Chlorophenyl-phenylether	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
4-Nitroaniline	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Fluorene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
n-Nitrosodiphenylamine	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
1,2-Diphenylhydrazine	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
4-Bromophenyl-phenylether	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Hexachlorobenzene	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Pentachlorophenol	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Phenanthrene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Anthracene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Carbazole	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Di-n-butylphthalate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Fluoranthene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Benzidine	**ND**	0.42	EPA 8270D	5-27-14	5-28-14	
Pyrene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Butylbenzylphthalate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
bis-2-Ethylhexyladipate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	5-27-14	5-28-14	
Benzo[a]anthracene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Chrysene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Di-n-octylphthalate	**ND**	0.042	EPA 8270D	5-27-14	5-28-14	
Benzo[b]fluoranthene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo(j,k)fluoranthene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[a]pyrene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Benzo[g,h,i]perylene	**ND**	0.0084	EPA 8270D/SIM	5-27-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*104*	*24 - 105*				
Phenol-d6	*105*	*34 - 101*				Q
Nitrobenzene-d5	*89*	*32 - 102*				
2-Fluorobiphenyl	*91*	*44 -100*				
2,4,6-Tribromophenol	*50*	*34 - 124*				
Terphenyl-d14	*100*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
Aroclor 1016	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.064	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*81*	*51-138*				
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
Aroclor 1016	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.066	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*79*	*51-138*				
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
Aroclor 1016	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*87*	*51-138*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
Aroclor 1016	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.092	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*65*	*51-138*				
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
Aroclor 1016	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*97*	*51-138*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
Aroclor 1016	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.070	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*105*	*51-138*				
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
Aroclor 1016	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*96*	*51-138*				
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
Aroclor 1016	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.071	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*102*	*51-138*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

PCBs
EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
Aroclor 1016	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.063	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*104*	*51-138*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-17A-14 S1-2**					
Laboratory ID:	05-195-01					
alpha-BHC	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	6.4	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	64	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*70*	*37-110*				
DCB	*77*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-18A-14 S1-2**					
Laboratory ID:	05-195-02					
alpha-BHC	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	6.6	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	66	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*67*	*37-110*				
DCB	*73*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-13A-14 S1-2**					
Laboratory ID:	05-195-03					
alpha-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	70	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*71*	*37-110*				
DCB	*79*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15A-14 S1-2**					
Laboratory ID:	05-195-04					
alpha-BHC	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	18	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	18	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	9.2	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	18	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	18	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	18	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	92	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*54*	*37-110*				
DCB	*59*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-14A-14 S1-2**					
Laboratory ID:	05-195-05					
alpha-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	71	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*83*	*37-110*				
DCB	*92*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20A-14 S1-2**					
Laboratory ID:	05-195-21					
alpha-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	7.0	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	70	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*85*	*37-110*				
DCB	*95*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-19A-14 S1-2**					
Laboratory ID:	05-195-23					
alpha-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	71	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*83*	*37-110*				
DCB	*90*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-1A-14 S1-2**					
Laboratory ID:	05-195-25					
alpha-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	7.1	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	14	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	14	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	71	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*87*	*37-110*				
DCB	*98*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-2A-14 S1-2**					
Laboratory ID:	05-195-28					
alpha-BHC	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	6.3	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	13	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	13	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	63	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*74*	*37-110*				
DCB	*87*	*42-114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-01					
Client ID:	**GEI-17A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-28-14	5-29-14	
Barium	**100**	3.2	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.64	6010C	5-28-14	5-29-14	
Chromium	**55**	0.64	6010C	5-28-14	5-29-14	
Lead	**ND**	6.4	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.32	7471B	5-28-14	5-28-14	
Selenium	**ND**	13	6010C	5-28-14	5-29-14	
Silver	**ND**	1.3	6010C	5-28-14	5-29-14	
Lab ID:	05-195-02					
Client ID:	**GEI-18A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-28-14	5-29-14	
Barium	**90**	3.3	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.66	6010C	5-28-14	5-29-14	
Chromium	**51**	0.66	6010C	5-28-14	5-29-14	
Lead	**ND**	6.6	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.33	7471B	5-28-14	5-28-14	
Selenium	**ND**	13	6010C	5-28-14	5-29-14	
Silver	**ND**	1.3	6010C	5-28-14	5-29-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-03					
Client ID:	**GEI-13A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-28-14	5-29-14	
Barium	**110**	3.5	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.70	6010C	5-28-14	5-29-14	
Chromium	**65**	0.70	6010C	5-28-14	5-29-14	
Lead	**ND**	7.0	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-28-14	5-28-14	
Selenium	**ND**	14	6010C	5-28-14	5-29-14	
Silver	**ND**	1.4	6010C	5-28-14	5-29-14	
Lab ID:	05-195-04					
Client ID:	**GEI-15A-14 S1-2**					
Arsenic	**ND**	18	6010C	5-28-14	5-29-14	
Barium	**91**	4.6	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.92	6010C	5-28-14	5-29-14	
Chromium	**33**	0.92	6010C	5-28-14	5-29-14	
Lead	**ND**	9.2	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.46	7471B	5-28-14	5-28-14	
Selenium	**ND**	18	6010C	5-28-14	5-29-14	
Silver	**ND**	1.8	6010C	5-28-14	5-29-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-05					
Client ID:	**GEI-14A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-28-14	5-29-14	
Barium	**110**	3.6	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.71	6010C	5-28-14	5-29-14	
Chromium	**54**	0.71	6010C	5-28-14	5-29-14	
Lead	**ND**	7.1	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.36	7471B	5-28-14	5-28-14	
Selenium	**ND**	14	6010C	5-28-14	5-29-14	
Silver	**ND**	1.4	6010C	5-28-14	5-29-14	

Lab ID:	05-195-06					
Client ID:	**Drum 5023-5024**					
Arsenic	**ND**	14	6010C	5-28-14	5-29-14	
Barium	**100**	3.5	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.69	6010C	5-28-14	5-29-14	
Chromium	**58**	0.69	6010C	5-28-14	5-29-14	
Lead	**ND**	6.9	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-28-14	5-28-14	
Selenium	**ND**	14	6010C	5-28-14	5-29-14	
Silver	**ND**	1.4	6010C	5-28-14	5-29-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-07					
Client ID:	**Drum 5025-5026**					
Arsenic	**ND**	16	6010C	5-28-14	5-29-14	
Barium	**100**	4.0	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.79	6010C	5-28-14	5-29-14	
Chromium	**57**	0.79	6010C	5-28-14	5-29-14	
Lead	**ND**	7.9	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.40	7471B	5-28-14	5-28-14	
Selenium	**ND**	16	6010C	5-28-14	5-29-14	
Silver	**ND**	1.6	6010C	5-28-14	5-29-14	
Lab ID:	05-195-08					
Client ID:	**Drum 5027-5028**					
Arsenic	**ND**	14	6010C	5-28-14	5-29-14	
Barium	**110**	3.5	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.71	6010C	5-28-14	5-29-14	
Chromium	**61**	0.71	6010C	5-28-14	5-29-14	
Lead	**ND**	7.1	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-28-14	5-28-14	
Selenium	**ND**	14	6010C	5-28-14	5-29-14	
Silver	**ND**	1.4	6010C	5-28-14	5-29-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-09					
Client ID:	**Drum 5029-5030**					
Arsenic	**ND**	14	6010C	5-28-14	5-29-14	
Barium	**140**	3.6	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.72	6010C	5-28-14	5-29-14	
Chromium	**68**	0.72	6010C	5-28-14	5-29-14	
Lead	**ND**	7.2	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.36	7471B	5-28-14	5-28-14	
Selenium	**ND**	14	6010C	5-28-14	5-29-14	
Silver	**ND**	1.4	6010C	5-28-14	5-29-14	
Lab ID:	05-195-10					
Client ID:	**Drum 5031**					
Arsenic	**ND**	15	6010C	5-28-14	5-29-14	
Barium	**140**	3.8	6010C	5-28-14	5-29-14	
Cadmium	**ND**	0.77	6010C	5-28-14	5-29-14	
Chromium	**73**	0.77	6010C	5-28-14	5-29-14	
Lead	**ND**	7.7	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.38	7471B	5-28-14	5-28-14	
Selenium	**ND**	15	6010C	5-28-14	5-29-14	
Silver	**ND**	1.5	6010C	5-28-14	5-29-14	

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Date of Report: June 5, 2014
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Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-11					
Client ID:	**Drum 3884-3885**					
Arsenic	**ND**	16	6010C	5-28-14	5-29-14	
Barium	**46**	7.9	6010C	5-28-14	5-29-14	
Cadmium	**ND**	1.6	6010C	5-28-14	5-29-14	
Chromium	**21**	1.6	6010C	5-28-14	5-29-14	
Lead	**ND**	16	6010C	5-28-14	5-29-14	
Mercury	**ND**	0.79	7471B	5-28-14	5-28-14	
Selenium	**ND**	31	6010C	5-28-14	5-29-14	
Silver	**ND**	3.1	6010C	5-28-14	5-29-14	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-21					
Client ID:	**GEI-20A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**140**	3.5	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.70	6010C	5-29-14	5-29-14	
Chromium	**76**	0.70	6010C	5-29-14	5-29-14	
Lead	**ND**	7.0	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-29-14	5-29-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	
Lab ID:	05-195-22					
Client ID:	**Drum 3878-3879**					
Arsenic	**ND**	12	6010C	5-29-14	5-29-14	
Barium	**51**	3.1	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.62	6010C	5-29-14	5-29-14	
Chromium	**45**	0.62	6010C	5-29-14	5-29-14	
Lead	**ND**	6.2	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.31	7471B	5-29-14	5-29-14	
Selenium	**ND**	12	6010C	5-29-14	5-29-14	
Silver	**ND**	1.2	6010C	5-29-14	5-29-14	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-23					
Client ID:	**GEI-19A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**82**	3.5	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.71	6010C	5-29-14	5-29-14	
Chromium	**47**	0.71	6010C	5-29-14	5-29-14	
Lead	**ND**	7.1	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.35	7471B	5-29-14	5-29-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	
Lab ID:	05-195-24					
Client ID:	**Drum 3880-3881**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**44**	3.1	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.63	6010C	5-29-14	5-29-14	
Chromium	**35**	0.63	6010C	5-29-14	5-29-14	
Lead	**ND**	6.3	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.31	7471B	5-29-14	5-29-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-25					
Client ID:	**GEI-1A-14 S1-2**					
Arsenic	**ND**	14	6010C	5-29-14	5-29-14	
Barium	**120**	3.6	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.71	6010C	5-29-14	5-29-14	
Chromium	**66**	0.71	6010C	5-29-14	5-29-14	
Lead	**ND**	7.1	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.36	7471B	5-29-14	5-29-14	
Selenium	**ND**	14	6010C	5-29-14	5-29-14	
Silver	**ND**	1.4	6010C	5-29-14	5-29-14	
Lab ID:	05-195-26					
Client ID:	**Drum 3874-3875**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**33**	3.2	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.65	6010C	5-29-14	5-29-14	
Chromium	**22**	0.65	6010C	5-29-14	5-29-14	
Lead	**ND**	6.5	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.32	7471B	5-29-14	5-29-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	

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TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-27					
Client ID:	**Drum 3872-3873**					
Arsenic	**ND**	16	6010C	5-29-14	5-29-14	
Barium	**130**	4.1	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.81	6010C	5-29-14	5-29-14	
Chromium	**74**	0.81	6010C	5-29-14	5-29-14	
Lead	**ND**	8.1	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.41	7471B	5-29-14	5-29-14	
Selenium	**ND**	16	6010C	5-29-14	5-29-14	
Silver	**ND**	1.6	6010C	5-29-14	5-29-14	
Lab ID:	05-195-28					
Client ID:	**GEI-2A-14 S1-2**					
Arsenic	**ND**	13	6010C	5-29-14	5-29-14	
Barium	**36**	3.2	6010C	5-29-14	5-29-14	
Cadmium	**ND**	0.63	6010C	5-29-14	5-29-14	
Chromium	**29**	0.63	6010C	5-29-14	5-29-14	
Lead	**ND**	6.3	6010C	5-29-14	5-29-14	
Mercury	**ND**	0.32	7471B	5-29-14	5-29-14	
Selenium	**ND**	13	6010C	5-29-14	5-29-14	
Silver	**ND**	1.3	6010C	5-29-14	5-29-14	

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TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	05-195-31					
Client ID:	**Decon Water**					
Arsenic	**120**	67	200.8	5-30-14	5-30-14	
Barium	**2200**	560	200.8	5-30-14	5-30-14	
Cadmium	**ND**	4.4	200.8	5-30-14	5-30-14	
Chromium	**870**	220	200.8	5-30-14	5-30-14	
Lead	**150**	22	200.8	5-30-14	5-30-14	
Mercury	**0.88**	0.50	7470A	5-28-14	5-28-14	
Selenium	**12**	5.6	200.8	5-30-14	5-30-14	
Silver	**ND**	11	200.8	5-30-14	5-30-14	

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Date of Report: June 5, 2014
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Project: 0144-444-00

NWTPH-HCID
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523S2					
Gasoline Range Organics	**ND**	20	NWTPH-HCID	5-23-14	5-23-14	
Diesel Range Organics	**ND**	50	NWTPH-HCID	5-23-14	5-23-14	
Lube Oil Range Organics	**ND**	100	NWTPH-HCID	5-23-14	5-23-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*68*	*50-150*				

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NWTPH-HCID
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527W1					
Gasoline Range Organics	**ND**	0.10	NWTPH-HCID	5-27-14	5-27-14	
Diesel Range Organics	**ND**	0.25	NWTPH-HCID	5-27-14	5-27-14	
Lube Oil Range Organics	**ND**	0.40	NWTPH-HCID	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				

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NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528S3					
Gasoline	**ND**	5.0	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*71-121*				
Laboratory ID:	MB0528S4					
Gasoline	**ND**	5.0	NWTPH-Gx	5-28-14	5-29-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*106*	*71-121*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-195-25										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*98*	*89*	*71-121*			
Laboratory ID:	05-195-28										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*117*	*104*	*71-121*			

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NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0603W1					
Benzene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Toluene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Ethyl Benzene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
m,p-Xylene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
o-Xylene	**ND**	1.0	EPA 8021B	6-3-14	6-3-14	
Gasoline	**ND**	100	NWTPH-Gx	6-3-14	6-3-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*71-112*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-195-31										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*88*	*89*	*71-112*			
SPIKE BLANKS											
Laboratory ID:	SB0603W1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**48.9**	**48.7**	50.0	50.0		**98**	**97**	86-116	0	11	
Toluene	**50.4**	**51.4**	50.0	50.0		**101**	**103**	86-117	2	12	
Ethyl Benzene	**50.3**	**50.6**	50.0	50.0		**101**	**101**	86-118	1	13	
m,p-Xylene	**51.7**	**53.1**	50.0	50.0		**103**	**106**	86-118	3	14	
o-Xylene	**51.2**	**51.1**	50.0	50.0		**102**	**102**	85-117	0	14	
Surrogate:											
Fluorobenzene						*93*	*97*	*71-112*			

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NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	5-23-14	5-27-14	X1
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	5-23-14	5-27-14	X1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*112*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-193-04										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*101*	*107*	*50-150*			
Laboratory ID:	05-195-18										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*82*	*77*	*50-150*			

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NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	5-27-14	5-27-14	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	05-178-12										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	X1
Surrogate:											
o-Terphenyl						*89*	*78*	*50-150*			

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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0527S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Chloromethane	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Bromomethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Chloroethane	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Acetone	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Iodomethane	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Methylene Chloride	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Vinyl Acetate	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
2-Butanone	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Bromochloromethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Chloroform	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Benzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Trichloroethene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Dibromomethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Toluene	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0527S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
2-Hexanone	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Chlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Ethylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
m,p-Xylene	ND	0.0020	EPA 8260C	5-27-14	5-27-14	
o-Xylene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Styrene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Bromoform	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Bromobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	5-27-14	5-27-14	
Naphthalene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	5-27-14	5-27-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*65-129*				
Toluene-d8	*97*	*77-122*				
4-Bromofluorobenzene	*99*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0528S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Chloromethane	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Vinyl Chloride	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Bromomethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Chloroethane	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Acetone	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Iodomethane	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Carbon Disulfide	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Methylene Chloride	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Vinyl Acetate	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
2-Butanone	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Bromochloromethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Chloroform	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Benzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Trichloroethene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Dibromomethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Toluene	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0528S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
2-Hexanone	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Chlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Ethylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
m,p-Xylene	ND	0.0020	EPA 8260C	5-28-14	5-28-14	
o-Xylene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Styrene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Bromoform	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Isopropylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Bromobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
n-Propylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
tert-Butylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
sec-Butylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
n-Butylbenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	5-28-14	5-28-14	
Naphthalene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	5-28-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*65-129*				
Toluene-d8	*96*	*77-122*				
4-Bromofluorobenzene	*98*	*73-124*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0527S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0527**	**0.0550**	0.0500	0.0500	105	110	56-141	4	15	
Benzene	**0.0483**	**0.0512**	0.0500	0.0500	97	102	70-121	6	15	
Trichloroethene	**0.0531**	**0.0554**	0.0500	0.0500	106	111	74-118	4	15	
Toluene	**0.0493**	**0.0510**	0.0500	0.0500	99	102	75-120	3	15	
Chlorobenzene	**0.0500**	**0.0532**	0.0500	0.0500	100	106	75-120	6	15	
Surrogate:										
Dibromofluoromethane					*101*	*100*	*65-129*			
Toluene-d8					*101*	*100*	*77-122*			
4-Bromofluorobenzene					*103*	*101*	*73-124*			

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Laboratory Reference: 1405-195
Project: 0144-444-00

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0528S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0483**	**0.0503**	0.0500	0.0500	97	101	56-141	4	15	
Benzene	**0.0452**	**0.0472**	0.0500	0.0500	90	94	70-121	4	15	
Trichloroethene	**0.0521**	**0.0524**	0.0500	0.0500	104	105	74-118	1	15	
Toluene	**0.0486**	**0.0488**	0.0500	0.0500	97	98	75-120	0	15	
Chlorobenzene	**0.0519**	**0.0491**	0.0500	0.0500	104	98	75-120	6	15	
Surrogate:										
Dibromofluoromethane					*89*	*89*	*65-129*			
Toluene-d8					*94*	*97*	*77-122*			
4-Bromofluorobenzene					*97*	*98*	*73-124*			

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0527S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Pyridine	**ND**	0.33	EPA 8270D	5-27-14	5-29-14	
Phenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Aniline	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Chlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Benzyl alcohol	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Hexachloroethane	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Nitrobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Isophorone	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Nitrophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
4-Chloroaniline	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2-Nitroaniline	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Dimethylphthalate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
3-Nitroaniline	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	

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Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0527S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
4-Nitrophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Dibenzofuran	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Diethylphthalate	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
4-Nitroaniline	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Pentachlorophenol	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Carbazole	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Di-n-butylphthalate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Benzidine	**ND**	0.33	EPA 8270D	5-27-14	5-29-14	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	5-27-14	5-29-14	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	5-27-14	5-29-14	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	5-27-14	5-28-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*79*	*24 - 105*				
Phenol-d6	*80*	*34 - 101*				
Nitrobenzene-d5	*86*	*32 - 102*				
2-Fluorobiphenyl	*92*	*44 -100*				
2,4,6-Tribromophenol	*61*	*34 - 124*				
Terphenyl-d14	*74*	*47 - 114*				

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

SEMIVOLATILES EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-195-18										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	**1.38**	**1.20**	1.33	1.33	ND	104	90	43 - 104	14	25	
2-Chlorophenol	**1.21**	**1.03**	1.33	1.33	ND	91	77	41 - 104	16	32	
1,4-Dichlorobenzene	**0.466**	**0.387**	0.667	0.667	ND	70	58	23 - 95	19	42	
n-Nitroso-di-n-propylamine	**0.556**	**0.495**	0.667	0.667	ND	83	74	34 - 105	12	27	
1,2,4-Trichlorobenzene	**0.413**	**0.351**	0.667	0.667	ND	62	53	26 - 106	16	32	
4-Chloro-3-methylphenol	**1.08**	**1.01**	1.33	1.33	ND	81	76	52 - 109	7	20	
Acenaphthene	**0.486**	**0.458**	0.667	0.667	ND	73	69	51 - 104	6	21	
4-Nitrophenol	**0.999**	**0.971**	1.33	1.33	ND	75	73	52 - 121	3	22	
2,4-Dinitrotoluene	**0.484**	**0.463**	0.667	0.667	ND	73	69	53 - 115	4	22	
Pentachlorophenol	**0.782**	**0.692**	1.33	1.33	ND	59	52	29 - 131	12	28	
Pyrene	**0.654**	**0.665**	0.667	0.667	ND	98	100	41 - 123	2	35	
Surrogate:											
2-Fluorophenol						*101*	*85*	*24 - 105*			
Phenol-d6						*108*	*94*	*34 - 101*			Q
Nitrobenzene-d5						*92*	*82*	*32 - 102*			
2-Fluorobiphenyl						*90*	*84*	*44 -100*			
2,4,6-Tribromophenol						*54*	*52*	*34 - 124*			
Terphenyl-d14						*102*	*100*	*47 - 114*			

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S2					
Aroclor 1016	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1221	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1232	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1242	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1248	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1254	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Aroclor 1260	**ND**	0.050	EPA 8082A	5-29-14	6-2-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*98*	*51-138*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-195-18										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.497**	**0.491**	0.500	0.500	ND	**99**	**98**	49-136	1	14	
Surrogate:											
DCB						*111*	*114*	*51-138*			

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0529S1					
alpha-BHC	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
gamma-BHC	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
beta-BHC	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
delta-BHC	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
Aldrin	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
gamma-Chlordane	**ND**	10	EPA 8081B	5-29-14	5-30-14	
alpha-Chlordane	**ND**	10	EPA 8081B	5-29-14	5-30-14	
4,4'-DDE	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endosulfan I	**ND**	5.0	EPA 8081B	5-29-14	5-30-14	
Dieldrin	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endrin	**ND**	10	EPA 8081B	5-29-14	5-30-14	
4,4'-DDD	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endosulfan II	**ND**	10	EPA 8081B	5-29-14	5-30-14	
4,4'-DDT	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endrin Aldehyde	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Methoxychlor	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endosulfan Sulfate	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Endrin Ketone	**ND**	10	EPA 8081B	5-29-14	5-30-14	
Toxaphene	**ND**	50	EPA 8081B	5-29-14	5-30-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*86*	*37-110*				
DCB	*96*	*42-114*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	05-195-12										
	MS	MSD	MS	MSD		MS	MSD				
gamma-BHC	**92.9**	**93.3**	100	100	ND	**93**	**93**	45-117	0	15	
Heptachlor	**86.6**	**87.5**	100	100	ND	**87**	**88**	57-101	1	16	
Aldrin	**91.6**	**93.4**	100	100	ND	**92**	**93**	50-119	2	16	
Dieldrin	**90.6**	**92.0**	100	100	ND	**91**	**92**	45-110	2	17	
Endrin	**94.1**	**95.5**	100	100	ND	**94**	**95**	56-117	1	18	
4,4'-DDT	**88.5**	**90.8**	100	100	ND	**89**	**91**	46-110	3	21	
Surrogate:											
TCMX						*88*	*87*	*37-110*			
DCB						*98*	*96*	*42-114*			

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-29-14
Date Analyzed: 5-29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0529SM1&MB0529S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 5-29-14
Date Analyzed: 5-29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0529SM1&MB0529S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 5-28-14
Date Analyzed: 5-28&29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-195-12

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Barium	**40.4**	**39.6**	2	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**21.8**	**19.8**	10	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 5-29-14
Date Analyzed: 5-29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-195-28

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**28.3**	**28.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**22.8**	**19.2**	17	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 5-28-14
Date Analyzed: 5-28&29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-195-12

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.1**	92	**90.6**	91	2	
Barium	100	**135**	95	**135**	94	0	
Cadmium	50.0	**46.1**	92	**46.3**	93	0	
Chromium	100	**112**	90	**114**	92	2	
Lead	250	**228**	91	**231**	92	1	
Mercury	0.500	**0.497**	99	**0.501**	100	1	
Selenium	100	**88.1**	88	**92.5**	93	5	
Silver	25.0	**20.5**	82	**20.8**	83	2	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 5-29-14
Date Analyzed: 5-29-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 05-195-28

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**89.8**	90	**92.8**	93	3	
Barium	100	**125**	97	**116**	88	8	
Cadmium	50.0	**46.2**	92	**46.5**	93	1	
Chromium	100	**117**	95	**110**	87	7	
Lead	250	**224**	89	**226**	91	1	
Mercury	0.500	**0.523**	105	**0.527**	105	1	
Selenium	100	**87.4**	87	**88.9**	89	2	
Silver	25.0	**20.2**	81	**21.1**	84	5	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-28&30-14
Date Analyzed:	5-28&30-14
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0530WM1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.3
Barium	200.8	**ND**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**ND**	11
Lead	200.8	**ND**	1.1
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Extracted:	5-28&30-14
Date Analyzed:	5-28&30-14
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB0528W1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 5-28&30-14
Date Analyzed: 5-28&30-14

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-215-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**6.18**	**5.88**	5	3.3	
Barium	**30.8**	**31.6**	3	28	
Cadmium	**ND**	**ND**	NA	4.4	
Chromium	**ND**	**ND**	NA	11	
Lead	**ND**	**ND**	NA	1.1	
Selenium	**ND**	**ND**	NA	5.6	
Silver	**ND**	**ND**	NA	11	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 5-28&30-14
Date Analyzed: 5-28&30-14

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-195-31

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**0.875**	**0.785**	11	0.50	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 5-28&30-14
Date Analyzed: 5-28&30-14

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-215-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	111	**125**	107	**128**	110	2	
Barium	111	**145**	103	**146**	104	1	
Cadmium	111	**122**	110	**123**	111	1	
Chromium	111	**111**	100	**114**	103	3	
Lead	111	**116**	104	**117**	105	1	
Selenium	111	**130**	117	**131**	118	1	
Silver	111	**103**	93	**105**	94	2	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

TOTAL MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Extracted: 5-28&30-14
Date Analyzed: 5-28&30-14

Matrix: Water
Units: ug/L (ppb)

Lab ID: 05-195-31

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**13.9**	104	**14.1**	106	2	

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Date of Report: June 5, 2014
Samples Submitted: May 23, 2014
Laboratory Reference: 1405-195
Project: 0144-444-00

% MOISTURE

Date Analyzed: 5-23-14

Client ID	Lab ID	% Moisture
GEI-17A-14 S1-2	05-195-01	22
GEI-18A-14 S1-2	05-195-02	25
GEI-13A-14 S1-2	05-195-03	28
GEI-15A-14 S1-2	05-195-04	46
GEI-14A-14 S1-2	05-195-05	30
Drum 5023-5024	05-195-06	28
Drum 5025-5026	05-195-07	37
Drum 5027-5028	05-195-08	30
Drum 5029-5030	05-195-09	31
Drum 5031	05-195-10	35
Drum 3884-3885	05-195-11	68
GEI-20A-14 S1-2	05-195-21	28
Drum 3878-3879	05-195-22	19
GEI-19A-14 S1-2	05-195-23	29
Drum 3880-3881	05-195-24	20
GEI-1A-14 S1-2	05-195-25	30
Drum 3874-3875	05-195-26	23
Drum 3872-3873	05-195-27	38
GEI-2A-14 S1-2	05-195-28	21

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

APPENDIX F
Report Limitations and Guidelines for Use

APPENDIX F
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Geotechnical Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of The United States Navy, Notkin Mechanical Engineers and their authorized agents. This report may be made available to prospective contractors for their bidding or estimating purposes, but our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, a geotechnical or geologic study conducted for a civil engineer or architect may not fulfill the needs of a construction contractor or even another civil engineer or architect that are involved in the same project. Because each geotechnical or geologic study is unique, each geotechnical engineering or geologic report is unique, prepared solely for the specific client and project site. Our report is prepared for the exclusive use of our Client. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with which there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted geotechnical practices in this area at the time this report was prepared. This report should not be applied for any purpose or project except the one originally contemplated.

A Geotechnical Engineering or Geologic Report Is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the P-259 P-8A Aircraft Apron Expansion project at NASWI near Oak Harbor, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org .

For example, changes that can affect the applicability of this report include those that affect:

- the function of the proposed structure;
- elevation, configuration, location, orientation or weight of the proposed structure;
- composition of the design team; or
- project ownership.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying a report to determine if it remains applicable.

Most Geotechnical and Geologic Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ, sometimes significantly, from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Geotechnical Engineering Report Recommendations Are Not Final

Do not over-rely on the preliminary construction recommendations included in this report. These recommendations are not final, because they were developed principally from GeoEngineers' professional judgment and opinion. GeoEngineers' recommendations can be finalized only by observing actual subsurface conditions revealed during construction. GeoEngineers cannot assume responsibility or liability for this report's recommendations if we do not perform construction observation.

Sufficient monitoring, testing and consultation by GeoEngineers should be provided during construction to confirm that the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should the conditions revealed during the work differ from those anticipated, and to evaluate whether or not earthwork activities are completed in accordance with our recommendations. Retaining GeoEngineers for construction observation for this project is the most effective method of managing the risks associated with unanticipated conditions.

A Geotechnical Engineering or Geologic Report Could Be Subject to Misinterpretation

Misinterpretation of this report by other design team members can result in costly problems. You could lower that risk by having GeoEngineers confer with appropriate members of the design team after

submitting the report. Also retain GeoEngineers to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering or geologic report. Reduce that risk by having GeoEngineers participate in pre-bid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Exploration Logs

Geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering or geologic report should never be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

Give Contractors a Complete Report and Guidance

Some owners and design professionals believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering or geologic report, but preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with GeoEngineers and/or to conduct additional study to obtain the specific types of information they need or prefer. A pre-bid conference can also be valuable. Be sure contractors have sufficient time to perform additional study. Only then might an owner be in a position to give contractors the best information available, while requiring them to at least share the financial responsibilities stemming from unanticipated conditions. Further, a contingency for unanticipated conditions should be included in your project budget and schedule.

Contractors Are Responsible for Site Safety on Their Own Construction Projects

Our geotechnical recommendations are not intended to direct the contractor's procedures, methods, schedule or management of the work site. The contractor is solely responsible for job site safety and for managing construction operations to minimize risks to on-site personnel and to adjacent properties.

Read These Provisions Closely

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering or geology) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

Geotechnical, Geologic and Environmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or

regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.

If Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

Have we delivered World Class Client Service?

Please let us know by visiting **www.geoengineers.com/feedback**.

GeoEngineers