

ATTACHMENT N:

PHASE II HERRERA ESA 2013

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

YOUTH SERVICES CENTER
1211 EAST ALDER STREET
SEATTLE, WASHINGTON

TAX PARCELS 2908700085 / 7949300095

Prepared for
King County Facilities Management Division

Prepared by
Herrera Environmental Consultants, Inc.



Note:

Some pages in this document have been purposely skipped or blank pages inserted so that this document will copy correctly when duplexed.

PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

YOUTH SERVICES CENTER
1211 EAST ALDER STREET
SEATTLE, WASHINGTON

TAX PARCELS 2908700085 / 7949300095

Prepared for
King County Facilities Management Division
500 Fourth Avenue, Room 820
Seattle, Washington 98104

Prepared by
Herrera Environmental Consultants, Inc.
2200 Sixth Avenue, Suite 1100
Seattle, Washington 98121
Telephone: 206/441-9080

November 25, 2013

CONTENTS

Introduction	1
Property Description and Physical Setting	3
Property Description and Physical Setting	3
Asset Description	3
Regional and Site Geology and Hydrogeology	4
Geology	4
Regional and Site Hydrology (Surface Water, Wetlands, Stormwater Runoff	4
Hydrogeology (Groundwater)	4
Phase I ESA Update	7
Field Investigations	11
Utility Locate	11
Drilling and Sampling Activities	15
First Field Event	15
Second Field Event	15
Third Field Event	16
Fourth Field Event	16
Indoor Air Sampling	17
Investigation Results	19
Subsurface Conditions	19
Site Geology	19
Groundwater	19
Contaminants of Concern	20
Analytical Results	24
Groundwater Sampling	24
Soil Sampling	29
Air Sampling	31
Conclusions	35
Groundwater	35
Soil	36
Indoor Air	36
Limitations	39
References	41
Appendix A	Field Procedures
Appendix B	Soil Boring and Monitoring Well Construction Records
Appendix C	Data Quality Assurance Review
Appendix D	Analytical Laboratory Reports

TABLES

Table 1. Building Addition Construction Information, Youth Services Center.....	3
Table 2. Summary of Sites with Suspected Environmental Conditions Based on Historical Activities, Youth Services Center.....	9
Table 3. Groundwater Dry Cleaner Solvent Analytical Results Summary ($\mu\text{g}/\text{L}$), Youth Services Center, Seattle, Washington.....	25
Table 4. Soil Sampling Analytical Results Summary, Youth Services Center, Seattle, Washington.....	30
Table 5. Air Monitoring Analytical Results Summary, Youth Services Center, Seattle, Washington.....	33

FIGURES

Figure 1. Location Map, Youth Services Center, Seattle, Washington.	2
Figure 2. Vicinity Map, Youth Services Center, Seattle, Washington.	8
Figure 3. Groundwater Sampling Locations, Youth Services Center, Seattle, Washington.....	12
Figure 4. Soil Sampling Locations, Youth Services Center, Seattle, Washington.	13
Figure 5. Air Sampling Locations, Youth Services Center, Seattle, Washington.	14
Figure 6. Geologic Cross-section, Youth Services Center, Seattle, Washington.	21
Figure 7. Groundwater Elevation Contour Map, Youth Services Center, Seattle, Washington.....	23
Figure 8. Groundwater Sampling Summary Results, Youth Services Center, Seattle, Washington.....	27

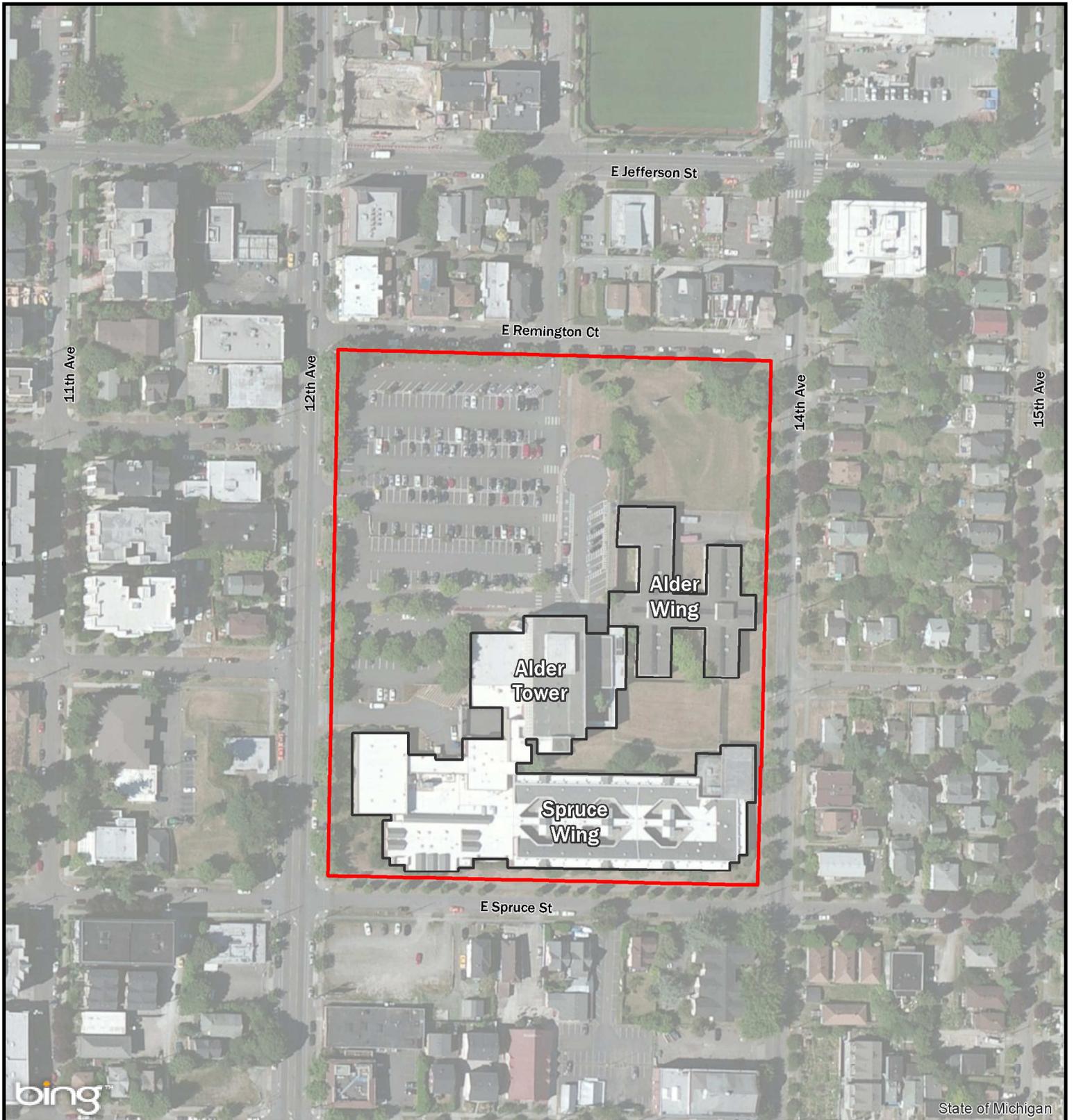
INTRODUCTION

Herrera Environmental Consultants, Inc. (Herrera) has completed a Phase II Environmental Site Assessment (ESA) for the Youth Services Center (YSC) property, located at 1211 East Alder Street in Seattle, Washington 98122 (Figure 1). The work was conducted under On-Call Environmental Hazard Services Procurement Contract No. B21945B between King County and Herrera. The assessment was performed to determine the potential for presence of hazardous substances prior to demolition of existing buildings and construction of a new facility. The new facility will include a courthouse, detention facility and parking garage. King County is the property owner.

Herrera identified Recognized Environmental Conditions (RECs) in a Phase I ESA completed in April 2010, including potential releases of petroleum hydrocarbons at the site and possible migration of petroleum hydrocarbons and dry cleaner solvents onto the property from historical operations at sites located to the north, west, and east (Herrera 2010).

Work performed for this Phase II ESA was conducted in phases, including:

- Updating the 2010 Phase I ESA by reviewing current regulatory databases for recently listed sites
- Conducting probe groundwater sampling at seven locations to determine the potential for site contamination associated with identified historical onsite and offsite contaminant sources, as well as soil sampling at three potential onsite source locations
- Conducting follow up probe groundwater sampling at five locations to further delineate identified dry cleaner solvent contamination in the northwest corner of the site and conducting groundwater sampling at three monitoring wells installed during concurrent geotechnical investigations
- Conducting indoor air monitoring for possible vapor intrusion (VI) associated with groundwater contamination
- Conducting additional probe groundwater and soil and sampling across the north-central portion of the site to further characterize groundwater contamination (7 locations) and to characterize soil planned for excavation during site development (22 locations)
- Installing and sampling nine groundwater monitoring wells to define groundwater flow direction and monitor water quality conditions across the property.



bing

State of Michigan

Legend

-  Existing building
-  Subject property



Figure 1.
Location Map, Youth Services Center,
Seattle, Washington.



 **HERRERA**

Bing 2011 (Aerial)
 K:\Projects\09-04 193-002\Project\youth_service_center-site.mxd

PROPERTY DESCRIPTION AND PHYSICAL SETTING

Property Description and Physical Setting

The site consists of two parcels covering a total of 8.59 acres, located in the south central portion of Section 41, Township 25 North, Range 4 East of the Willamette Meridian, in King County. The two parcels are identified by Tax ID numbers 2908700085 and 7949300095.

The subject property is situated at latitude 47.59909 North and longitude -122.33136 West on land that slopes down to the south from approximately 260 to 220 feet above mean sea level (EDR 2010). The site is currently used as a court and juvenile detention center by King County; a small school is also operated by the Seattle School District in the Alder Wing. Approximately 65 percent of the site is covered by impervious surfaces that include building roofs and paved parking areas. Buildings cover approximately 35 percent of the property; the remainder is composed of parking lots, paved walkways, and lawn/landscaped areas. Catch basins in the paved areas drain surface water to the City stormwater system; roof drains are also connected to the City system. The site is bordered by residential and commercial/ industrial properties on all sides.

Asset Description

King County property records indicate that a 20,724 square foot (ft²) rectangular masonry building was constructed on the property in 1950; building addition information is provided in Table 1.

Building Addition	Addition Area (ft²)	Addition Construction Date	Current Use
1	90,792	1951	Cafeteria, hospital, gymnasium
2	4,108	1968	Indoor swimming pool room
3	4,459	1970	Gymnasium
4	40,144	1971	Youth center dormitory
5	64,500	1971	Office and court
6	30,750	1974	Youth center dormitory
7	95,719	1990	Office, jail, gymnasium

Note: The 1951 structure was demolished when the 1971 structures were built.

The current configuration separates the building complex into three general areas, connected by indoor hallways: the central Alder Tower, the Alder Wing to the east, and the Spruce Wing to the south (see Figure 1).

Regional and Site Geology and Hydrogeology

Geology

The YSC is located within the southern portion of the Puget Sound Lowland physiographic region. The Puget Sound Lowland has undergone physiographic and depositional changes due to at least five glacial episodes. The last glaciation that occurred in the region was the Vashon Stade of the Fraser Glaciation, which ended approximately 13,500 years ago. The advance of the Vashon Glacier deepened and widened the north/south trending valleys situated between the Olympic Mountains and the Cascade Range in western Washington State. In the Seattle area, the Vashon Stade is represented by four stratigraphic units (from oldest to youngest): Lawton Clay, Esperance Sand, Vashon Till, and Vashon recessional deposits that make up the Vashon Drift (Galster and Laprade 1991).

As the Vashon glacial lobe advanced south and blocked the northern portion of the Puget Sound basin, a lake was formed and fine-grained sediments were deposited. This glaciolacustrine deposit, known as the Lawton Clay, is reported to be present in the Seattle area as high as 150 feet above mean sea level. A fine- to medium-grained sand unit was deposited above the Lawton Clay by meltwater streams issuing from the advancing ice sheet as it neared the Seattle area. This sand unit is called the Esperance Sand Member. The Lawton Clay and Esperance Sand are sometimes intermixed and interbedded, and the contact between the two soil types may be gradational. Both of these deposits were overridden by an estimated 3,000 feet of ice, which consolidated them into hard or dense layers. A mantle of the Vashon till was deposited on top of the Esperance Sand and Lawton Clay.

The YSC likely rests on recessional outwash deposits formed in a channel that trends north-south, flanked by till to the east and west. The recessional deposits are typically stratified sand and gravel and, less commonly, silty sand and silt. Locally, the recessional deposits are divided into 1) lacustrine deposits, consisting of laminated silt and clay, with localized sand layers underlain by 2) coarse grained deposits, consisting of sand and gravel (USGS 2005).

Regional and Site Hydrology (Surface Water, Wetlands, Stormwater Runoff)

The YSC sits at the center of the north-south trending trough, with the potential to accept surface flow from a wide arc, extending from the northwest, swinging through the north to the northeast. Surface water leaves the site to the south. Surface flow typically is intercepted by the City stormwater collection system, so that typically only site runoff comes onto the property; however, historical intense rainfall events have resulted in significant site flooding. There are no wetlands or surface water bodies mapped in the vicinity of the subject property.

Hydrogeology (Groundwater)

Regional shallow groundwater in the Seattle area generally occurs above the Esperance Sand/Lawton Clay contact and emerges along hillsides as springs. This groundwater is primarily recharged by direct infiltration and seepage from surface waters, precipitation, and surface runoff. Fine-grained deposits within the recessional outwash, situated above the Esperance Sand/Lawton Clay, often result in perched groundwater conditions. Groundwater

tends to migrate downward within thin sand layers in these zones to more permeable and transmissive sand and gravel within the recessional and advance deposits.

Fifteen monitoring wells were installed during this investigation; additional discussion of site-specific groundwater conditions, including a water level contour map is provided in the results section of this report.

PHASE I ESA UPDATE

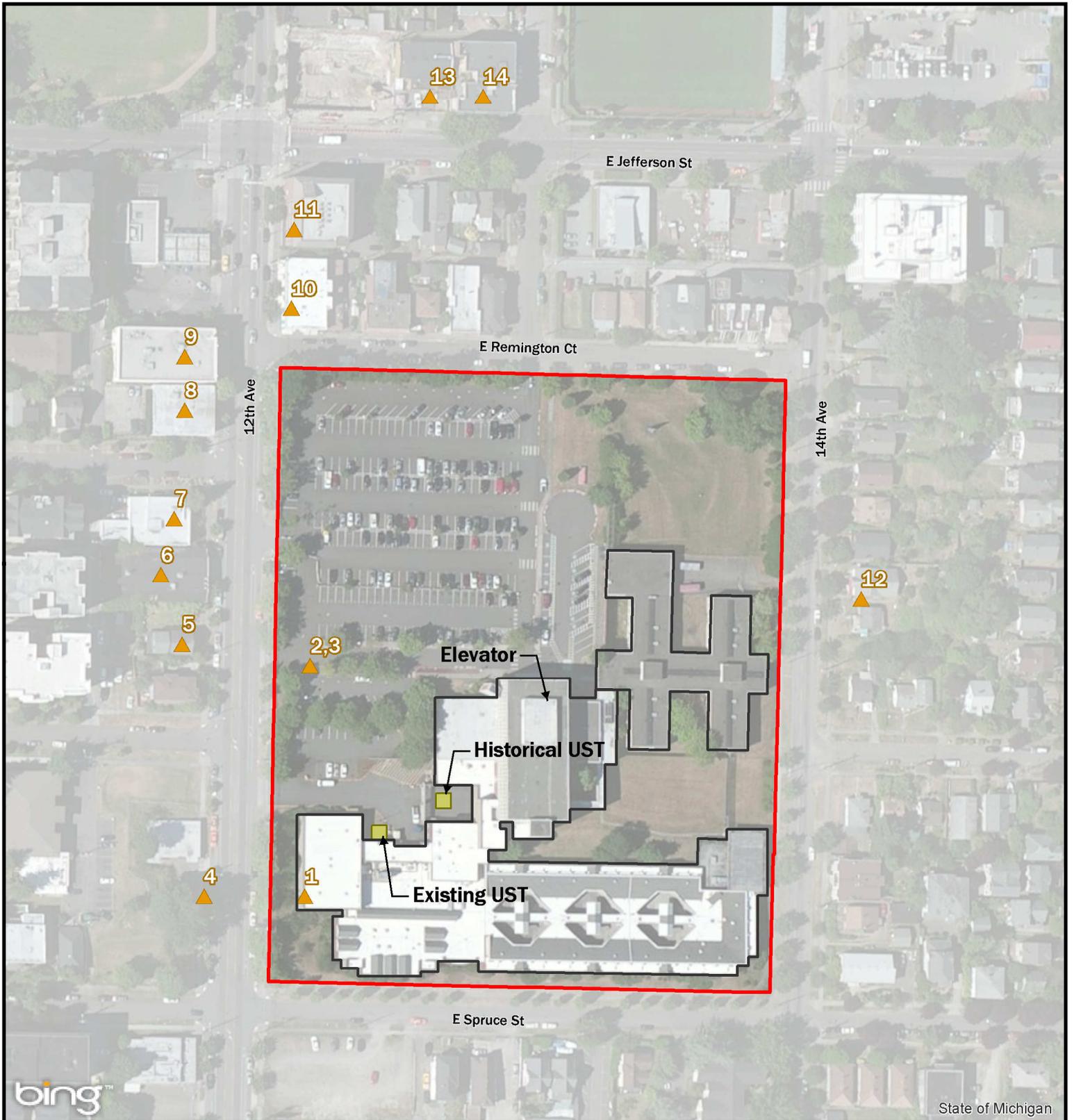
The regulatory database review conducted in 2010 identified a generator diesel fuel underground storage tank (UST) located on the YSC property in current use and nine sites documented on Ecology databases as having handled or managed hazardous substances within 1,000 feet of the YSC. The tank currently in use is constructed of double wall steel, is registered with Ecology, complies with current regulations, and features an electronic leak detection system; no evidence of a leak has been identified for the tank. None of the nine surrounding sites identified during the regulatory database review were determined to pose a risk to the YSC property based on activities reported, locations, and distances from the YSC.

Review of site drawings in 2010 identified an historical emergency generator UST located in the basement on the west side of the Alder Tower; it is unknown whether the tank was removed when the facility was redeveloped in 1990.

In addition to the regulatory database review, a review of historical property uses surrounding the YSC was performed that identified 14 sites with a potential to impact the site (Table 2, Figure 2). Three of these sites had been located on the YSC property and the other 11 sites had been located one or two blocks away to the west, north, and east (downgradient offsite businesses to the south were not considered potential sources worth further consideration).

No new sites of potential concern were identified as a result of a 2013 updated review of regulatory databases; each of the sites and addresses indicated in Table 2 were confirmed.

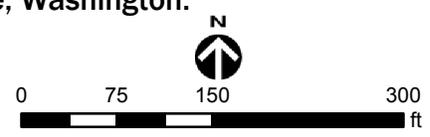
In September 2012, it was discovered that an estimated 50 gallons of hydraulic fluid had leaked into a concrete vault at the base of the north Alder Tower elevator (near the building entrance). The elevator repair company soaked up what they could, but suspected that much of the oil had seeped into concrete fractures and joints and then onto soil beneath the building. The release was reported to Ecology, along with a plan to address the contaminated soil when demolishing the building over the next few years. Ecology suggested that the site would be placed on the Confirmed and Suspected Contaminated Sites List; however, it was not found during the 2013 database review.



Legend

-  Historical site of concern
-  Underground storage tank (onsite)
-  Existing building
-  Subject property

Figure 2.
Vicinity Map, Youth Services Center,
Seattle, Washington.



Site No.	Site Name	Site Address	Distance ^a	Type	Contaminant
1	Paul R Johnson	212 12th Avenue	Onsite	Historical Auto Stations	Petroleum products
2	Hill's Auto Repair	314 12th Avenue	Onsite	Historical Auto Stations	Petroleum products
3	Auto Repair	320 12th Avenue	Onsite	Historical Auto Stations	Petroleum products
4	NW Perkins Motors	217 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
5	Bob's Auto Repair	305 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
6	Tet's Auto Repair	317 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
7	Kono Garage	321 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
8	Kono Y Tkio	407 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
9	Frans Bros	417 12th Avenue	60 feet west	Historical Auto Stations	Petroleum products
10	Law's Cleaners and Hatters	452 12th Avenue	60 feet north	Historical Cleaners	Solvents
11	Robertson's Cleaners	460 12th Avenue	80 feet north	Historical Cleaners	Solvents
12	Fuller Serv U Dry Cleaners	320 14th Avenue	60 feet east	Historical Cleaners	Solvents
13	Lee Wing Hand Laundry	1222 E Jefferson Street	250 feet north	Historical Cleaners	Solvents
14	Dong Gom	1220 E Jefferson Street	250 feet north	Historical Cleaners	Solvents

^a Distance of the listed site relative to the subject property boundary, as determined by area reconnaissance (note: the 2010 Phase ESA reported these distances relative to the property buildings).

FIELD INVESTIGATIONS

Field investigations were conducted using a phased approach, where sampling and analysis results from each field event were used to determine sampling efforts for the following field event. Herrera provided oversight for installation of 36 vibratory probes and nine groundwater monitoring wells. Groundwater was sampled from 20 of the probes and soil was sampled from 23 of the probes. In addition to the nine monitoring wells installed by Herrera, three monitoring wells were installed by Icicle Creek Engineers during their geotechnical investigations, conducted concurrent with Phase II investigations, to support future building designs. Due to the presence of volatile organic compounds detected in groundwater beneath the buildings, indoor air monitoring was conducted in the Alder Tower and Spruce Wing.

Field procedures are provided in Appendix A and boring logs and well completion diagrams are provided in Appendix B. Drilling locations associated with groundwater sampling are provided on Figure 3 and drilling locations associated with soil sampling are provided in Figure 4 (soil and groundwater samples were collected from the same probes at eight locations, shown on both figures). Air monitoring locations also are provided on Figure 5.

Soil and groundwater samples were analyzed for all or some of the following:

- Petroleum hydrocarbons using Hydrocarbon Identification (HCID) screening and then follow up with Total Petroleum Hydrocarbon - diesel extended (TPH-Dx) based on screening results
- Total lead using Environmental Protection Agency (EPA) method 6010C/6020A
- Toxicity Characteristic Leaching Procedure (TCLP) for lead using EPA method 1311
- Halogenated volatile organic compounds (HVOCs) using EPA method 8260C

Air samples were analyzed for dry cleaner solvent HVOCs, including tetrachloroethylene, trichloroethylene, (cis) 1,2-dichloroethylene, (trans) 1,2-dichloroethylene, and vinyl chloride and for 1,1-dichloroethane using EPA method TO-15.

Utility Locate

The toll-free (one call) underground utility location service was contacted prior to drilling to designate water, sewer, gas, electric, and communication lines surrounding the property. A private locating service, APS of North Bend, Washington, identified underground piping on the subject property prior to each drilling event. Seattle Public Utilities provided a map that indicated a detailed wastewater, water supply, and storm drain piping network across the site.



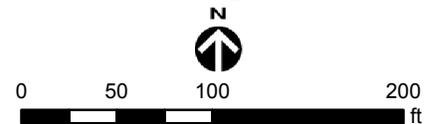
bing™

State of Michigan

Legend

- Probe location*
- ⋯ Proposed building
- ▭ Subject property

Figure 4.
Soil Sampling Locations, Youth Services Center, Seattle, Washington.



HERRERA

Bing 2011 (Aerial)

K:\Projects\09-04-193-002\Project\youth_service_center-site.mxd

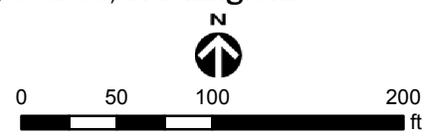
Note: * - YSC prefix has been removed from probe labels to improve legibility of figure.



Legend

- ▲ Air sample location - indoor
- ▲ Air sample location - outdoor
- Subject property

Figure 5.
Air Sampling Locations, Youth Services Center, Seattle, Washington.



Bing 2011 (Aerial)

Drilling and Sampling Activities

First Field Event

Initial Phase II sampling included installation of six probes (YSCGP-1 through YSCGP-6) along the west and north property boundaries to address potential soil and groundwater contamination associated with the offsite historical sources listed in Table 2. Probe YSCGP-7 was installed immediately south of the historical emergency generator UST. Groundwater was encountered between 10 and 23 feet below ground surface (bgs); probes were advanced to probe depths ranging from 15 to 25 feet bgs. Sampling and analysis were conducted, as follows (refer to Figure 2 for historical source locations):

- Probe YSCGP-1 was drilled adjacent to historical site No. 1-soil was collected from 2- and 10-foot depths and analyzed for HCID; groundwater was analyzed for HCID.
- Probe YSCGP-2 was drilled adjacent to historical site Nos. 2/3-groundwater was analyzed for HCID and HVOCs.
- Probe YSCGP-3 was drilled across the street from historical site Nos. 6/7-groundwater was analyzed for HCID and HVOCs.
- Probe YSCGP-4 was drilled across the street from historical site Nos. 10/11-groundwater was analyzed for HVOCs.
- Probe YSCGP-5 and YSCGP-6 were drilled downgradient from historical site Nos. 13/14-groundwater was analyzed for HVOCs.
- Probe YSCGP-7 was drilled adjacent to the historical Alder Tower emergency generator-soil was collected from 9 feet bgs and analyzed for HCID and TPH-Dx; groundwater was analyzed for HCID.

Contamination found at the northwest corner of the site indicated the need for additional groundwater characterization (specific results are discussed in the Investigation and Results section below).

Second Field Event

Follow up Phase II sampling included installation of six probes (YSCGP-4A and YSCGP-8 through YSCGP-12) across the northwest corner of the property. Probe YSCGP-4A was drilled adjacent to YSCGP-4 to determine if groundwater initially sampled in YSCGP-4 had come from a 6-inch thick sand lens encountered at 6.5 feet bgs or from a deeper layer. Probes YSCGP-8 through YSCGP-12 were positioned to complete a grid with an approximate 100-foot spacing, extending to the east and south of YSCGP-4. Groundwater was encountered between 7 and 11.5 feet bgs; probes were advanced to between 10 and 21 feet bgs. Sampling and analysis were conducted, as follows:

- **Probe YSCGP-4A** - soil was collected from 8.5 feet bgs and analyzed for HVOC to characterize the soil cuttings for disposal; groundwater was analyzed for HVOCs.

- **Probe YSCGP-8** - soil was analyzed for HCID; groundwater was analyzed for HCID, TPH-Dx, and HVOCs (petroleum was analyzed based on a sheen observed on saturated soil).
- **Probes YSCGP-9 through YSCGP-12** - groundwater was analyzed for HVOCs.

Concurrent with the second field event, three geotechnical borings were completed as monitoring wells (MW-6, MW-7, and MW-8) by Icicle Creek Engineers, located in the south-central portion of the property. Groundwater was sampled from each well after the probes were sampled. Contamination found in probes south of YSCGP-4 and in MW-8 indicated the need for additional groundwater characterization (specific results are discussed in the Investigation and Results section below).

Third Field Event

Additional Phase II sampling included installation of 23 probes (YSCGP-13 through YSCGP-34) across the northern two-thirds of the property (additional probe YSCGP-20A was drilled adjacent to YSCGP-20 to collect a groundwater sample that could not previously be collected due to lack of water prior to encountering refusal). The probes were positioned on a grid with approximately 100-foot spacing, extending to the east and south of a point located approximately 100 feet south of YSCGP-4. Soil was collected from 22 locations to evaluate potential construction and disposal requirements associated with planned building basement excavations; groundwater was collected from seven probes to delineate contamination across the central portion of the site to help determine placement of future monitoring wells:

- **Probes YSCGP-13 through YSCGP-34** - shallow soil (fill) was analyzed for HCID, TPH-Dx (as required), lead, and HVOCs; deep soil (saturated) was analyzed for HVOCs.
- Shallow soil samples were not analyzed from **Probes YSCGP-23 and YSCGP-29** because no fill material was encountered.
- A deep soil sample was not analyzed from **Probe YSCGP-33**; the boring was not able to penetrate beyond 11 feet due to the presence of coarse material and saturated soil was not encountered.
- **Probes YSCGP-19, YSCGP-20A, YSCGP-21, YSCGP-22, YSCGP-26, YSCGP-28, YSCGP-33** - groundwater was analyzed for HVOCs.

Fourth Field Event

Nine monitoring wells were installed across the entire site, integrating the labeling system already established with the existing wells installed during the geotechnical investigation:

- **MW-1s** was installed at the northwest corner of the site, screened across the groundwater surface to a depth of 16 feet bgs, to evaluate shallow aquifer conditions-groundwater was analyzed for HVOCs.
- **MW-1d** was installed adjacent to MW-1s and screened between 35 and 45 feet bgs to evaluate deep aquifer conditions-groundwater was analyzed for HVOCs.

- **MW-2** was installed at the center of the property, immediately north of the Alder Tower entrance, screened across the groundwater surface to a depth of 26 feet bgs, to evaluate conditions half way between the northwest corner of the property and contamination found at MW-8 during the second field event-groundwater was analyzed for HVOCs.
- **MW-3, MW-4, and MW-5** were installed across the southeast corner of the property, screened across the groundwater surface to depths of 31, 18, and 22.5 feet bgs, respectively, to evaluate downgradient property boundary conditions-groundwater was analyzed for HVOCs.
- **MW-9** was installed at the north-central property boundary, screened across the groundwater surface to a depth of 27 feet bgs, to evaluate the eastern extent of the plume-groundwater was analyzed for HVOCs.
- **MW-10** was installed at the northeast corner of the property, screened across the groundwater surface to a depth of 26 feet bgs, to evaluate the eastern extent of the plume-groundwater was analyzed for HVOCs.
- **MW-11** was installed approximately 200 feet south of the northwest corner of the property, screened across the groundwater surface to a depth of 25 feet bgs, to evaluate the western extent of the plume-groundwater was analyzed for HVOCs.

All monitoring wells were surveyed to the tops of casings on September 23, 2013, by Parametrix; elevations were established according to the NAVD 1988 vertical datum, per City of Seattle Benchmarks #SNV-2503 and #3638-0201.

Indoor Air Sampling

Analytical results associated with probe sampling at the northwest corner of the site and the geotechnical investigation monitoring wells indicated the presence of tetrachloroethylene beneath occupied buildings at a concentration of concern for VI. Five Summa canisters were installed within and on top of both the Alder Tower and the Spruce Wing to evaluate indoor and ambient air quality:

- **Sample #1** - located in the Alder Tower basement mechanical room
- **Sample #2** - located in the Spruce Wing detention L wing unit 4
- **Sample #3** - located in the Alder Tower basement storage room
- **Sample #4** - located in the Spruce Wing roof above unit 4 ventilation system exhaust
- **Sample #5** - located in the Alder Tower penthouse ventilation system intake

Each Summa canister was set to collect air over an 8-hour period. The two outdoor locations were selected to represent background conditions and influent air quality into the building. The three indoor locations were selected to represent the highest potentials for exposure. After sampling was complete, it was determined that the vent structure associated with Sample #4 was an exhaust vent.

INVESTIGATION RESULTS

Subsurface Conditions

Site Geology

Fill material was encountered across the site, including brick fragments found in over one-third of the borings completed during this study. Small pieces of concrete, plastic, and wood fragments also were observed in several borings. Much of the fill consisted of loose silty sand with gravel, often underlain by brick fragments, and was logged as fill. Gray and red-brown mottled silty sand and sandy silt with gravel was observed beneath sediment with brick fragments at depths ranging from 7 to 11 feet bgs near the center of the site and within 1 foot of ground surface near the northern property boundary. Based on the nature of this material, including color mottling, consistency, and its presence at depth, it was logged as native soil.

The fill layer was thickest immediately north of the Alder Tower (18 feet) and south of the Alder Tower (7 to 13 feet), diminishing to 1 or 2 feet at the north property boundary, 3 feet at the south property boundary, 4 feet at the east property boundary, and 1 to 3 feet at the west property boundary. Fill was found to be approximately 1 foot thick across the entire northeast quarter of the property where the surface elevation was generally 9 feet lower than the central portion of the property.

Fill material was underlain by glacial outwash deposits, generally consisting of loose silt, sand, and gravel. Clay layers also were observed in five probes across the site, including YSCGP-6, YSCGP-11, YSCGP-16, YSCGP-30, and YSCGP-31 at depths ranging from 8 feet to 14.5 feet bgs with thicknesses from 0.5 to 3.5 feet. Thin interbeds, less than 4 inches thick, of silt or sand were present at some boring locations.

Outwash deposits were observed as very dense across the site at depths ranging from 15 to 25 feet bgs. The outwash began transitioning to fine-grained deposits of silty clay observed in monitoring well MW-1d at 45 feet bgs; dense silt found at depths ranging from 25.5 to 30 feet bgs in MW-3, MW-9, and MW-10; and dense sandy silt observed at 47.5 feet bgs in MW-5.

A geologic cross section drawn from the northwest corner to the southeast corner of the YSC property is provided as Figure 6. There appears to be a consistent vertical profile throughout the site progressing from the surface to approximately 50 feet deep as layers of fill, silt, sand, and silt, with some interbedding of sand or clay. The lower silt layer becomes hard at depth, likely acting as an aquiclude.

Groundwater

Shallow groundwater migrates onto the YSC property from surrounding properties and recharges from precipitation that occurs onsite. Zones of low permeability, including silt and

clay, impede vertical migration of water across the site, causing it to migrate in a stair step manner through the vadose zone. Thin sand interbeds convey shallow groundwater onto the property from offsite.

Groundwater levels measured on September 23, 2013, were used to develop a water level contour map; the direction of groundwater flow was to the south-southeast (Figure 7). The depth to water varied from 4.6 to 20.8 feet bgs. Water levels measured in MW-1s (9.0 feet bgs) and in MW-1d (7.9 feet bgs) indicate an upward vertical gradient; the formation spanning the two screened sections was found to be quite transmissive (silty sand to sandy gravel), sampled at 5-foot intervals. The hydraulic gradient is calculated as 0.022 ft/ft.

Shallow groundwater appears to be semi-confined, due to the presence of fine-grained material overlying more permeable zones of sand and gravel. The fine-grained lacustrine deposits, discussed above in Site Geology, may be considered the bottom of the shallow aquifer for the site. The very dense silts and clays, encountered at depths ranging from 25.5 to 45 feet bgs, did not appear to be saturated.

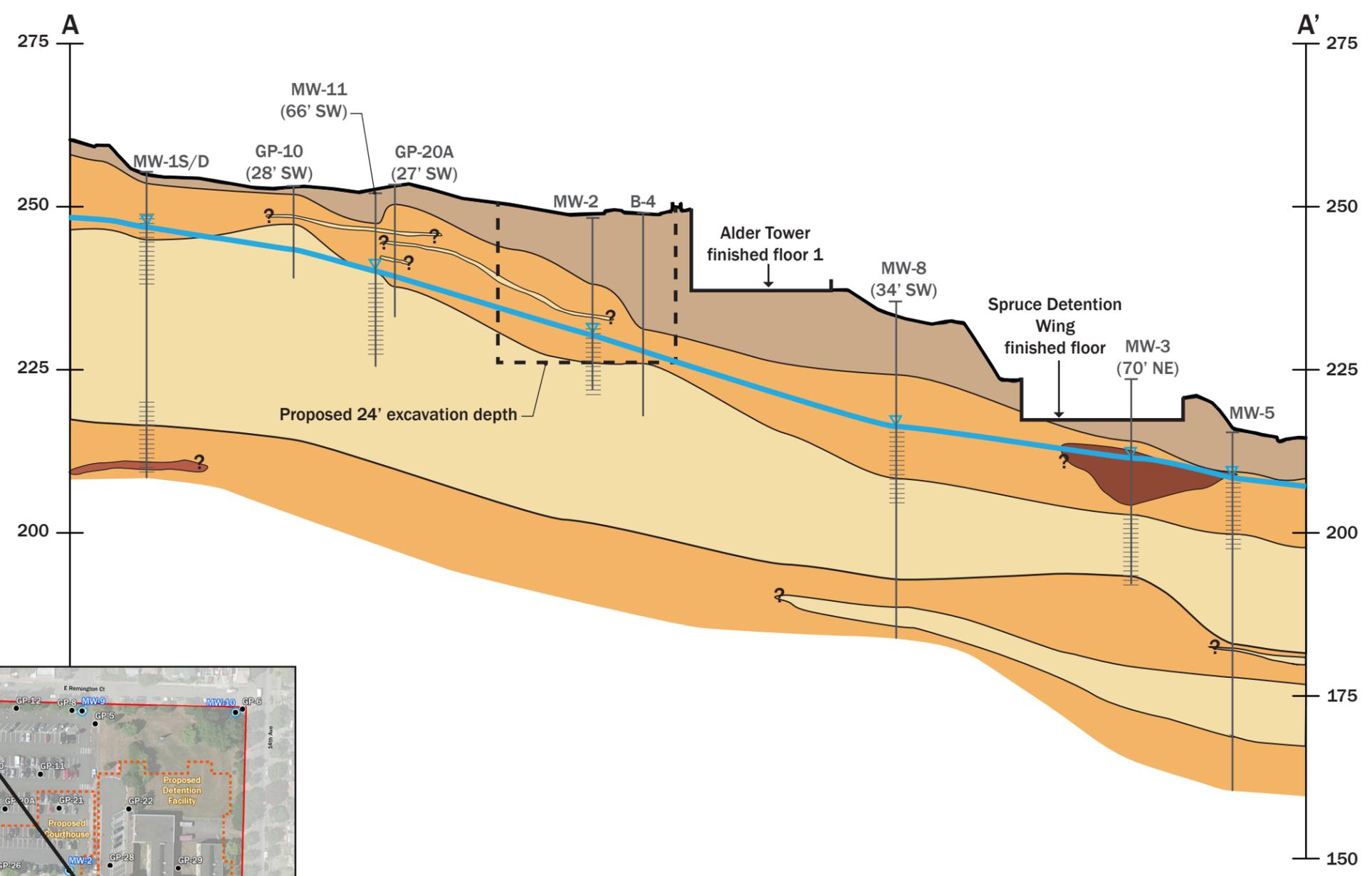
Water levels relative to ground surface elevations were observed during probe installations and measured at wells when sampled. Depth to water measured in probes and wells within and adjacent to proposed building locations included:

- Courthouse location (YSCGP-19, -20, -21, -25, -26, and -27; and MW-2, and -11) indicate saturated conditions generally between 12 and 14 feet deep
- Parking garage location (YSCGP-7 and MW-7 and -8) indicate saturated conditions generally between 13 and 20 feet deep
- Detention facility location (YSCGP-16, -17, -18, -22, -23, -24, -28, -29, -30, -33, and -34; and MW-6) indicate saturated conditions generally between 14 and 18 feet deep along the western building edge, between 6 to 9 feet deep along the center of the building, and between 7 to 14 feet deep along the eastern building edge.

Contaminants of Concern

Initial sampling indicated the presence of dry cleaning solvents along the north property boundary, immediately south of historical dry cleaners identified in the Phase I ESA. Starting in the mid-1930s, tetrachloroethylene (also known as perchloroethylene, “PCE”, or “perc”) became the primary dry cleaning solvent of use. It is a chlorinated volatile compound, degraded in the environment by reductive dechlorination under anaerobic conditions to trichloroethylene, which degrades to dichloroethylene (both cis- and trans-isomers), which degrades to vinyl chloride. The degradation compounds are called daughter products; each is considered an HVOC quantified by EPA method 8260. The specific gravities of dichloroethylene, trichloroethylene, and tetrachloroethylene range from 1.3 to 1.6, which are greater than water at 1.0. If found at high enough concentrations, these compounds may sink through the water column until impeded by a confining surface.

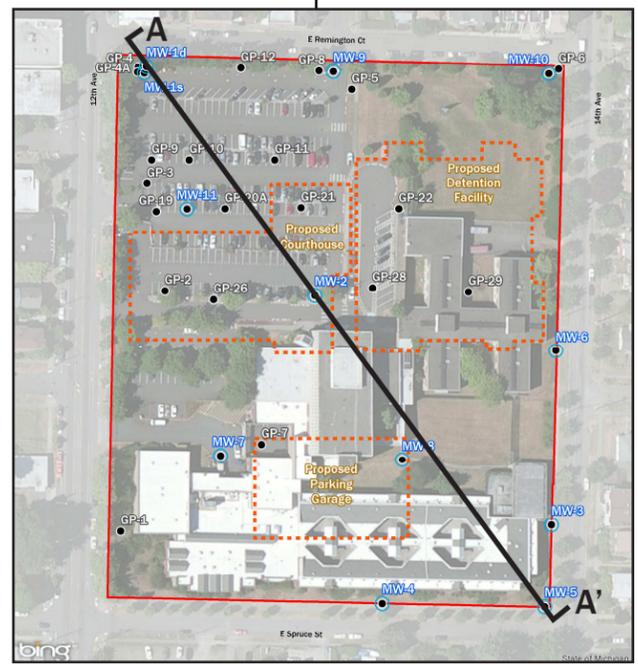
Figure 6.
Geologic Cross-Section, Youth
Services Center, Seattle, Washington.



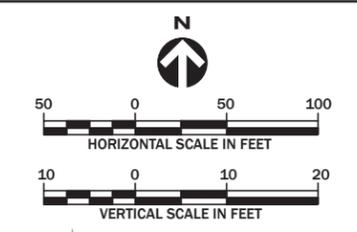
- Legend**
- Surface elevation
 - - - Conceptual profile of proposed courthouse building
 - ⊥ Monitoring well (MW)/probe location (GP) - distance projected from cross-section in parenthesis ()
 - ≡ Well screen
 - ▽ Groundwater level measured (9/23/2013)
 - Inferred groundwater level
 - Fill
 - Silt
 - Sand
 - Clay

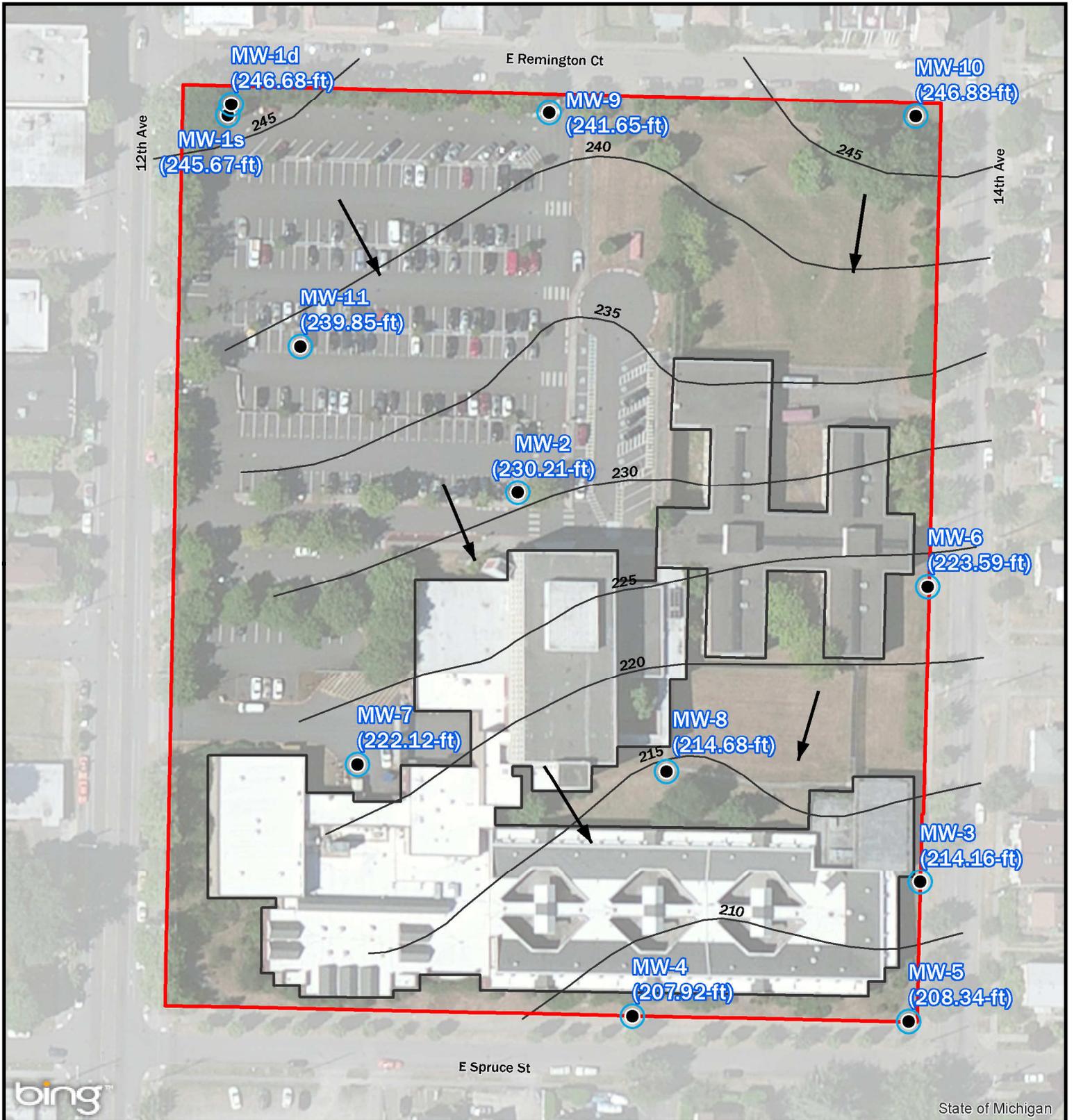
Notes:

- B-4 is a geotechnical boring.
- YSC prefix has been removed from probe labels to improve legibility of figure.



Site plan with line of section

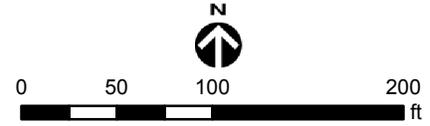




Legend

- Monitoring well location
- Existing building
- Subject property
- Estimated groundwater elevation contour (5-ft)
- Groundwater flow path

Figure 7.
Groundwater Elevation Contour Map,
Youth Services Center, Seattle, Washington.



Initial sampling also indicated the presence of diesel-range petroleum hydrocarbons adjacent to an historical UST used to store diesel fuel for an emergency generator. Diesel fuel is quantified by the NWTPH-Dx method.

Analytical Results

Groundwater samples were collected at 20 probe locations and 12 monitoring well locations. A summary of analytical results for dry cleaner solvent HVOCs is provided in Table 3 and depicted in Figure 8. HVOCs unrelated to dry cleaning operations detected in groundwater are discussed separately in the narrative below.

Soil samples were collected at three onsite historical potential source areas, at one location where high dry cleaning solvents concentrations were detected in groundwater, at one location where sheen was observed while drilling for groundwater, and at 22 locations in and surrounding planned excavation areas.

Air samples were collected at three indoor and two outdoor locations.

Laboratory reports and chain-of-custody records are provided in Appendix D and a Data Quality Assurance Review is provided in Appendix C. All data were deemed acceptable, based on *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA 2002); however, HVOC holding times for groundwater samples collected at probes YSCGP-2 and YSCGP-3 were exceeded by 18 and 19 days, respectively, and were qualified as estimated non-detects (these samples were analyzed after it appeared that dry cleaner solvents may have migrated south along the west side of the property during the first field event and were used to help position probes and monitoring wells during later field events).

Groundwater Sampling

Groundwater sampling at probes and monitoring wells was conducted to define the extent of dry cleaning solvent contamination first identified at the northwest corner of the property:

- Eighteen probes were installed during three field events to determine the apparent length and width of the contaminant plume across the north half of the property.
- Three monitoring wells installed as part of geotechnical investigations indicated contamination in the center of the site.
- Nine more monitoring wells were installed to further define plume boundaries and to provide for long-term monitoring across the site.

Probe Results

Five probes identified dry cleaning solvents and daughter breakdown products emanating from a source or sources located north of the YSC property, possibly at historical site Nos. 10 and 11 (Law's Cleaners and Hatters listed at 452 12th Avenue and Robertson's Cleaners listed

Table 3. Groundwater Dry Cleaner Solvent Analytical Results Summary (µg/L), Youth Services Center, Seattle, Washington.

Sample Identification	Date Sampled	Analytical Parameters				
		Tetrachloroethylene	Trichloroethylene	cis-1, 2 dichloroethylene	trans-1, 2 dichloroethylene	Vinyl chloride
YSCGP-2	6/27/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-3	6/27/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-4	6/27/13	8,200	91	160	ND (50)	ND (50)
YSCGP-4A	8/2/13	2,800	ND (20)	ND (20)	ND (20)	ND (20)
YSCGP-5	6/27/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-6	6/27/13	0.40	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-8	8/2/13	73	22	1.3	0.8	ND (0.40)
YSCGP-9	8/2/13	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
YSCGP-10	8/2/13	2,100	ND (10)	ND (10)	ND (10)	ND (10)
YSCGP-11	8/2/13	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
YSCGP-12	8/2/13	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
YSCGP-19	9/4/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-20A	9/5/13	2,000	15	ND (10)	ND (10)	ND (10)
YSCGP-21	9/4/13	74	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
YSCGP-22	9/4/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-26	9/4/13	26	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-28	9/5/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
YSCGP-29	9/5/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-1s	9/23/13	3,900	21	26	ND (20)	ND (20)
MW-1d	9/23/13	2.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-2	9/23/13	3,000	ND (20)	ND (20)	ND (20)	ND (20)
MW-3	9/23/13	ND(1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)

Table 3 (continued). Groundwater Dry Cleaner Solvent Analytical Results Summary (µg/L), Youth Services Center, Seattle, Washington.

Sample Identification	Date Sampled	Analytical Parameters				
		Tetrachloroethylene	Trichloroethylene	cis-1, 2 dichloroethylene	trans-1, 2 dichloroethylene	Vinyl chloride
MW-4	9/23/13	66	1.8	ND (0.20)	ND (0.20)	ND (0.20)
MW-5	9/23/13	1.7	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-6	7/30/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-6	9/23/13	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW 7	7/30/13	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW 7	9/23/13	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-8	7/30/13	150	ND (0.40)	ND (0.40)	ND (0.40)	ND (0.40)
MW-8	9/23/13	98	1.9	ND (1.0)	ND (1.0)	ND (1.0)
MW-9	9/23/13	230	16	ND (2.0)	ND (2.0)	ND (2.0)
MW-10	9/23/13	ND (1.0)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)
MW-11	9/23/13	3,000	ND (20)	ND (20)	ND (20)	ND (20)
MTCA Cleanup Level		5.0 ^a	5.0 ^a	16.0 ^b	160 ^b	0.20 ^a

^a MTCA method A cleanup level for unrestricted land use

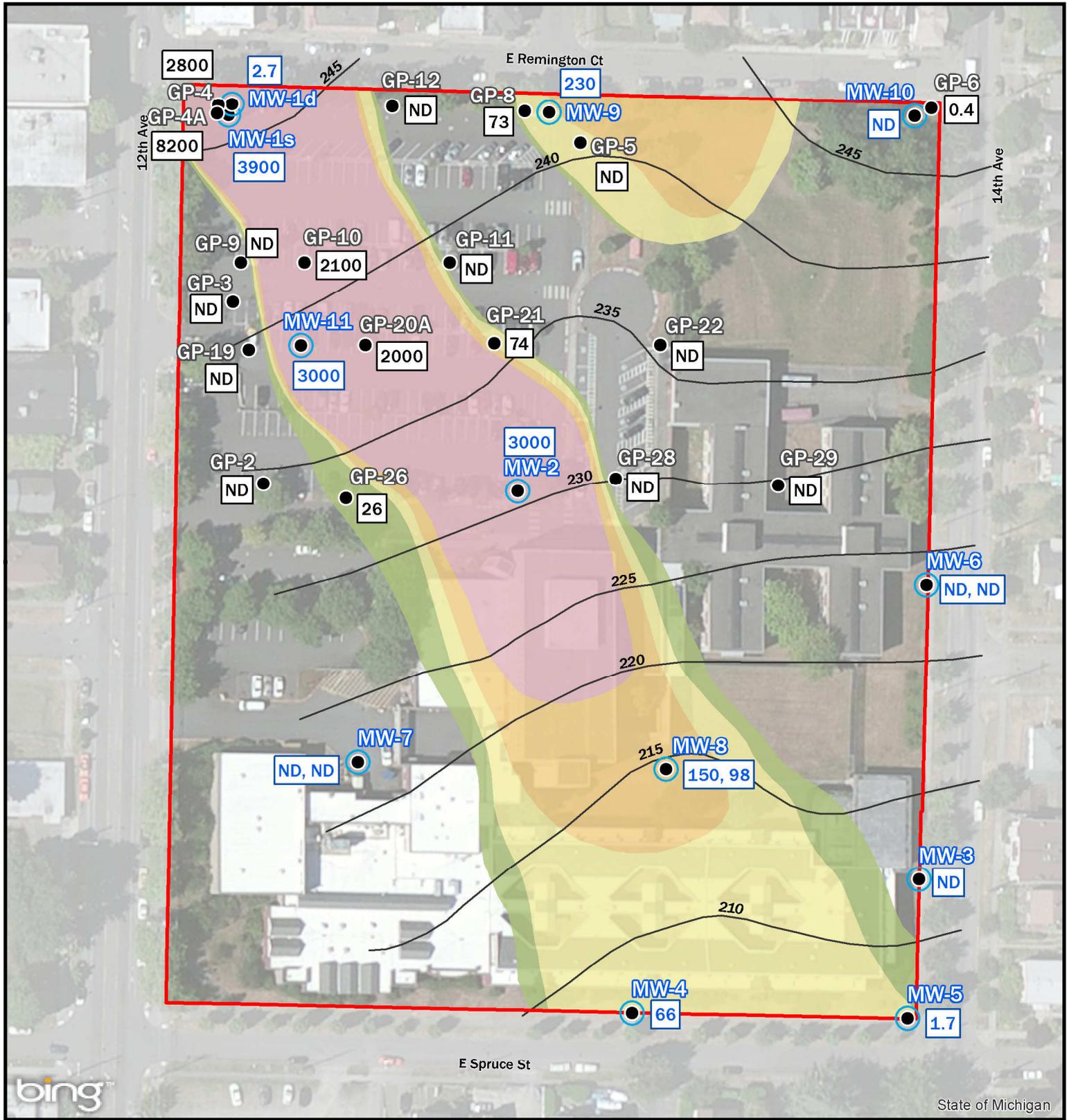
^b MTCA method B cleanup level

µg/L - micrograms per liter

Bold values were detected

Bold values exceed MTCA cleanup level

ND - Constituent not detected (detection limit).



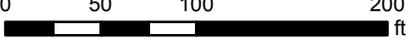
Legend

Approx. PCE concentration ($\mu\text{g/L}$)	● Monitoring well location
 < 1	● Probe location ¹
 1 - 100	## PCE concentration ²
 100 - 1,000	— Estimated groundwater elevation contour (5-ft)
 > 1,000	□ Subject property

Note
¹ YSC prefix has been removed from probe labels to improve legibility of figure.
² ND: non-detect concentration

Figure 8.
Groundwater Sampling Summary Results,
Youth Services Center, Seattle, Washington.

N


0 50 100 200
 ft


 Bing 2011 (Aerial)
 K:\Projects\09-04\193-002\Project\youth_service_center-site.mxd

at 460 12th Avenue - see Figure 2). The chemicals of concern include tetrachloroethylene, trichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, and vinyl chloride; no vinyl chloride was detected (although the detection limit was often elevated due to high concentrations of tetrachloroethylene). The probes define a contaminant plume extending from the northwest corner through the center of the property.

Dry cleaner solvents also were found at probes YSCGP-6 and YSCGP-8, located at the east and center of the north property boundary, respectively. No solvents were detected in groundwater at probe YSCGP-12, located approximately half-way between contamination found at YSCGP-4 and YSCGP-8, or in GP-11 further south, indicating the potential for contamination to be entering the property from a different source. Historical dry cleaner sites Nos. 13 and 14 (Lee Wing Hand Laundry and Dong Gom) were reportedly located one block north in the center of the block on East Jefferson Street (see Figure 2).

Samples from probes YSCGP-5 and YSCGP-22 in the north-central part of the property identified the presence of chemicals apparently unrelated to dry cleaning operations, with 1,1-dichloroethane identified at 0.45 µg/L and 0.27 µg/L, respectively; both results were well below the MTCA method B cleanup level of 1,600 µg/L.

Monitoring Well Results

The three monitoring wells (MW-6, MW-7, and MW-8) sampled during the second field event on July 30 indicated tetrachloroethylene at a concentration 30 times the MTCA cleanup level in MW-8 near the south end of the property; no HVOCs were detected in the other two wells. These results helped to focus probe installations to the north and additional monitoring well installations to the south to further define the apparent plume dimensions. Samples from wells MW-7 and MW-8, located west and east of the historical UST release identified in probe YSCGP-7, were also screened for petroleum hydrocarbons; none were detected.

Sampling results from all 12 monitoring wells on September 23 indicate that the dry cleaner solvent plume follows a relatively narrow north-to-south path through the site. Coupled with groundwater flow information, it appears that an area of high solvent concentration extends from the northwest corner to the center of the property, with concentrations diminishing almost two orders of magnitude at the south property boundary (still exceeding the cleanup level). The plume represented in Figure 7 is based on tetrachloroethylene concentrations measured at monitoring wells and probes; where both existed side-by-side along the north property boundary, only monitoring well results were used (concentrations in adjacent wells and probes were found to be quite variable - see Table 2).

The low tetrachloroethylene concentration (2.7 µg/L) collected at MW-1d from 37 feet below the water table using low-flow sampling indicates that the solvent does not appear to be accumulating deep in the aquifer near the apparent source at historical sites Nos. 10 and 11.

HVOC analysis identified chloroform (unrelated to dry cleaning) at the north property boundary in MW-1d (0.21 µg/L) and at the south property boundary in MW-5 (0.80 µg/L); neither concentration exceeds the MTCA method B cleanup level of 80 µg/L. Chloroform is

often found in disinfected drinking water as a by-product of the chlorination process and may be present as a result of leaking water mains.

Groundwater samples collected from MW-7 and MW-8 were analyzed for diesel-range petroleum hydrocarbons to evaluate the potential for migration of fuel oil from historical and currently used emergency generator USTs in the sally port; none were detected.

A groundwater sample collected from MW-9 was analyzed for diesel-range petroleum hydrocarbons to further evaluate their presence identified at the north-central property boundary during probe sampling; none were detected.

Soil Sampling

Soil was sampled at 23 probe locations across the site to assess conditions associated with identified historical sites of concern and to address the potential for contaminated fill expected to be removed during site development excavations; samples with detected contaminants of concern are summarized in Table 4. Probes installed near the three historical sites of concern located on the YSC property included:

- Boring YSCGP-1 drilled adjacent to historical site No. 1 (auto repair facility) in the southwest corner of the property-no petroleum compounds were detected, based on screening analysis at either 2 or 10 feet deep.
- Boring YSCGP-7 drilled adjacent to the historical Alder Tower emergency generator UST in the southwest corner of the property-diesel-range petroleum hydrocarbons were detected at 61 mg/kg at 9 feet deep, which does not exceed the MTCA method A cleanup level of 2,000 mg/kg.
- Boring YSCGP-8 drilled along the north central property boundary to determine the eastern limit of dry cleaning solvents initially found at YSCGP-4; petroleum was analyzed based on a sheen observed on saturated soil-no petroleum compounds were detected based on screening analysis at 9 feet deep.

A probe was installed adjacent to probe YSCGP-4, where high dry cleaning solvents concentrations had previously been detected in groundwater:

- Boring YSCGP-4A drilled adjacent to historical sites No. 10/11 (dry cleaner facilities) in the northwest corner of the property-tetrachloroethylene was detected at 1.2 µg/kg at 8.5 feet deep, which does not exceed the Model Toxics Control Act (MTCA) method A cleanup level of 50 µg/kg.

A probe was installed at a location where sheen was observed while drilling for groundwater:

- Boring YSCGP-8 at the north-central property boundary-no petroleum hydrocarbons were detected based on screening analysis at 9 feet deep.

Table 4. Soil Sampling Analytical Results Summary, Youth Services Center, Seattle, Washington.

Sample Identification	Depth (feet)	Analytical Parameters			
		Diesel-range Petroleum Hydrocarbons (mg/kg)	Heavy Oil-range Petroleum Hydrocarbons (mg/kg)	Tetrachloroethylene (µg/kg)	Trichloroethylene (µg/kg)
YSCGP-4A	8.5			1.2	
YSCGP-7	9.0	61			
YSCGP-14	3.0			38	
YSCGP-14	9.0			560	5.0
YSCGP-19	2.0		340		
YSCGP-20	12.0			37	
YSCGP-22	8.0		93		
YSCGP-26	3.0		190		
YSCGP-26	24.0			6.1	
YSCGP-27	3.0		140		
YSCGP-28	9.0	120	1,500		
YSCGP-32	3.0		330		
YSCGP-24	3.0		540		
<i>MTCA Cleanup Level^a</i>		2,000	2,000	50	30

^a MTCA method A cleanup level for unrestricted land use

Bold value exceeds MTCA cleanup level

Nineteen borings installed across the area planned for new courthouse and detention facility construction were sampled from both the fill layer and from deeper native soil to determine disposal requirements; two borings were only sampled from the deeper native soil, due to absence of fill, and one boring was only sampled from fill, due to absence of groundwater in deeper native soil. Diesel- and/or heavy oil-range petroleum hydrocarbons were detected at seven locations; no concentrations exceeded the MTCA method A cleanup level of 2,000 mg/kg:

- Boring YSCGP-19-heavy oil-range hydrocarbons were found 2 feet deep at 340 mg/kg.
- Boring YSCGP-22-heavy oil-range hydrocarbons were found 8 feet deep at 93 mg/kg.
- Boring YSCGP-26-heavy oil-range hydrocarbons were found 3 feet deep at 190 mg/kg.
- Boring YSCGP-27-heavy oil-range hydrocarbons were found 3 feet deep at 140 mg/kg.
- Boring YSCGP-28-diesel- and heavy oil-range hydrocarbons were found 9 feet deep at 120 mg/kg and 1,500 mg/kg, respectively.
- Boring YSCGP-32-heavy oil-range hydrocarbons were found 3 feet deep at 330 mg/kg.
- Boring YSCGP-34-heavy oil-range hydrocarbons were found 3 feet deep at 540 mg/kg.

Several of these borings were located within the apparent dry cleaner solvent plume, three of which were found to have detectable levels of solvents:

- Boring YSCGP-14-tetrachloroethylene was found 3 feet deep at 38 µg/kg and trichloroethylene and tetrachloroethylene were found 9 feet deep at 5 µg/kg and 560 µg/kg, respectively (the MTCA method A cleanup level for tetrachloroethylene is 50 µg/kg).
- Boring YSCGP-20-tetrachloroethylene was found 12 feet deep at 37 µg/kg.
- Boring YSCGP-26-tetrachloroethylene was found 24 feet deep at 6.1 µg/kg.

Each shallow (fill) sample collected from the 22 locations was analyzed for lead, with concentrations ranging from non-detect (minimal practical quantitation limit of 5.6 mg/kg) to 200 mg/kg. Two samples with the highest concentrations (YSCGP-19-2 and YSCGP-20-4) were analyzed for TCLP lead; no lead was detected.

Air Sampling

Air samples were tested for tetrachloroethylene, trichloroethylene, and their common degradation products in the environment (cis-dichloroethylene, trans-dichloroethylene, and vinyl chloride). Results are presented in Table 5. The degradation products were not detected in any samples, consistent with their very low concentrations in groundwater. Tetrachloroethylene, the primary contaminant in groundwater, was not detected in indoor air samples, even though the locations selected for sampling were chosen to represent worst case exposure conditions (subsurface locations closest to groundwater). Tetrachloroethylene was detected in a single roof sample; it is routinely found in background ambient air in urban environments (data for Beacon Hill sampling compiled for the Puget Sound Clean Air Agency is provided in Table 5). Trichloroethylene, the other volatile organic commonly detected in groundwater, was detected at a low concentration in a single indoor sample in a storage room. Since trichloroethylene is still a fairly common solvent in office and cleaning products, it is not known whether the detection represents vapor intrusion or the presence of the trichloroethylene-containing product in the storage room.

Risk-based equations from MTCA were used to calculate site-specific screening levels to better understand the context of the detected results. The following values were calculated and are presented at the bottom of Table 5:

- Adult worker exposure based on a 50-hour work week, for 50 weeks per year for 30 years with a 1 in 100,000 cancer risk - this is an unusually long exposure period compared to typical staffing at the facility and represents worst-case conditions. As shown in Table 5, detected concentrations were much lower than the screening level, indicating that conditions are protective under MTCA for site workers.
- Youth resident exposure based on a 24-hour per day stay of up to 6 weeks - tetrachloroethylene and trichloroethylene have adjusted toxicities based on early life exposure consistent with new (2012) EPA protocols; the adjustments assumed youths between the ages of 8 and 16 at the facility and a 1 in a 1,000,000 cancer risk.

As shown in Table 5, detected concentrations were much lower than the screening level, indicating that conditions are protective under MTCA for youth residents.

- A standard Method B (residential) screening level has been calculated by Ecology for tetrachloroethylene and trichloroethylene that assumes humans over the age of 6 live full-time (24 hours per day all year) at a site for 70 years. The trichloroethylene concentration in the storage room is above this value. Since nobody lives on site for 70 years, the exceedance does not represent an actual risk.

The Occupational Safety and Health Administration (OSHA) sets Permissible Exposure Limits (PELs) for chemicals found in the workplace. The limits set for tetrachloroethylene and trichloroethylene are established based on a time-weighted average of 8 hours (i.e., a typical work day). The PEL units of measurement are parts per million by volume (ppmv), as opposed to MTCA cleanup levels measured in units of mass per volume ($\mu\text{g}/\text{m}^3$). Tetrachloroethylene and trichloroethylene were measured in only one indoor sample, collected from the Alder Tower basement storage room (Sample #3), at concentrations of 0.0000583 and 0.000289 ppmv, respectively; the OSHA PEL for both compounds is 100 ppmv.

Table 5. Air Monitoring Analytical Results Summary, Youth Services Center, Seattle, Washington.

Sample Identification	Date Sampled	Analytical Parameters					
		Tetrachloroethylene µg/m ³	Trichloroethylene µg/m ³	1,1-Dichloroethane µg/m ³	cis-1,2-Dichloroethylene µg/m ³	trans-1,2-Dichloroethylene µg/m ³	Vinyl chloride µg/m ³
Background Locations							
Alder Tower Penthouse HVAC Air Intake	8/21/2013	ND (2.0)	ND (1.1)	ND (0.81)	ND (0.79)	ND (0.79)	ND (0.51)
Spruce Wing Roof Above Unit 4 (Sample 2)	8/21/2013	7.4	ND (1.1)	ND (0.81)	ND (0.79)	ND (0.79)	ND (0.51)
Seattle Background Air Monitoring (Beacon Hill)	2008-2009	0.16					
Indoor Locations							
Alder Tower Basement Mech Room	8/21/2013	ND (2.0)	ND (1.1)	ND (0.81)	ND (0.79)	ND (0.79)	ND (0.51)
Alder Tower Basement Storage Room	8/21/2013	ND (2.0)	1.55	ND (0.81)	ND (0.79)	ND (0.79)	ND (0.51)
Spruce Wing Detention Wing L, Unit 4	8/21/2013	ND (2.0)	ND (1.1)	ND (0.81)	ND (0.79)	ND (0.79)	ND (0.51)
Cleanup Level/Site-Specific Exposure (modified Method B for youth) ^a		300	14.2	–	–	496	17.1
Cleanup Level/Site-Specific Exposure (modified Method C for workers) ^b		138	6.9	–	–	205	18.9
Cleanup Level/Criteria (MTCA Method B age 7 and up)		9.6	0.37		NA	27	0.56

Notes:

Bold values were detected

ND Analyte not detected (detection limit)

^a Method B Modified for youth assumes children between the ages of 10 and 18, in 24-hour, 7-day per week residence for up to 6 weeks per year. A reasonable maximum exposure given existing legal limitations at the facility.

^b Method C Modified for on-site workers assumes adults working up to 50 hr/wk, for 50 wk/yr for 30 years. A reasonable maximum exposure for the facility.

CONCLUSIONS

The purpose of this Phase II ESA was to verify potential contaminant sources based on earlier Phase I ESA efforts and to determine the extent of contamination associated with those sources. Thirty-six probes were installed, with groundwater collected at 20 locations and soil collected at 25 locations. Nine monitoring wells were installed onsite for this effort and three additional monitoring wells were installed concurrently as part of geophysical investigations. A summary of site characterization results follows.

Groundwater

- Groundwater collected from probes identified and delineated dry cleaner solvent entering the northwest corner of the YSC property, extending to the center of the property at concentrations exceeding MTCA method A and B cleanup levels; a potential source has been identified as historical sites Nos. 10 and 11 on 12th Avenue.
- Groundwater collected from 12 monitoring wells indicate dry cleaning solvents exceeding MTCA cleanup levels migrating along a narrow band from the northwest corner to the southeast corner of the YSC property. The presence of tetrachloroethylene and the low level of the dichloroethylene isomers indicate that the groundwater conditions are aerobic; otherwise, the parent compounds would be degrading and they are not.
- Dewatering required during construction of buildings at proposed locations will require management of hazardous waste associated with the contaminant plume if solvents are detected.
- Groundwater collected from probes located along the north-central and northeast property boundary identified tetrachloroethylene, which may not be a part of the plume originating near the northwest corner of the property; a potential source has been identified as historical sites Nos. 13 and 14 on East Jefferson Street. This interpretation is based on no contaminants of concern detected in probes YSCGP-11, YSCGP-12, and YSCGP-22.
- Low concentrations of 1,1-dichloroethane were found in groundwater at the north-central property boundary and 150 feet to the south; no source has been identified, but it appears to be offsite to the north (1,1-dichloroethane is mainly used as a feedstock in chemical synthesis and as a solvent for plastics, oils, and fats; as a degreaser; as a fumigant in insecticide sprays; in halon fire extinguishers; and in cementing of rubber).
- An historical emergency generator UST, located at the southwest corner of the Alder Tower, appears to have released diesel fuel to adjacent soil and groundwater; no petroleum hydrocarbons were detected in groundwater crossgradient at monitoring

well MW-7 (65 feet west-southwest) or downgradient at monitoring well MW-8 (165 feet east-southeast), indicating that the release is likely contained onsite (although it may have migrated beneath the Spruce Wing).

- An estimated 50-gallon release of hydraulic fluid to an elevator sump located at the northeast corner of the Alder Tower has been reported, most of which is assumed to have leaked to the soil below; the building blocks access to the impacted soil, but no petroleum hydrocarbons were detected in groundwater at monitoring well MW-8, approximately 150 feet downgradient.

Soil

- The soil sample collected near the historical emergency generator UST adjacent to the southwest corner of the Alder Tower identified diesel fuel at a concentration below the MTCA method A cleanup level; however, some soil surrounding the tank can be expected to exceed the cleanup level and will require removal.
- Diesel- or heavy oil-range petroleum hydrocarbons found in 7 of the 20 boring location samples collected from fill across the proposed construction zone did not identify concentrations exceeding the MTCA method A cleanup level, indicating a low probability of contamination during planned excavations. Although concentrations were below the cleanup level, offsite disposal would still be restricted to facilities or locations that meet Ecology requirements for reuse of petroleum-contaminated soils (Ecology 2011). Also, soils could exhibit petroleum odors, which may impact reuse onsite.
- Lead found in most of the 20 boring location samples collected from fill across the proposed construction zone did not identify concentrations exceeding the MTCA method A cleanup level, indicating a low probability of contamination during planned excavations; TCLP testing of the sample with the highest concentration (200 mg/kg) indicates that none of this material will qualify as a hazardous waste.
- Dry cleaner solvents found in soil at three boring locations across the proposed construction zone did not identify concentrations exceeding the MTCA method A cleanup level; however, their presence indicates a potential for classifying the soil as a hazardous waste once excavated. Depth to groundwater measurements indicate saturated soil 12 to 14 feet deep across the proposed courthouse footprint, where high concentrations of dry cleaner solvents were found in groundwater. If soil containing dry cleaner solvents at concentrations below MTCA cleanup levels is to be excavated, a “contained-out” designation should be obtained from Ecology (this would allow soil with low concentrations of dry cleaner solvents to be disposed of at a municipal waste landfill, as opposed to a hazardous waste landfill).

Indoor Air

- Air samples were tested for dry cleaner solvent and its degradation by-products. Tetrachloroethylene, the primary contaminant in groundwater, was not detected in

indoor air samples, even though the locations selected for sampling were chosen to represent worst case exposure conditions. Trichloroethylene was found at one indoor location; however, it is a fairly common solvent in office and cleaning products, which may explain its presence in the storage room.

- Risk-based equations from MTCA were used to calculate site-specific screening levels to better understand the context of the detected results. Results indicate that conditions are protective under MTCA both for site workers and youth residents.
- Proposed construction would result in structures situated either within or above contaminated groundwater. Although VI does not appear to currently affect existing buildings, it must be taken into account as a contaminant pathway with the potential to impact indoor air that may require mitigation measures.

LIMITATIONS

This report has been prepared for exclusive use by the King County. The analyses and conclusions included in this report are based on conditions encountered at the time of the field investigation, as well as professional experience and judgment. Herrera cannot be responsible for interpretation by others of the data contained in this report.

Herrera's services were performed with due diligence in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the area. No other warranty, express or implied, is made.

REFERENCES

Ecology. 2001. Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation (CLARC). Washington State Department of Ecology, Toxics Cleanup Program. Publication Number 94-145. Updated April 2011.

Ecology. 2007. Model Toxics Control Act Statute and Regulation—Model Toxics Control Act, Chapter 70.105D RCW; Uniform Environmental Covenants Act, Chapter 64.70 RCW; and MTCA Cleanup Regulation, Chapter 173-340 WAC. Washington State Department of Ecology, Toxics Cleanup Program. Publication Number 94-06. Revised November 2007.

Ecology. 2011. Guidance for Remediation of Petroleum Contaminated Sites, Toxics Cleanup program Publication No. 10-09-057. September 2011.

Environmental Data Resources, Inc. (EDR). 2010. The EDR Radius Map with GeoCheck - King County Juvenile Detention Youth Service Ctr, 1211 E. Alder Street, Seattle, WA 98122, Inquiry Number: 2722336.2s, Millford, CT. March 17, 2010.

Galster, Richard W. and William T. Laprade. 1991. Geology of Seattle, Washington: Bulletin of Association of Engineering Geologists 28(3):235-302.

Herrera. 2010. Phase I Environmental Site Assessment, Youth Service Center - Seattle, Washington. Prepared for King County Facilities Management Division by Herrera Environmental Consultants, Inc., Seattle, Washington. April 20, 2010.

US Geological Survey. 2005. The Geologic Map of Seattle - a Progress Report. Open File Report 2005-1252.

APPENDIX A

Field Procedures

FIELD PROCEDURES

Field procedures used to perform the Phase II Environmental Site Assessment (ESA) at the Youth Services Center (YSC) addressed the following:

- Drilling and sampling of soil and groundwater with the push-probe drilling method
- Monitoring well installation with the hollow-stem auger drilling method
- Groundwater sampling from monitoring wells
- Sample handling and documentation
- Field sampling equipment decontamination

The field investigation consisted of drilling 36 push-probe borings and collecting soil samples and/or groundwater samples from those borings. Twelve monitoring wells also were installed and groundwater samples were collected from those wells. Probe-boring logs and monitoring well construction logs are included in Appendix B.

Sample Designation

Samples were designated by an alphanumeric system. Push-probe borings began with (YSC)GP-1 and the numeric suffix denotes the depth interval of the soil sample. Monitoring wells began with MW-1, s and d indicating shallow and deep, respectively.

Drilling and Sampling Procedures

Pre-Drilling Activities

Prior to commencing drilling and sampling activities, Underground Utility Location Service (UULS) was notified of the intent to drill soil borings at the subject property. UULS subsequently contacted participating agencies or companies with underground utilities in the area. These utility companies marked the locations of their utility lines and equipment along the property boundaries.

A private utility locating company, APS of North Bend, Washington, was used to locate underground utilities at each proposed boring location.

Utility drawings available through Seattle Public Utilities also were reviewed.

Soil Sampling from Probe-Drilled Borings

Probe borings were advanced using a probe-drive sampler attached to driven probe rods. During drilling, discrete soil samples for soil classification, field screening, and chemical

analysis were collected continuously at 5-foot intervals using a probe-drive sampler 5 feet long by 2 inches outside diameter and lined with dedicated clear Lexan® liners. The sampler was sealed with a piston stop pin while being pushed or driven to the desired sampling depth. The piston stop pin was retracted into the sampler while the sampler was pushed or driven to obtain a soil sample. Following retrieval, the soil-filled Lexan® liner was removed from the sampler and cut open to expose the soil core. Soil encountered during drilling was visually inspected and classified in accordance with the Unified Soil Classification System (USCS; American Society for Testing and Materials [ASTM] D2488-08).

Samples were prepared for chemical analysis by removing soil from the liner and placement directly into jars provided by the analytical laboratory. Pre-weighed sample vials were filled to comply with the 5035A method for sample collection for Northwest Total Petroleum Hydrocarbons-Gasoline/Benzene, Toluene, Ethylbenzene, and Total Xylenes (NWTPH-G/BTEX) and Halogenated Volatile Organic Compound (HVOC) analyses. Each sample was uniquely labeled denoting sample identification number and depth, date and time sampled, and job number. Soil samples were then placed into a chilled cooler for storage prior to delivery to the analytical laboratory.

If no groundwater was to be collected, after soil sampling was completed, each probe borehole was backfilled from the bottom to ground surface with bentonite chips and then capped at the surface with soil or asphalt.

Groundwater Sample Collection from Push Probe Borings

Groundwater samples were collected from probe borings by driving a sealed stainless steel screened probe point to the desired depth, opening the screen, and drawing water via clean dedicated polyethylene tubing connected to a peristaltic pump at the surface. Initial depth to water was determined by the field geologist based on observations of moisture content and permeability of soil samples collected at each probe boring location. Once the water level stabilized and after development (approximately 1/2 to 2 gallons water purged from each boring), water samples were collected directly from the tubing into sample containers provided by the laboratory. Care was taken to ensure that no bubbles or headspace were present in the 40 ml vials for G/BTEX and HVOC analyses. Immediately upon filling, each container was securely capped, labeled, and stored in a chilled cooler prior to delivery to the laboratory.

Following groundwater collection, each probe borehole was backfilled from the bottom to ground surface with bentonite chips and then capped at the surface with soil or asphalt.

Monitoring Well Installations from Hollow-Stem Auger Borings

Borings were drilled using an auger drill rig equipped with 4.25-inch inside diameter hollowstem auger flights. Discrete soil samples were collected at 5-foot depth intervals using a drive split-spoon sampler 18 inches long by 3-inch outside diameter for soil classification, field screening, and chemical analysis. The sampler was driven using a 300-pound downhole hammer with a drop of 24 inches. Following retrieval, each sample was logged by a geologist for soil lithology. Soils encountered during drilling were visually inspected for staining,

screened for the presence of volatile organic vapors using a Photovac® Minirae photoionization detector (PID), and classified in accordance with the Unified Soil Classification System (USCS; American Society for Testing and Materials [ASTM] D2488-08).

Each well was constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) blank well casing flush threaded with a 10-foot section of 0.010-inch slotted machine cut well screen casing at the base. A filter pack of clean silica sand was placed in the annular space between the screened casing and borehole to a height approximately 2 feet above the top of the screened well casing. Bentonite chips were placed above the filter pack to within 2 feet of the ground surface. Each well was completed below grade with a water-tight well monument box set in a concrete surface seal.

Samples were prepared for chemical analysis by removing soil from the sampler and placement directly into jars provided by the analytical laboratory.

Well Development

Following installation, monitoring wells were developed with a submersible pump. Development continued until levels of sand and silt were reduced and water removed from the well was generally of clear quality. Development water from each well was contained in 55-gallon drums and stored temporarily at the site.

Groundwater Sampling from Monitoring Wells

General procedures for collecting groundwater samples from monitoring wells were as follows:

- The well monument cover was removed and condition of the well and surrounding area were inspected. Note observations in the field notebook and well sampling log. Remove the well casing plug.
- Depth to groundwater was measured to the nearest 0.01 foot using an electronic water level indicator. Measurements were taken relative to the surveyed reference mark at the top of the PVC well casing. Date, time, and measurements were recorded on the well sampling log.
- Monitoring wells MW-6, MW-7, and MW-8 were sampled on July 30, 2013 with disposable bailers. During purging, pH, water temperature, dissolved oxygen, and specific conductivity were measured. The amount of water purged, water parameter measurements, and time of collection were recorded on the well sampling log. Five casing volumes of standing water were removed prior to sampling. Purged water removed during development was placed into 55-gallon drums stored onsite.
- Samples were collected with the same dedicated disposable bailers used to purge the well by filling sample containers provided by the analytical laboratory. Care was taken to ensure that no bubbles or headspace were present for the HVOC samples. Containers were securely capped, labeled, and placed into a chilled cooler for storage prior to delivery to the laboratory. The date and time sample collected was recorded on the well sampling log and chain-of-custody form.

- The twelve wells sampled on September 23, 2013 were purged of standing water using a low-flow purge method ranging from 0.1 to 0.5 liters per minute with clean, dedicated polyethylene tubing and a peristaltic pump. Tubing was placed within several inches of the bottom of each well. During purging, pH, water temperature, dissolved oxygen, specific conductivity, water level, and pumping rate were measured. The amount of water purged, water parameter measurements, and time of collection were recorded on the well sampling log. Recharge for 11 of the wells, excluding MW-10, was very slow; the water levels never stabilized and continued to drop during purging. These wells were purged until field readings had stabilized, with a maximum of three casing volumes of standing water removed prior to sampling. Well MW-2 was purged dry and sampled when the water level recovered. The water level did stabilize for well MW-10 and it was sampled when the parameters had stabilized, prior to removal of three casing volumes. Purged water removed during development was placed into 55-gallon drums stored onsite.
- Samples were collected with the same dedicated polyethylene tubing used to purge the well by pumping directly into sample containers provided by the analytical laboratory. Sample collection and handling was comparable to the procedures discussed above during bailer sampling.
- The well casing plug was replaced and the well monument cover secured.

Decontamination Procedures

Drilling equipment, including probe and auger core barrel sections, probe well screens, and other downhole equipment, were decontaminated between each boring using a pressure washer. Decontamination fluids generated during decontamination of drilling equipment were placed into 55-gallon drums for disposal. In addition, chemical-resistant gloves worn by sample handlers were changed between sampling locations.

Sample Handling

All samples collected during this investigation were handled according to the procedures described in this section.

Sample Containers and Labeling

Samples were placed in containers supplied by the analytical laboratory appropriate for the analyses to be performed. Sample container labels were completed at the time of collection using a permanent waterproof pen or marker. Sample labels included the following information:

- Project name
- Sample identification (including site designation, sample number, and depth interval collected)
- Date and time of collection

Sample Storage

Immediately following sample collection, sample containers were placed into a chilled cooler containing ice for storage prior to delivery to the analytical laboratory. Care was taken to ensure that sample holding times were not exceeded. Soil sample containers were placed into plastic Ziploc bags to protect labels from moisture in the cooler.

Chain of Custody

Following collection, sample information was recorded on a chain-of-custody form. The purpose of this record is to account for the possession (or custody) of each sample from the time it is collected until laboratory testing and reporting is complete. The signature of each person in possession of the samples was recorded on the chain-of-custody form. Information recorded on the chain-of-custody record included the following:

- Project name and location
- Project number
- Names of project manager and sampling personnel
- Sample identification
- Sample matrix (soil or water)
- Date and time of collection (for each sample)
- Analysis requested (for each sample)
- Number of sample containers (for each sample)
- Signature, date, and time (for each person releasing or accepting sample custody)

Sample Shipment and Delivery

Samples collected during this field investigation were couriered from the site or Herrera's office to the analytical laboratory.

Sample Documentation

All sampling activities during this investigation were documented in a dedicated field notebook. The notebook was labeled with the project name, project identification number, dates of field activities, and name of the field coordinator. All relevant activities were recorded in the field notebook during the period of the field investigation. Entries into the field notebook were made in permanent ink. Corrections were made by placing a single line through the original entry accompanied by the initials of the person entering the correction. At a minimum, information in the field notebook included:

- Date and atmospheric conditions
- Major activities to be performed

- Names of sampling personnel present (including subcontractors)
- Time of arrival at site, set-up, sample collection, and completion at each sample station
- Soil descriptions (except where recorded on boring logs)
- Start and stop times of work by subcontractors
- Any unusual events or occurrences

Disposal of Investigation-Derived Waste

Disposal of Incidental Trash

Incidental trash generated during this investigation (including discarded gloves, used polyethylene tubing, plastic soil liners, polyethylene bailers, used Ziploc bags, paper towels, and food packaging) were placed in plastic trash bags and disposed of as solid waste into a dumpster at the Herrera office building in Seattle, Washington or at Cascade Drilling's shop in Woodinville, Washington.

Disposal of Soil Cuttings

Soil cuttings generated during drilling activities were placed in 55-gallon drums and stored onsite pending arrangement of disposal.

Decontamination Fluids and Purge Water Disposal

Decontamination fluids and purge water generated during drilling were placed into 55-gallon drums pending arrangement of disposal.

APPENDIX B

Soil Boring and Monitoring Well Construction Records



SOIL PROBE BORING RECORD

Boring ID YSCGP-1
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>SW corner of property, 23 ft</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>West of building</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	80	▼	1	SM	Grass/Topsoil
			2		Light brown silty SAND, with a trace of gravel, (Fill), dry
			3		Soil Sample YSCGP1-2 at 10:10
			4		
			5	ML	Brown sandy SILT, with a trace of gravel, damp
6	GM		Gray-brown sandy GRAVEL, dry		
7					
8					
9					
10			Soil Sample YSCGP1-10 at 10:20		
11					
12					
13					
14					
15					
16	Water encountered at 16 feet during drilling.				
5-foot core with liner	80		17		Gray silty SAND, with a trace of clay, wet
			18		
			19		
			20		Set screen from 16 ft to 20 ft in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-2
 Total depth 25 feet
 Sheet 1 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>N of N sidewalk at main</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>entrance</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description		
5-foot core with liner	50	▼	1	SW	Asphalt/crushed rock		
			2		Brown medium SAND, with a trace of gravel, silt, (Fill), dry		
			3				
			4				
			5				
5-foot core with liner	80		6	SW		Brown gravelly SAND, with a trace of silt, wood fragment, damp	
			7				
			8				
			9				
			10		ML		Very dark brown gravelly SILT, with a trace of clay, sand, organic material, damp
11	Tan-light brown gravelly sandy SILT, with a trace of clay, damp,						
5-foot core with liner	100		12		ML		Gray brown gravelly sandy SILT, with a trace of clay, damp,
			13				
			14				
			15				
			16				
5-foot core with liner	80		17	SM		Dark gray silty SAND, damp	
			18			Small cobbles	
			19				
			20				



SOIL PROBE BORING RECORD

Boring ID YSCGP-2
 Total depth 25 feet
 Sheet 2 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>N of N sidewalk at main</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>entrance</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	100		21	SM	Brown silty SAND, wet	
			22			
			23	ML	Gray brown sandy SILT, with a trace of gravel, damp	
			24			Gray sandy SILT, damp
			25			



SOIL PROBE BORING RECORD

Boring ID YSCGP-3
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>N of northernmost gate at</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>West end of parking lot adjacent to 12th</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 27, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	70	▼ ▽	1	SW	Asphalt/Crushed Rock	
				SM	Brown gravelly SAND, (Fill), dry	
			2		Tan fine SAND with a trace of silt and gravel, damp	
			3		Red brown silty gravelly SAND, damp	
			4			
5-foot core with liner	90		5			
			6		Red brown mottled silty gravelly SAND, damp	
			7		Gray and red-brown mottled silty, gravelly, SAND, damp	
			8			
			9		Gray brown gravelly silty SAND with a trace of clay, damp	
5-foot core with liner	100		10			
			11			
			12			
			13			
			14		Water encountered at 14.5 feet during drilling.	
5-foot core with liner	100		15		Gray gravelly SAND with a trace of silt, wet	Static water level measured at 15.3 feet.
			16			
			17			
			18			
			19			
		20		Set screen from 16 ft to 20 ft in temporary well. Backfilled borehole with bentonite chips.		



SOIL PROBE BORING RECORD

Boring ID YSCGP-4
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>NW corner of parking lot</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	Air monitoring (Y/N) <u>No</u>	
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 27, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▽ ▼			Asphalt/Crushed Rock
			1	ML	Brown sandy SILT with a trace of gravel, occasional red mottling, damp
			2		
			3		
			4		
5					
6					
7					
5-foot core with liner	100		8	SP	Coarse 4-inch SAND interbed
			9	ML	Brown gravelly SILT with a trace of clay and sand, damp
			10	SM	Gray fine to medium SAND with a trace of gravel, damp
5-foot core with liner	100		11		Gray brown gravelly silty SAND with a trace of clay, wet
			12		
			13		
			14		
		15			
					Set screen from 6 ft to 10 ft in temporary well due to presence of heaving sand. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-4A
 Total depth 10 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>NW corner of parking lot</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>Adjacent to YSCGP-4 (2' SW)</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	55	∇			Asphalt/Crushed Rock
			1	ML	Brown sandy SILT with a trace of gravel, occasional red mottling, damp
			2		
			3		
			4		
5					
3-foot core with liner	100		6	SP	Brown medium 4-inch SAND interbed, damp
			7	ML	Brown gravelly SILT with a trace of sand and clay, damp
			8		
2-foot core with liner	100		9	SP	Brown medium SAND, damp. Static water level measured at 8.85 feet.
		10	ML	Brown sandy SILT with a trace of gravel, damp	
					Set screen from 5 ft to 10 ft in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-6
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>NE corner of property</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	60	<div style="display: flex; align-items: center; justify-content: center;"> ▽ ▼ </div>	1	SM	Grass/Topsoil
			2		Gray brown silty gravelly SAND, brick fragments, (Fill), damp
			3		
			4		
			5		
6					
7					
5-foot core with liner	75		8	CL	Gray blue silty CLAY, with a trace of gravel, damp
			9		
			10		
			11		
5-foot core with liner	90		12	ML	Gray blue to brown mottled clayey SILT, with a trace of gravel and sand, damp
			13		
			14		
			15		
5-foot core with liner	100		16		Static water level measured at 14.2 feet.
			17		Water encountered at 15.5 feet during drilling.
			18		Gray blue clayey SILT with a trace of sand and gravel, damp
			19		Set screen from 15.5 ft to 19.5 ft in temporary well. Backfilled borehole with bentonite chips.
			20	SM	Gray silty SAND, damp



SOIL PROBE BORING RECORD

Boring ID YSCGP-7
 Total depth 25 feet
 Sheet 1 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>SE corner of Sally Port</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	Air monitoring (Y/N) <u>No</u>	
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	60		1	SM	Asphalt/Crushed Rock	
			2		Brown silty gravelly SAND, (Fill), damp	
			3			
			4			
5-foot core with liner	60		5	ML		Brown sandy SILT, with a trace of gravel, brick fragments, (Fill), damp
			6			
			7			
			8			
			9			
5-foot core with liner	90		10	SM	Gray brown silty SAND, with a trace of gravel, fuel odor, damp. Soil Sample YSCGP7-9 at 8:40.	
			11			
			12			
			13			Light brown silty SAND, with a trace of gravel, damp
			14			
			15			
5-foot core with liner	100		16	ML	Gray weathered rock, dry	
			17			
			18			
			19			
			20			Gray clayey SILT, with a trace of gravel and sand, damp



SOIL PROBE BORING RECORD

Boring ID YSCGP-7
 Total depth 25 feet
 Sheet 2 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>SW corner of Sally Port</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>June 26, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description			
5-foot core with liner	100	▼	21	ML	Gray clayey SILT, with a trace of gravel and sand, damp			
			22					
			23					
						24	SM	Water encountered at 23.5 feet during drilling. Gray silty SAND, with a trace of gravel, wet
					25			
					Set screen from 21 ft to 25 ft in temporary well. Backfilled borehole with bentonite chips.			



SOIL PROBE BORING RECORD

Boring ID YSCGP-8
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>98 feet East of YSCGP-12</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	<div style="text-align: center;"> ▽ ▼ </div>			Asphalt/Crushed rock
			1	SM	Brown to red-brown mottled silty SAND with a trace of gravel, damp
			2		
			3		
			4	ML	Brown to red-brown mottled sandy SILT with a trace of gravel, damp
5-foot core with liner	100		5		
			6		Gray sandy SILT with a trace of gravel, damp, fuel odor
			7		
			8		
			9		Soil sample YSCGP8-9
5-foot core with liner	100		10		Static water level measured at 9.9 feet.
			11		Fuel odor, damp Water encountered at 11.5 feet during drilling.
			12	SW	Gray gravelly SAND, wet
			13		
			14		
		15			
					Set screen from 9 feet to 14 feet in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-9
 Total depth 21 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>96 feet South of GP-4</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	75	▼ ▽	1	SM	Asphalt/Crushed Rock	
			2		Brown gravelly SAND, with a trace of silt, large brick fragments, (Fill), damp	
			3			
			4			
			5			
5-foot core with liner	100		6	ML		Light brown to red-brown mottled gravelly, sandy SILT, damp
			7			
			8			
4-foot core with liner	100		9	SM	Gray-brown gravelly silty SAND, damp	
			10			
			11			Wet, water encountered at 10.5 feet during drilling.
			12			Static water level measured at 11.05 feet.
5-foot core with liner	75		13		Gray gravelly SAND with a trace of silt, damp to wet, dense	
			14			
			15			
			16			
			17			
			18			
			19			
2-foot core with liner	100		20		Unable to penetrate beyond 21 feet. Soil was very dense. Set screen from 16 feet to 21 feet in temporary well. Backfilled borehole with bentonite chips.	
			21			



SOIL PROBE BORING RECORD

Boring ID YSCGP-10
 Total depth 14 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>117 feet West of YSCGP-11</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	100	▽ ▼			Asphalt/Crushed Rock	
			1	ML	Dark brown silty SAND with a trace of gravel, brick fragments, (Fill), damp	
			2		Light brown to red-brown mottled silty SAND with a trace of gravel, damp	
			3			
			4			
			SP	2-inch coarse sand interbed, damp		
5	ML		Brown sandy SILT with a trace of gravel, damp			
5-foot core with liner	100			SM	Light brown to red-brown mottled silty SAND, damp	
			6			
			7	SP	Brown medium SAND with a trace of silt, damp	
			8			
			9	SM	Gray brown gravelly silty SAND, damp	
4-foot core with liner	100			10		Static water level measured at 9.8 feet. Wet, water encountered at 10.5 feet during drilling.
				11		
			12			
			13			
			14			
					Set screen from 8.5 feet to 13.5 feet in temporary well. Backfilled borehole with bentonite chips.	



SOIL PROBE BORING RECORD

Boring ID YSCGP-11
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>100 feet East of YSC GP-10</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▽ ▼			Asphalt/Crushed Rock
			1	ML	Dark brown sandy SILT with a trace of gravel, brick fragments, (Fill), damp
			2		Brown sandy SILT with a trace of gravel, occasional red-brown mottling, damp
			3		
			4		
			5		
5-foot core with liner	100		6		
			7	SW	Brown fine to medium SAND, damp
			8	ML	Brown sandy gravelly SILT, damp
			9		
5-foot core with liner	100		10		Static water level measured at 9.5 feet.
					Brown sandy SILT, damp
					Wet, water encountered at 10.5 feet during drilling.
			11		Brown sandy SILT with a trace of gravel, damp
			12		Brown silty CLAY with a trace of gravel, damp
		13		2-inch interbed of brown medium SAND, damp	
		14		Gray silty CLAY with a trace of gravel, damp	
		15			
					Set screen from 9 feet to 14 feet in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-12
 Total depth 10 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>102 feet East of YSC GP-4</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>August 1, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▽ ▼	1	SM	Asphalt/Crushed Rock
			2		Gray and red-brown mottled silty SAND with a trace of clay and gravel, damp
			3		
			4		
			5		
5-foot core with liner	100		6		
			7		Static water level measured at 6.9 feet.
			8	SP	Water encountered at 7.5 feet during drilling. Gray brown medium SAND, wet
			9	SW	Gray brown gravelly SAND, wet
			9	ML	Gray brown gravelly SILT, damp
		10	SM	Gray brown silty SAND with a trace of gravel, damp	
					Set screen from 4.5 feet to 9.5 feet in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-13
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>61 feet South and 32 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>West of YSCGP-4A</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	85	▼	1	ML	Asphalt/Crushed Rock
			2		Brown-gray gravelly silty SAND, brick fragments, (Fill), dry
			3		Light gray-brown silty SAND, white small plastic pieces, (Fill), dry Soil Sample YSCGP13-3 at 10:15
			4		Wood fragments Red-brown and gray mottled gravelly silty SAND, (Fill), dry
			5	SP	Gray-tan fine SAND, dry
5-foot core with liner	100		6	SM	Gray and red-brown mottled gravelly silty SAND, (Fill), dry
			7	GM	Gray-brown sandy GRAVEL, with a trace of silt, (Fill), damp
			8	SM	Gray-brown gravelly silty SAND, damp
			9		
5-foot core with liner	80		10		
			11		Gray gravelly silty SAND, damp
			12		
			13		
			14		Soil Sample YSCGP13.5-14.5 at 10:25 Wet, water encountered at 14.5 feet during drilling.
			15		Gray silty SAND, with a trace of gravel, wet
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-14
 Total depth 10 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>104 feet East and 10 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>South of YSCGP-13</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼	1	ML	Asphalt/Crushed Rock
			2		Gray and red-brown mottled sandy SILT, with a trace of gravel, damp
			3		Soil Sample YSCGP14-3 at 10:45
			4		
			5		Gray and red-brown mottled gravelly SILT, with a trace of sand, damp
5-foot core with liner	100		6	SM	Gray-brown gravelly silty SAND, damp
			7	SP	Gray-brown medium SAND, damp
			8		
			9	SM	Gray-brown gravelly SAND, with a trace of silt, damp Water encountered at 9 feet during drilling. Soil Sample YSCGP14-9.5 at 10:55
			10		
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-15
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>94 feet East of YSCGP-14</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼			Asphalt/Crushed Rock
			1	SM	Brown silty SAND, (Fill), damp
			2		Soil Sample YSCGP15-2 at 11:35
			3		
5-foot core with liner	100		4	ML	Gray and red-brown mottled gravelly sandy SILT, damp
			5		
			6		
			7		
			8		
			9		
5-foot core with liner	100		10	SP	Gray-brown medium SAND, damp Wet, Soil Sample YSCGP15-10 at 11:50 Water encountered at 10 feet during drilling.
			11		
			12		
			13		
			14	ML	
			SP	Gray-brown medium SAND, wet	
	15	ML	Gray gravelly SILT, with a trace of sand, damp		
				Backfilled borehole with bentonite chips.	



SOIL PROBE BORING RECORD

Boring ID YSCGP-16
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>145 feet East of YSCGP-15</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼			Grass/Topsoil
			1	SM	Brown gravelly silty SAND, (Fill), dry
			2		Brown-gray gravelly silty SAND, (Fill) damp Large brick fragment Soil Sample YSCGP16-3 at 12:35
			3		
			4		
5-foot core with liner	100		5	ML	Gray and red-brown mottled sandy SILT, damp
			6		
			7		Gray and red-brown mottled gravelly sandy SILT, damp
			8		
			9		
			10		
5-foot core with liner	100		11	CL	Gray silty CLAY with a trace of gravel, damp
			12		
			13		
			14		Wet, water encountered at 14.5 feet during drilling.
		15	CL	Gray silty CLAY with a trace of gravel, damp	
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-17
 Total depth 10 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>75 feet East of YSCGP-17</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	100	▼			Grass/Topsoil	
			1	SM	Brown gravelly SAND with a trace of silt, (Fill), damp. Soil Sample YSCGP17-1 at 13:25	
			2	SP	Brown medium SAND, (Fill), damp	
			3	ML	Gray and red-brown mottled sandy SILT, with a trace of gravel, damp	
			4			
5-foot core with liner	100		5			
			6			Brown gravelly sandy SILT, damp
			7			Gray clayey SILT with a trace of sand, damp
			8			
			9			Water encountered at 9 feet during drilling.
		10	SM	SP	Soil Sample YSCGP17-9.5 at 13:35 Gray gravelly SAND, wet Gray medium SAND, wet	
					Backfilled borehole with bentonite chips.	



SOIL PROBE BORING RECORD

Boring ID YSCGP-18
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>90 feet North and 16 feet West</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>of YSCGP-24</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 4, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼	1	SM	Grass/Topsoil
			2		Brown silty SAND with a trace of gravel, (Fill), dry
			3		
			4		
			5		
6					
5-foot core with liner	100		7	SW	Gray-brown mottled gravelly SAND, damp
			8	ML	Gray gravelly SILT with a trace of sand, damp
			9		
			10		
5-foot core with liner	100		11	SW	Gray gravelly SAND, wet Soil Sample YSCGP18-11 at 15:25
			12		
			13		
			14		
			15		
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-19
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>78 feet South and 48 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>East of YSCGP-25</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 4, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▽ ▼			Asphalt/Crushed Rock
			1	SM	Dark brown silty SAND with a trace of gravel, brick fragments, piece of a Sneaker, (Fill), damp Soil Sample YSCGP19-2 at 10:45
			2		
			3	SP	Brown-tan medium SAND, (Fill),
			4		
5-foot core with liner	100		5	SM	Gray and red-brown mottled silty gravelly SAND, damp
			6		
			7		
			8		
			9		
5-foot core with liner	100		10		Static water level measured at 10.45 feet.
			11		
			12		
			13		Water encountered at 12.5 feet during drilling. Tan-gray gravelly SAND with a trace of silt, wet
			14		Soil Sample YSCGP19-14 at 11:05
		15			Set screen from 11 ft to 15 ft in temporary well. Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-20
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>91 feet East of YSCGP-19</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100				Asphalt/crushed rock
			1	ML	Dark brown sandy SILT with a trace of gravel, (Fill), damp
			2		Tan and red-brown mottled sandy SILT with a trace of gravel, (Fill), damp
			3	SM	Dark brown gravelly SAND, with a trace of silt, damp Soil Sample YSCGP20-4 at 12:00
			4		
5					
5-foot core with liner	100			SP	Gray medium SAND, damp, 1-inch silt interbed.
			6	ML	Gray and red-brown mottled sandy SILT with a trace of gravel, damp
			7		
			8		
			9		
5-foot core with liner	100	▽ ▼		SP	Static water level measured at 10.4 feet. Brown medium SAND, damp to wet
			11	ML	Water encountered at 11 feet during drilling. Gray and red-brown mottled sandy SILT with a trace of gravel, damp Soil Sample YSCGP20-12 at 12:20
			12		
			13		
			14		
			15		Rock at bottom of borehole. Unable to drill deeper than 15 feet.
			16		Set screen from 11 to 15 feet in temporary well. Well did not produce sufficient water to collect sample. Backfilled with bentonite pellets.
			17		
			18		
			19		
			20		



SOIL PROBE BORING RECORD

Boring ID YSCGP-20A
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>96.5 feet East of YSCGP-19</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	60	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;">▼</div> <div style="margin-top: 20px;">▽</div> </div>	1	ML	Asphalt/crushed rock
					Dark brown sandy SILT with a trace of gravel, (Fill), damp
			2		Tan and red-brown mottled sandy SILT with a trace of gravel, (Fill), damp
			3	SM	Dark brown gravelly SAND, with a trace of silt, damp
			4		
			5		
6					
5-foot core with liner	90			SP	Gray medium SAND, damp
			7	ML	Gray and red-brown mottled sandy SILT, damp
			8		
			9	SP	Brown medium SAND, damp
5-foot core with liner	80			ML	Gray and red-brown mottled sandy SILT with a trace of gravel, damp
			10		
			11	SP	Gray medium SAND damp to wet. Water encountered at 11.5 feet during drilling.
			12	ML	Gray and red-brown mottled sandy SILT
			13		Static water level measured at 13.58 feet.
			14		
15					
5-foot core with liner	100			SM	Gray-brown gravelly silty SAND. wet
			16		
		17			
		18			
		19			
	20		Set screen from 16 to 20 feet in temporary well. Backfilled with bentonite pellets.		



SOIL PROBE BORING RECORD

Boring ID YSCGP-22
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>120 feet West and 13 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>South of YSCGP-23</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 4, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	95		1	SM	Grass/Topsoil	
			2		Brown gravelly SAND with a trace of silt, (Fill), dry	
			3			
			4			
			5			
5-foot core with liner	100		6	ML	Brown sandy SILT with a trace of gravel, brick fragments, (Fill), damp	
			7			
			8			
			9			
			10			
5-foot core with liner	100		11			
			12			
			13			
			14			2-inch zone of black gravelly SAND, (Fill), dry
			15			SW
5-foot core with liner	100	∇ ▼	16	GW	Static water level measured at 15.68 feet.	
			17		Brown sandy GRAVEL, wet Water encountered at 16.5 feet during drilling.	
			18		Soil Sample YSCGP22-18 at 14:45 Gray sandy GRAVEL, wet	
			19		Set screen from 15 to 19 feet in temporary well. Backfilled with bentonite pellets.	
			20			



SOIL PROBE BORING RECORD

Boring ID YSCGP-23
 Total depth 9 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>24 feet West and 26 feet North</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>of the NE corner of the building.</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼			Grass/Topsoil
			1	ML	Gray and red-brown mottled sandy SILT, with a trace of gravel, damp
			2		
			3		
			4		
5					
4-foot core with liner	100		6		Water encountered at 6 feet during drilling.
			7	SW	Soil Sample YSCGP23-6 at 14:30 Gray gravelly SAND, wet
			8		
		9			
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-24
 Total depth 8.5 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>100 feet East of YSCGP-23</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	Air monitoring (Y/N) <u>No</u>	
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼			Grass/Topsoil
			1	SM	Brown silty SAND with a trace of gravel (Fill), dry Soil Sample YSCGP-24-0.5 at 14:00
			2	ML	Gray and red-brown mottled sandy SILT, with a trace of gravel, damp
			3		
			4		
3.5-foot core with liner	75		5		
			6		
			7		Water encountered at 7 feet during drilling.
		8	SM	Soil Sample YSCGP24-7.5 at 14:10 Gray-brown silty SAND, wet	
			ML	Gray and red-brown mottled sandy SILT with a trace of gravel, damp	
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-25
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>24 feet North and 40 feet West</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>of YSCGP-24</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	100	▼	1	SM	Asphalt/crushed rock	
			2		Brown gravelly SAND with a trace of silt, brick fragments, (Fill), damp	
			3			Soil Sample YSCGP25-3 at 16:00
			4			
			5			
6						
7						
8	Gray and red-brown mottled silty SAND, with a trace of gravel, damp					
9						
10						
11						
12			Gray and red-brown mottled gravelly SAND with a trace of silt, damp			
13						
14				Water encountered at 14 feet during drilling. Soil Sample YSCGP25-14 at 16:10		
15				ML	Gray-brown gravelly SILT with a trace of sand, wet	
16					Backfilled with bentonite pellets.	
17						
18						
19						
20						



SOIL PROBE BORING RECORD

Boring ID YSCGP-26
 Total depth 25 feet
 Sheet 1 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>27 feet South and 103 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>East of YSCGP-25</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 4, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	<div style="display: flex; align-items: center;"> ∇ </div>	1	SM	Asphalt/crushed rock
			2		Gray-brown silty SAND with a trace of gravel, brick fragments, (Fill), damp
			3		Brown SAND with a trace of silt and gravel, (Fill), dry
			4		Soil Sample YSCGP26-3 at 9:10
			5		
6					
7					
8					
5-foot core with liner	100		9	ML	3.5-inch piece of brick
			10		Dark brown-black sandy SILT, brick fragments, with a trace of gravel and some Organic material, (Fill), damp
			11		Gray-green sandy SILT with a trace of gravel, (Fill), damp
12	Gray and red-brown mottled sandy SILT with a trace of gravel, damp				
13					
14	Static water level measured at 14.2 feet.				
15					
5-foot core with liner	100		16		
			17		
			18		
			19	Gray clayey SILT with a trace of sand and gravel, damp	
			20		
		20			



SOIL PROBE BORING RECORD

Boring ID YSCGP-26
 Total depth 25 feet
 Sheet 2 of 2

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>27 feet South and 103 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>East of YSCGP-25</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 4, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100	▼	21	ML	Gray clayey SILT with a trace of sand and gravel, damp
			22		
			23		
			24	SM	Gray-brown silty SAND with a trace of gravel, wet Soil Sample YSCGP26-24 at 9:30
			25		



SOIL PROBE BORING RECORD

Boring ID YSCGP-27
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>104 feet East of YSCGP-26</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	90	▼			Grass/Topsoil
			1	SM	Gray-brown silty SAND with a trace of gravel, (Fill), damp
			2		
			3		
			4	ML	Soil Sample YSCGP27-3 at 16:45 Gray-green sandy SILT with a trace of gravel, (Fill), damp
5-foot core with liner	80		5		
			6		
			7		
			8	SM	Gray SAND with a trace of silt, damp
			9	ML	Brown gravelly SILT, damp
5-foot core with liner	100		10		Gray gravelly SILT, damp
					Black gravelly SILT, damp
			11	SP	Gray medium SAND, damp
				ML	Gray SILT, with a trace of sand, damp
			12	SP	Gray medium SAND, damp
			SM	Gray and brown mottled silty SAND, damp	
		13			
14					
		Water encountered at 14.5 feet during drilling.			
		15	SP	Gray medium SAND, wet Soil Sample YSCGP27-14.5 at 16:55	
				Backfilled borehole with bentonite chips.	



SOIL PROBE BORING RECORD

Boring ID YSCGP-28
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>Gated Facility North of main</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>entrance, 15 ft S and 11 ft E of NW corner</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	20	<div style="text-align: center;"> ▽ ▼ </div>	1	SM	Asphalt/Crushed Rock	
			2		Brown silty SAND, (Fill), dry	
			3			
			4			
			5			
5-foot core with liner	20		6	ML		Gray-green sandy SILT with a trace of gravel, (Fill), damp
			7			
			8			
			9		Soil Sample YSCGP28-9 at 8:30	
			10			
5-foot core with liner	60		11		ML	Brown-dark brown sandy SILT, damp
			12			
			13			
			14			
			15			
5-foot core with liner	70		16	ML		Static water level measured at 15.65 feet.
			17			Water encountered at 17.5 feet during drilling.
			18			Soil Sample YSCGP28-18 at 8:45
			19			Gray-brown sandy SILT, wet
			20			Set screen from 16 to 20 feet in temporary well. Backfilled with bentonite pellets.



SOIL PROBE BORING RECORD

Boring ID YSCGP-29
 Total depth 10 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>South of YSCGP-23</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>		Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	60	▽ ▼	1	ML	Grass/Topsoil
			2		Brown gravelly sandy SILT, dry
			3		
			4		
			5		
6					
5-foot core with liner	70		7	CL	Static water level measured at 8.7 feet. Gray brown silty CLAY, damp Water encountered at 9 feet during drilling. Soil Sample YSCGP29-9 at 11:05
			8		
			9		
			10		



SOIL PROBE BORING RECORD

Boring ID YSCGP-30
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>NE corner of building along</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>14th Avenue</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	95	▼	1	SM	Grass/Topsoil
			2		Brown silty SAND with a trace of gravel, (Fill), dry Soil Sample YSCGP30-1 at 13:15
			3		2-inch piece of brick
			4		Brown silty SAND with a trace of gravel, (Fill), dry
			5		ML
6					
7					
8					
9					
10					
11					
12					
13					
14	CL		Gray silty CLAY, damp Water encountered at 14 feet during drilling. Soil Sample YSCGP30-14 at 13:25		
15					
5-foot core with liner	100				
5-foot core with liner	95				
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-31
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>East end of southernmost</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	Parking area _____	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	90	▼	1	SM	Asphalt/Crushed Rock	
			2		Gray-brown silty SAND with a trace of gravel, wood fragments, (Fill), dry	
			3			
			4			Soil Sample YSCGP31-3 at 9:00
			5			Brown silty SAND with a trace of gravel, (Fill), dry
			6			
5-foot core with liner	100		7	ML	Gray and red-brown mottled sandy SILT with a trace of gravel, dry	
			8			
			9		Gray and red-brown mottled gravelly, sandy SILT, dry	
			10		damp	
5-foot core with liner	95		11			
			12			
			13			
			14			
5-foot core with liner	100		15	CL	Gray silty CLAY, damp	
			16	SM	Gray-brown silty SAND with a trace of gravel, damp	
			17		Water encountered at 16 feet during drilling.	
			18		Soil Sample YSCGP31-16 at 9:20	
			19			
			20		Gray silty SAND with a trace of gravel, wet	
				Backfilled with bentonite pellets.		



SOIL PROBE BORING RECORD

Boring ID YSCGP-32
 Total depth 20 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>16 feet South and 112 feet</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>East of YSCGP-31</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description	
5-foot core with liner	100	▼	1	SM	Asphalt/Crushed Rock	
			2		Gray-Brown silty SAND with a trace of gravel, (Fill), dry	
			3			Soil Sample YSCGP32-3 at 8:10
			4			
			5			
5-foot core with liner	100		6	ML	Gray and red-brown mottled sandy SILT with a trace of gravel, damp	
			7		4-inch sand interbed	
			8			
			9			
			10			
5-foot core with liner	100		11		4-inch sand interbed	
			12			
			13		ML	Brown-gray clayey SILT, damp
			14			Gray-brown sandy SILT with a trace of gravel, damp
			15			
5-foot core with liner	100		16	Soil Sample YSCGP32-16.5 at 8:20 Water encountered at 16.5 feet during drilling.		
			17	SP	Gray medium SAND with a trace of silt, wet	
			18	SM	Gray silty SAND with a trace of gravel, wet	
			19			
			20			Backfilled with bentonite pellets.



SOIL PROBE BORING RECORD

Boring ID YSCGP-33
 Total depth 11 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>20 feet south of courtyard in</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>SE field</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 6, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description
5-foot core with liner	100				Grass/Topsoil
			1	SM	Brown silty SAND with a trace of gravel, (Fill), damp
			2		
			3		
			4		Soil Sample YSCGP33-4 at 15:35
5					
5-foot core with liner	100		6	ML	Gray and red-brown mottled sandy SILT, dry
			7	SM	Brown silty SAND with a trace of gravel, damp
			8	SP	Brown-gray coarse SAND, dry
			9	ML	Gray and red-brown mottled sandy SILT, damp
			10	SP	Brown-gray coarse SAND, dry
1-foot core w/l	25	11	ML	Gray and red-brown mottled sandy SILT with a trace of gravel and cobbles, dry Probe unable to penetrate beyond 11 feet.	
					Backfilled borehole with bentonite chips.



SOIL PROBE BORING RECORD

Boring ID YSCGP-34
 Total depth 15 feet
 Sheet 1 of 1

Project name <u>YSC Phase II ESA</u>	Drilling Contractor <u>Cascade</u>	Drilling method <u>Push-probe rig</u>
Project number <u>09-04193-017</u>	Location <u>20 feet east of SE corner of</u>	Sampling method <u>5 ft core with plastic liner</u>
Client <u>KC Capital Planning & Dev</u>	<u>building along 14th Avenue</u>	Air monitoring (Y/N) <u>No</u>
HEC rep. <u>Bruce Carpenter</u>	Date <u>September 5, 2013</u>	Instrument(s) <u>NA</u>

Sample type, interval	% recovery	Water level (feet)	Depth (feet, BGS)	Soil group	Soil description				
5-foot core with liner	70	▼	1	SM	Grass/Topsoil				
			2		Brown gravelly SAND with a trace of silt, (Fill), dry				
			3						
			4						
			5-foot core with liner	100		5	ML	Gray and red-brown mottled sandy SILT with a trace of gravel, damp	
6									
7									
8									
9									
10									
5-foot core with liner	100				11	SP			Water encountered at 13 feet during drilling.
					12				
					13				
					14				
			15	Gray and red-brown mottled sandy SILT with a trace of gravel, wet					
					Backfilled borehole with bentonite chips.				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-1d
 Total depth: 46 feet
 Sheet 1 of 3

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: 4 feet East of YSCGP-4 NW corner
 HEC rep.: Bruce Carpenter
 Date: 09/19/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): Y
 Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0				
				1			Asphalt/Crushed rock	
				2				
				3				
				4				
0	X	100	8 10 10	5 6		ML	Red-brown, mottled, sandy SILT, tr. gravel, damp	
				7				
				8	▽		Static water level 7.94 feet (9/23/2013)	
				9				
0	X	100	16 29 21	10 11		SM	Gray-Brown gravelly silty SAND, damp	
				12			Water encountered during drilling between 12 and 15 feet	
				13				
				14				
0	X	100	50/6	15		SM	Gray-brown gravelly silty SAND, wet	
				16				
				17				
				18				
				19				
0	X	100	21 50/6	20 21		SM	Gray fine to coarse gravelly SAND, tr. silt, wet	
				22				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-1d

Total depth: 46 feet

Sheet 2 of 3

Project name: YSC

Project number: 09-04193-017

Client: King County Facilities Management Division

Location: 4 feet East of YSCGP-4 NW corner

HEC rep.: Bruce Carpenter

Date: 09/18/2013

Drilling Contractor: Cascade

Drilling method: Hollow Stem Auger

Sampling method: D+M Sampler

Air monitoring (y/n): Y

Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				23				<p>Hydrated bentonite chips</p> <p>#2/12 sand filter pack</p> <p>2-inch diameter schedule 40 PVC 10-slot well screen 35'-45'</p>
				24				
0	 	100	50/6	25		SM	Gray fine to coarse gravelly SAND, tr. silt	
				26				
				27				
				28				
				29				
0	 	100	50/6	30		SW	Gray fine to medium SAND, tr. fine gravel, wet	
				31				
				32				
				33				
				34				
0	 	100	50/6	35				
				36			Cobble, 2"	
				37				
				38				
				39				
0	 	100	50/6	40		ML	Gray fine to coarse gravelly sandy SILT, wet	
				41				
				42				
				43				
				44				
				45		CL	Gray silty CLAY, damp	



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-1s

Total depth: 16 feet

Sheet 1 of 1

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: 4.5 feet SW of YSCGP-4A
 HEC rep.: Bruce Carpenter
 Date: 09/19/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): Y
 Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
	No samples collected			0				<p>Concrete</p> <p>Hydrated bentonite chips</p> <p>#2/12 sand filter pack</p> <p>2-inch diameter schedule 40 PVC 10-slot well screen 6'-16'</p>
				1			Asphalt/Crushed rock	
				2				
				3				
				4				
				5		ML	Red-brown, mottled, sandy SILT, tr. gravel, damp	
				6				
				7				
				8				
				9	▽		Static water level 7.94 feet (9/23/2013)	
				10		SM	Gray-brown gravelly silty SAND, damp	
				11				
				12				
				13				
				14				
				15		SM	Gray-brown gravelly silty SAND, wet	
				16				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-2
Total depth: 26 feet
Sheet 1 of 2

Project name: YSC
Project number: 09-04193-017
Client: King County Facilities Management Division
Location: 44 feet East of YSCGP-27
HEC rep.: Bruce Carpenter
Date: 09/18/2013

Drilling Contractor: Cascade
Drilling method: Hollow Stem Auger
Sampling method: D+M Sampler
Air monitoring (y/n): Y
Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0				
				1			Asphalt/Crushed rock	
				2				
				3				
				4				
				5				
0	X	10	19 50/6	6		SM	Dark Brown silty SAND (Fill), damp, large cobble in tip of sampler	
				7				
				8				
				9				
				10			Fill	
0	X	100	9 11 15	11		ML	Red-brown and gray fine to coarse gravelly sandy SILT, damp	
				12				
				13				
				14				
				15				
0	X	100	10 14 16	16		SM ML	Red-brown and gray, silty SAND, damp Red-brown and gray sandy, SILT, damp	
				17				
				18	▽		Static water level 17.95 feet (9/23/13) Very dense	
				19				
				20			Very dense	
				21				
0	X	100	27	22		SM	Gray-Brown med SAND, tr. silt, gravel, wet	



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-3
 Total depth: 31 feet
 Sheet 1 of 2

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: 100 feet North of MW-5
 HEC rep.: Bruce Carpenter
 Date: 09/20/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): Y
 Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Grass topsoil	<p>Concrete</p> <p>Hydrated bentonite chips</p> <p>#2/12 sand filter pack</p> <p>2-inch diameter schedule 40 PVC 10-slot</p>
				1		SM	Brown gravelly silty SAND pieces of concrete (Fill), dry	
				2				
				3				
				4				
0	X	10	10	5		SM	Brown-dark brown fine, gravelly silty SAND, wood fragments (Fill), damp	
			10	6		SM	Brown-red-brown mottled gravelly silty SAND, damp	
			12	7				
				8				
				9	▽		Static Water Level 9.18 feet (09/23/2013)	
				10				
0	X	100	8	11		ML	Gray-brown gravelly SILT, w/tr. clay and sand, damp	
			9	12		CL	Gray fine to coarse gravelly silty CLAY, damp	
				13				
				14				
0	X	100	50/6	15				
				16		CL	Gray fine to coarse gravelly silty CLAY, damp	
				17				
				18				
				19				
0	X	100	36	20				
			50/6	21		SM	Gray-brown silty, SAND, tr. gravel, wet	
				22				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-4
 Total depth: 19 feet
 Sheet 1 of 1

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: 68 feet East of Boring B-9
 HEC rep.: Bruce Carpenter
 Date: 09/17/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): Y
 Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Grass topsoil	
				1			↓ Fill	
				2				
				3				
				4				
30	X	100	17	5		SM	Brown-red to brown-gray gravelly, medium to coarse SAND, tr. silt, damp	
			24	6				
			20	7				
				8	▽		Static Water Level 7.99 feet (09/23/2013)	
				9				
100	X	100	12	10			Water encountered at 10 feet during drilling	
			24	11		SM	Gray-brown-fine to medium SAND w/ silt, wet	
			27	12				
				13				
				14				
75	X	100	19	15		SM	Gray-Brown fine to medium SAND w/ tr. silt, wet	
			17	16				
			20	17				
120	X	100	14	18		SM	Gray-Brown fine to medium sand tr. silt and gravel, wet	
			50/6	19				
				20				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-5
Total depth: 55 feet
Sheet 1 of 3

Project name: YSC
Project number: 09-04193-017
Client: King County Facilities Management Division
Location: NW corner of East Spruce & 14th
HEC rep.: Bruce Carpenter
Date: 09/17/2013

Drilling Contractor: Cascade
Drilling method: Hollow Stem Auger
Sampling method: D+M Sampler
Air monitoring (y/n): Y
Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Grass/Topsoil	
				1				
				2				
				3				
				4				
0	X	100	4	5		SM	Dark brown silty SAND, damp (Fill) Gray-brown gravelly silty SAND, brick fragments, damp	
			4	6		CL	Gray coarse gravelly silty CLAY, damp coarse gravel Static Water Level 7.16 feet (09/23/2013)	
			7	7	7.16			
				8				
				9				
0	X	100	7	10		CL	Gray fine gravelly silty CLAY, damp	
			7	11		ML	Brown fine gravelly sandy SILT, damp, iron staining	
			9	12				
				13				
				14			Water encountered at 14 feet during drilling	
				15				
77	X	100	11	16		SM	Gray-brown fine to medium SAND, tr. silt and fine gravel, wet	
			16	17				
				18				
				19			heaving sand	
22	X	100	50/6	20		SM	Gray-brown fine to medium SAND, tr. gravel, silt, wet	
				21				
				22				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-5
 Total depth: 55 feet
 Sheet 2 of 3

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: NW corner of East Spruce & 14th
 HEC rep.: Bruce Carpenter
 Date: 09/17/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): Y
 Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				23				
				24				
75	 	100	31	25		SW	Gray-brown fine to medium gravelly fine to coarse SAND, wet	
			50/6	26				
				27				
				28				
				29				
35	 	100	50/6	30		SW	Gray-brown fine to medium gravelly fine to coarse SAND, wet	
				31				
				32				
54	 	100	12	33		ML	Gray sandy SILT, damp	
			15	34		SW	Gray, fine to medium SAND, wet	
			40	34		ML	Gray sandy SILT, tr. gravel	
				35				
27	 	100	50/6	36		ML	Gray sandy SILT, tr. fine gravel, wet	
				37				
7	 	100	50/6	38		SM	Gray silty fine SAND, wet	
				39				
0	 	100	50/6	40		SM	Gray silty fine SAND, wet	
				41				
				42				
0	 	100	50/6	43		SM	Gray silty fine SAND, wet	
				44				
				45				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-9
 Total depth: 27 feet
 Sheet 1 of 2

Project name: YSC
 Project number: 09-04193-017
 Client: King County Facilities Management Division
 Location: 15 feet East of YSCGP-8 between YSCGP-5 and YSCGP-8
 HEC rep.: Bruce Carpenter
 Date: 09/19/2013

Drilling Contractor: Cascade
 Drilling method: Hollow Stem Auger
 Sampling method: D+M Sampler
 Air monitoring (y/n): N
 Instrument(s): -

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Asphalt/crushed rock	<p>Concrete</p> <p>Hydrated bentonite chips</p> <p>#2/12 sand filter pack</p> <p>2-inch diameter schedule 40 PVC 10-slot well screen 17'-27'</p>
				1		SM	Brown to red-brown mottled silty SAND, tr. gravel, damp	
				2				
				3				
				4				
				5		ML	Gray and red-brown mottled sandy SILT, tr. fine gravel, damp fuel like odor	
		100	5	6				
			9	7				
				8				
				9	▽		Static Water Level 8.57 feet (09/23/2013)	
				10				
				11		SP	Gray coarse SAND, damp	
		100	26	12		ML	Gray gravelly sandy SILT, damp fuel like odor	
			50/6	13			Water encountered at 12 feet during drilling	
				14				
				15				
				16		SW	Gray fine to coarse gravelly SAND, large cobble, 2-1/2", wet fuel odor	
		100	23	17				
			24	18				
			27	19				
				20		SM	Gray fine to coarse gravelly SAND, tr. silt, large cobble 3", wet	
		100	50/6	21				
				22				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-10

Total depth: 31 feet

Sheet 1 of 2

Project name: YSC

Project number: 09-04193-017

Client: King County Facilities Management Division

Location: NE corner of site, adjacent to YSCGP-6

HEC rep.: Bruce Carpenter

Date: 09/20/2013

Drilling Contractor: Cascade

Drilling method: Hollow Stem Auger

Sampling method: D+M Sampler

Air monitoring (y/n): Y

Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Grass/Topsoil	
				1		SM	Gray-brown silty gravelly SAND, brick fragments (Fill)	
				2				
				3				
				4				
				5	▽	SM	Static Water Level 4.75 feet (09/23/2013) Gray-brown silty gravelly SAND, brick fragments (Fill), damp	
0	X	60	12 20 20	6				
				7				
				8				
				9				
				10				
0	X	35	6 7 7	11		ML	Gray-blue clayey SILT, wood fragments, damp	
				12				
				13				
				14				
				15			Water encountered at 15 feet during drilling	
0	X	80	8 8 7	16		CL	Gray-brown gravelly silty CLAY, damp	
				17				
				18				
				19				
0	X	100	50/6	20		ML	Gray gravelly silty SAND, wet	
				21				
				22				



SOIL BORING AND MONITORING WELL CONSTRUCTION RECORD

HERRERA

Monitoring Well MW-11

Total depth: 26.5 feet

Sheet 1 of 2

Project name: YSC

Project number: 09-04193-017

Client: King County Facilities Management Division

Location: 19 feet West of B-1, 45 feet West of GP-20

HEC rep.: Bruce Carpenter

Date: 09/19/2013

Drilling Contractor: Cascade

Drilling method: Hollow Stem Auger

Sampling method: D+M Sampler

Air monitoring (y/n): Y

Instrument(s): Photoionization Detector (PID)

PID Reading (ppm)	Sample Interval	% Recovery	Blow Counts	Depth (feet, BGS)	Water Level (feet)	Soil Group	Soil Description	Monitoring Well Construction Detail
				0			Asphalt/crushed rock	
				1			Fill	
				2				
				3				
				4				
				5		ML	Dark brown sandy SILT, tr. gravel, brick fragments (Fill), damp	
0	X	100	2	6		ML	Green-Gray-brown sandy SILT tr. gravel, damp	
			3	7				
			3	8				
				9				
				10				
0	X	100	12	11		SM	Gray and red-brown mottled silty SAND, damp	
			20	12	▽		Static Water Level 12.14 feet (09/23/2013)	
			20	13			Water encountered at 12.5 feet during drilling	
				14				
				15		SM	Gray-brown gravelly silty SAND, wet	
0	X	100	21	16				
			27	17				
			26	18				
				19				
				20				
-	X	100	19	21		SM	Gray gravelly silty SAND, wet, occasional fine sand and silt layers, damp	
			29	22				
			32					

APPENDIX C

Data Quality Assurance Review

Herrera Environmental Consultants, Inc.

Memorandum

To Project File 09-04193-017
From Gina Catarra, Herrera Environmental Consultants
Date September 30, 2013
Subject Data Quality Assurance Review of Youth Services Center Phase II Environmental Site Assessment Data

This memorandum presents a review of data quality for soil, groundwater, and air samples collected at the Youth Services Center Phase II Environmental Site Assessment site between June 26 and September 23, 2013. Soil and groundwater samples were analyzed by OnSite Environmental of Redmond, Washington by the following methods:

- Total petroleum hydrocarbons by Ecology's NWTPH-HCID method
- Total petroleum hydrocarbons by Ecology's NWTPH-Dx method
- Halogenated volatiles (HVOC) by EPA method 8260C
- Total lead by EPA method 6010C

Air samples were analyzed by Fremont Analytical of Seattle, Washington for volatile organic compounds (VOC) by EPA method TO-15.

Results for the following samples were validated.

Sample ID	Date Collected	Matrix	Laboratory Batch No.	Analyses
YSCGP7-9	6/26/2013	Soil	1306-255	HCID, Dx
YSCGP-1	6/26/2013	Groundwater	1306-255	HCID
YSCGP1-2	6/26/2013	Soil	1306-255	HCID
YSCGP1-10	6/26/2013	Soil	1306-255	HCID
YSCGP-2	6/26/2013	Groundwater	1306-255	HCID, HVOC
YSCGP-3	6/27/2013	Groundwater	1306-255	HCID, HVOC
YSCGP-4	6/27/2013	Groundwater	1306-255	HCID, HVOC
YSCGP-5	6/27/2013	Groundwater	1306-255	HCID, HVOC
YSCGP-6	6/26/2013	Groundwater	1306-255	HCID, HVOC
YSCGP-7	6/26/2013	Groundwater	1306-255	HCID, HVOC
MW-6	7/30/2013	Groundwater	1307-205	HCID
MW-7	7/30/2013	Groundwater	1307-205	HCID, HVOC
MW-8	7/30/2013	Groundwater	1307-205	HCID, HVOC

Sample ID	Date Collected	Matrix	Laboratory Batch No.	Analyses
YSCGP-8	8/01/2013	Groundwater	1308-015	HCID, Dx, HVOC
YSCGP-9	8/01/2013	Groundwater	1308-015	HVOC
YSCGP-10	8/01/2013	Groundwater	1308-015	HVOC
YSCGP-11	8/01/2013	Groundwater	1308-015	HVOC
YSCGP-12	8/01/2013	Groundwater	1308-015	HVOC
YSCGP8-9	8/01/2013	Soil	1308-015	HCID
YSCGP-4A	8/01/2013	Soil	1308-015	HVOC
YSC Soil Cutting Comp	8/02/2013	Soil	1308-015	Lead
YSCGP-4A	8/01/2013	Groundwater	1308-015	HVOC
13967	8/21/2013	Air	1308-140	VOC
13968	8/21/2013	Air	1308-140	VOC
13972	8/21/2013	Air	1308-140	VOC
13975	8/21/2013	Air	1308-140	VOC
GP19-2	9/04/2013	Soil	1309-028	HCID, Dx, HVOC, Lead
GP19-14	9/04/2013	Soil	1309-028	HVOC
GP19	9/04/2013	Groundwater	1309-028	HVOC
GP20-4	9/04/2013	Soil	1309-028	HCID, HVOC, Lead
GP20-12	9/04/2013	Soil	1309-028	HVOC
GP21-3	9/04/2013	Soil	1309-028	HCID, HVOC, Lead
GP21-15	9/04/2013	Soil	1309-028	HVOC
GP21	9/04/2013	Groundwater	1309-028	HVOC
GP22-8	9/04/2013	Soil	1309-028	HCID, Dx, HVOC, Lead
GP22-18	9/04/2013	Soil	1309-028	HVOC
GP22	9/04/2013	Groundwater	1309-028	HVOC
GP26-3	9/04/2013	Soil	1309-028	HCID, Dx, HVOC, Lead
GP26-24	9/04/2013	Soil	1309-028	HVOC
GP26	9/04/2013	Groundwater	1309-028	HVOC
GP33-4	9/04/2013	Soil	1309-028	HCID, HVOC, Lead
GP28-9	9/05/2013	Soil	1309-028	HCID, HVOC, Lead
GP28-18	9/05/2013	Soil	1309-028	HVOC
GP28	9/05/2013	Groundwater	1309-028	HVOC
GP20A	9/05/2013	Groundwater	1309-028	HVOC
GP29	9/05/2013	Groundwater	1309-028	HVOC
GP13-3	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP13-14.5	9/06/2013	Soil	1309-048	HVOC
GP14-3	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP14-9.5	9/06/2013	Soil	1309-048	HVOC

Sample ID	Date Collected	Matrix	Laboratory Batch No.	Analyses
GP15-2	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP15-10	9/06/2013	Soil	1309-048	HVOC
GP16-3	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP16-14.5	9/06/2013	Soil	1309-048	HVOC
GP17-1	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP17-9.5	9/06/2013	Soil	1309-048	HVOC
GP18-3	9/05/2013	Soil	1309-048	HCID, Dx, HVOC, Lead
GP18-11	9/05/2013	Soil	1309-048	HVOC
GP-23-6	9/05/2013	Soil	1309-048	HVOC
GP24-0.5	9/05/2013	Soil	1309-048	HCID, HVOC, Lead
GP-24-7.5	9/05/2013	Soil	1309-048	HVOC
GP25-3	9/05/2013	Soil	1309-048	HCID, HVOC, Lead
GP25-14	9/05/2013	Soil	1309-048	HVOC
GP27-3	9/05/2013	Soil	1309-048	HCID, Dx, HVOC, Lead
GP27-14.5	9/05/2013	Soil	1309-048	HVOC
GP29-9	9/05/2013	Soil	1309-048	HVOC
GP30-1	9/05/2013	Soil	1309-048	HCID, HVOC, Lead
GP30-14	9/05/2013	Soil	1309-048	HVOC
GP31-3	9/06/2013	Soil	1309-048	HCID, HVOC, Lead
GP31-16	9/06/2013	Soil	1309-048	HVOC
GP32-3	9/06/2013	Soil	1309-048	HCID, Dx, HVOC, Lead
GP32-16.5	9/06/2013	Soil	1309-048	HVOC
GP34-3	9/05/2013	Soil	1309-048	HCID, Dx, HVOC, Lead
GP34-13	9/05/2013	Soil	1309-048	HVOC
MW1-D	9/23/2013	Groundwater	1309-205	HVOC
MW1-S	9/23/2013	Groundwater	1309-205	HVOC
MW-2	9/23/2013	Groundwater	1309-205	HVOC
MW-3	9/23/2013	Groundwater	1309-205	HVOC
MW-4	9/23/2013	Groundwater	1309-205	Dx, HVOC
MW-5	9/23/2013	Groundwater	1309-205	HVOC
MW-6	9/23/2013	Groundwater	1309-205	HVOC
MW-7	9/23/2013	Groundwater	1309-205	HVOC
MW-8	9/23/2013	Groundwater	1309-205	HVOC
MW-9	9/23/2013	Groundwater	1309-205	Dx. HVOC
MW-10	9/23/2013	Groundwater	1309-205	HVOC
MW-11	9/23/2013	Groundwater	1309-205	HVOC

Custody, Preservation, Holding Times, and Completeness—Acceptable with Qualification

The samples were properly preserved and sample custody was maintained from sample collection to receipt at the laboratory. With the exceptions noted below, all samples were analyzed within the required holding times. The laboratory reports were complete and contained results for all samples and tests requested on the chain-of-custody (COC) forms.

The holding times for samples YSCGP-2 and YSCGP-3 were exceeded by 18 and 19 days, respectively, for HVOC analysis. As shown in the following table, sample results for all compounds were qualified as estimated non-detects (UJ), due to holding time exceedance.

Sample ID	Date Collected	Matrix	Parameter	Reason for Qualification	Qualifier
YSCGP-2	7/26/2013	Groundwater	All HVOC compounds	Holding time exceedance	UJ
YSCGP-3	7/27/2013	Groundwater	All HVOC compounds	Holding time exceedance	UJ

Laboratory Reporting Limits—Acceptable

The laboratory reporting limits were reasonable for the specified analytical methods.

Method Blank Analysis – Acceptable

Method blanks were analyzed at the required frequency for all analytical methods. Method blanks did not contain levels of target analytes above the laboratory reporting limits.

Laboratory Control Sample Analysis—Acceptable

Laboratory control samples or laboratory control sample/laboratory control sample duplicates (LCS/LCSD) were analyzed with each sample batch for HVOC analysis. The percent recovery values for all compounds met the control limits established by the laboratory.

Surrogate Analysis—Acceptable

Surrogates were analyzed with each sample for TPH, HVOC, and VOC analyses. The percent recovery values for all samples met the control limits established by the method or laboratories.

Matrix Spike Analysis—Acceptable

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed with each batch for total lead, as specified by the method. The percent recovery values for all samples met the control limits established by the method.

Laboratory Duplicate Analysis—Acceptable

Laboratory duplicates were analyzed for NWTPH-Dx, VOCs, and total lead at the required frequency. LCS/LCSD samples were analyzed for HVOCs at the required frequency. MS/MSD samples were analyzed for total lead at the required frequency. The relative percent difference (RPD) values met the control limits established by the laboratory or analytical methods. The RPD was not calculated for sample and duplicate when one or both values were less than the reporting limit.

Data Quality Assessment Summary

The data quality for all samples was found to be acceptable based on holding time, reporting limit, method blank, surrogate, and laboratory duplicate criteria. Usability of the data is based on the guidance documents previously noted. HVOC results for two samples were qualified as estimated non-detect (UJ) due to holding time. Upon consideration of the information presented here, the data are acceptable as qualified.

Definition of Data Qualifiers

The following data qualifier definitions are taken from *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA 2002):

- U** The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J** The associated value is an estimated quantity.
- UJ** The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
- R** The data are unusable. (Note: analyte may or may not be present.)

References

USEPA. 2002. Contract laboratory program national functional guidelines for inorganic data review. US Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C. (EPA-540/R-01/008).

APPENDIX D

Analytical Laboratory Reports



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

July 10, 2013

Bruce Carpenter
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/002-001
Laboratory Reference No. 1306-255

Dear Bruce:

Enclosed are the analytical results and associated quality control data for samples submitted on June 27, 2013.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: July 10, 2013
Samples Submitted: June 27, 2013
Laboratory Reference: 1306-255
Project: 09-04193-017/002-001

Case Narrative

Samples were collected on June 26 and 27, 2013 and received by the laboratory on June 27, 2013. 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.

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP7-9					
Laboratory ID:	06-255-01					
Gasoline Range Organics	ND	24	NWTPH-HCID	7-1-13	7-2-13	
Diesel Range Organics	Detected	60	NWTPH-HCID	7-1-13	7-2-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	7-1-13	7-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				

Client ID:	YSCGP1-2					
Laboratory ID:	06-255-03					
Gasoline Range Organics	ND	22	NWTPH-HCID	7-1-13	7-1-13	
Diesel Range Organics	ND	56	NWTPH-HCID	7-1-13	7-1-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-1-13	7-1-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	54	50-150				

Client ID:	YSCGP1-10					
Laboratory ID:	06-255-04					
Gasoline Range Organics	ND	23	NWTPH-HCID	7-1-13	7-1-13	
Diesel Range Organics	ND	57	NWTPH-HCID	7-1-13	7-1-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	7-1-13	7-1-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	66	50-150				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0701S1					
Gasoline Range Organics	ND	20	NWTPH-HCID	7-1-13	7-1-13	
Diesel Range Organics	ND	50	NWTPH-HCID	7-1-13	7-1-13	
Lube Oil Range Organics	ND	100	NWTPH-HCID	7-1-13	7-1-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	72	50-150				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

NWTPH-HCID

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-1					
Laboratory ID:	06-255-02					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.42	NWTPH-HCID	7-3-13	7-5-13	

Surrogate: *Percent Recovery* *Control Limits*
o-Terphenyl 73 50-150

Client ID:	YSCGP-2					
Laboratory ID:	06-255-05					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.41	NWTPH-HCID	7-3-13	7-5-13	

Surrogate: *Percent Recovery* *Control Limits*
o-Terphenyl 76 50-150

Client ID:	YSCGP-3					
Laboratory ID:	06-255-06					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.42	NWTPH-HCID	7-3-13	7-5-13	

Surrogate: *Percent Recovery* *Control Limits*
o-Terphenyl 69 50-150

Client ID:	YSCGP-4					
Laboratory ID:	06-255-07					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.41	NWTPH-HCID	7-3-13	7-5-13	

Surrogate: *Percent Recovery* *Control Limits*
o-Terphenyl 68 50-150

Client ID:	YSCGP-5					
Laboratory ID:	06-255-08					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.41	NWTPH-HCID	7-3-13	7-5-13	

Surrogate: *Percent Recovery* *Control Limits*
o-Terphenyl 68 50-150

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

NWTPH-HCID

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-6					
Laboratory ID:	06-255-09					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.41	NWTPH-HCID	7-3-13	7-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	70	50-150				

Client ID:	YSCGP-7					
Laboratory ID:	06-255-10					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.41	NWTPH-HCID	7-3-13	7-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	74	50-150				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0703W1					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-3-13	7-5-13	
Diesel Range Organics	ND	0.25	NWTPH-HCID	7-3-13	7-5-13	
Lube Oil Range Organics	ND	0.40	NWTPH-HCID	7-3-13	7-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>71</i>	<i>50-150</i>				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP7-9					
Laboratory ID:	06-255-01					
Diesel Range Organics	61	30	NWTPH-Dx	7-9-13	7-9-13	
Lube Oil Range Organics	ND	60	NWTPH-Dx	7-9-13	7-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0709S1					
Diesel Range Organics	ND	25	NWTPH-Dx	7-9-13	7-9-13	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-9-13	7-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	95	50-150				

Analyte	Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE						
Laboratory ID:	07-051-01					
	ORIG	DUP				
Diesel Range Organics	ND	ND		NA	NA	
Lube Oil Range Organics	ND	ND		NA	NA	
<i>Surrogate:</i>						
<i>o-Terphenyl</i>			69 71	50-150		

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4					
Laboratory ID:	06-255-07					
Dichlorodifluoromethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Chloromethane	ND	250	EPA 8260C	7-2-13	7-2-13	
Vinyl Chloride	ND	50	EPA 8260C	7-2-13	7-2-13	
Bromomethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Chloroethane	ND	250	EPA 8260C	7-2-13	7-2-13	
Trichlorofluoromethane	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethene	ND	50	EPA 8260C	7-2-13	7-2-13	
Iodomethane	ND	250	EPA 8260C	7-2-13	7-2-13	
Methylene Chloride	ND	250	EPA 8260C	7-2-13	7-2-13	
(trans) 1,2-Dichloroethene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
2,2-Dichloropropane	ND	50	EPA 8260C	7-2-13	7-2-13	
(cis) 1,2-Dichloroethene	160	50	EPA 8260C	7-2-13	7-2-13	
Bromochloromethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Chloroform	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1,1-Trichloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Carbon Tetrachloride	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloropropene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Trichloroethene	91	50	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloropropane	ND	50	EPA 8260C	7-2-13	7-2-13	
Dibromomethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Bromodichloromethane	ND	50	EPA 8260C	7-2-13	7-2-13	
2-Chloroethyl Vinyl Ether	ND	250	EPA 8260C	7-2-13	7-2-13	
(cis) 1,3-Dichloropropene	ND	50	EPA 8260C	7-2-13	7-2-13	
(trans) 1,3-Dichloropropene	ND	50	EPA 8260C	7-2-13	7-2-13	

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4					
Laboratory ID:	06-255-07					
1,1,2-Trichloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Tetrachloroethene	8200	50	EPA 8260C	7-2-13	7-2-13	
1,3-Dichloropropane	ND	50	EPA 8260C	7-2-13	7-2-13	
Dibromochloromethane	ND	50	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromoethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Chlorobenzene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1,1,2-Tetrachloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
Bromoform	ND	250	EPA 8260C	7-2-13	7-2-13	
Bromobenzene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,1,2,2-Tetrachloroethane	ND	50	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichloropropane	ND	50	EPA 8260C	7-2-13	7-2-13	
2-Chlorotoluene	ND	50	EPA 8260C	7-2-13	7-2-13	
4-Chlorotoluene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,3-Dichlorobenzene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,4-Dichlorobenzene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,2-Dichlorobenzene	ND	50	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromo-3-chloropropane	ND	250	EPA 8260C	7-2-13	7-2-13	
1,2,4-Trichlorobenzene	ND	65	EPA 8260C	7-2-13	7-2-13	
Hexachlorobutadiene	ND	68	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichlorobenzene	ND	68	EPA 8260C	7-2-13	7-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-120</i>				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C

Page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-5					
Laboratory ID:	06-255-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloromethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Iodomethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethane	0.45	0.20	EPA 8260C	7-2-13	7-2-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroform	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Trichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-5					
Laboratory ID:	06-255-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromoform	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Bromobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
1,2,4-Trichlorobenzene	ND	0.26	EPA 8260C	7-2-13	7-2-13	
Hexachlorobutadiene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C

Page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-6					
Laboratory ID:	06-255-09					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloromethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Iodomethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroform	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Trichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES by EPA 8260C
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-6					
Laboratory ID:	06-255-09					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Tetrachloroethene	0.40	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromoform	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Bromobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
1,2,4-Trichlorobenzene	ND	0.26	EPA 8260C	7-2-13	7-2-13	
Hexachlorobutadiene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES by EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0702W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloromethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Iodomethane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chloroform	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Trichloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromomethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	7-2-13	7-2-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-2-13	7-2-13	

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES by EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0702W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
Bromoform	ND	1.0	EPA 8260C	7-2-13	7-2-13	
Bromobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-2-13	7-2-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-2-13	7-2-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	7-2-13	7-2-13	
1,2,4-Trichlorobenzene	ND	0.26	EPA 8260C	7-2-13	7-2-13	
Hexachlorobutadiene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	7-2-13	7-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>102</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-120</i>				

Date of Report: July 10, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES by EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0702W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	11.9	11.1	10.0	10.0	119	111	63-142	7	17	
Benzene	10.8	10.3	10.0	10.0	108	103	78-125	5	15	
Trichloroethene	9.39	8.80	10.0	10.0	94	88	80-125	6	15	
Toluene	10.3	9.62	10.0	10.0	103	96	80-125	7	15	
Chlorobenzene	11.0	10.2	10.0	10.0	110	102	80-140	8	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					96	99	62-122			
<i>Toluene-d8</i>					95	96	70-120			
<i>4-Bromofluorobenzene</i>					92	96	71-120			

Date of Report: July 10, 2013
Samples Submitted: June 27, 2013
Laboratory Reference: 1306-255
Project: 09-04193-017/002-001

% MOISTURE

Date Analyzed: 7-1-13

Client ID	Lab ID	% Moisture
YSCGP7-9	06-255-01	16
YSCGP1-2	06-255-03	10
YSCGP1-10	06-255-04	12



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-naphthalene) 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



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

Turnaround Request (in working days)		Number of Containers		Laboratory Number: 06-255																	
<input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input checked="" type="checkbox"/> Standard (7 Days) (TPH analysis 5 Days) <input type="checkbox"/> (other) _____		Date Sampled	Time Sampled	Matrix	NWTPH-CID	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/ MICA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
Company:	Herrera																				
Project Number:	09-04193-017/002-001																				
Project Name:	YSC																				
Project Manager:	Bruce Carpenter																				
Sampled by:	Bruce Carpenter																				
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	NWTPH-CID	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/ MICA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
1	YSCGP-9	6/26/13	8:40	S	X	X	X	X	X												X
2	YSCGP-1	6/26/13	11:00	W	X	X	X	X	ND												X
3	YSCGP-2	6/26/13	10:10	S	X	X	X	X													X
4	YSCGP-10	6/26/13	10:20	S	X	X	X	X													X
5	YSCGP-2	6/26/13	12:45	W	X	X	X	X													X
6	YSCGP-3	6/27/13	11:20		X	X	X	X													X
7	YSCGP-4	6/27/13	9:50		X	X	X	X													X
8	YSCGP-5	6/27/13	8:30		X	X	X	X													X
9	YSCGP-6	6/26/13	14:00		X	X	X	X													X
10	YSCGP-7	6/26/13	9:15	↓	X	X	X	X													X
Signature	Company	Date	Time	Comments/Special Instructions																	
<i>[Signature]</i>	Herrera	6/27/13	1500	Sent Via Courier (X) Added 7/3/13. DB (STA)																	
Relinquished																					
Received	<i>[Signature]</i>	6/27/13	1715																		
Relinquished																					
Received																					
Relinquished																					
Received																					
Reviewed/Date				Chromatograms with final report <input type="checkbox"/>																	



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

July 31, 2013

Bruce Carpenter
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/002-001
Laboratory Reference No. 1306-255B

Dear Bruce:

Enclosed are the analytical results and associated quality control data for samples submitted on June 27, 2013.

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,

A handwritten signature in black ink, appearing to read "DEB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: July 31, 2013
Samples Submitted: June 27, 2013
Laboratory Reference: 1306-255B
Project: 09-04193-017/002-001

Case Narrative

Samples were collected on June 26 and 27, 2013 and received by the laboratory on June 27, 2013. 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.

Halogenated Volatiles EPA 8260C Analysis

The holding times for samples YSCGP-2 and YSCGP-3 were exceeded by 18 and 19 days, respectively.

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.

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-2					
Laboratory ID:	06-255-05					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	7-29-13	7-29-13	
Chloromethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Iodomethane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-29-13	7-29-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroform	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Trichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-29-13	7-29-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-2					
Laboratory ID:	06-255-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromoform	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Bromobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,2,2-Tetrachloroethane	ND	0.43	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
1,2,4-Trichlorobenzene	ND	0.28	EPA 8260C	7-29-13	7-29-13	
Hexachlorobutadiene	ND	0.33	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichlorobenzene	ND	0.42	EPA 8260C	7-29-13	7-29-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-3					
Laboratory ID:	06-255-06					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	7-29-13	7-29-13	
Chloromethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Iodomethane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-29-13	7-29-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroform	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Trichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-29-13	7-29-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-3					
Laboratory ID:	06-255-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromoform	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Bromobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1,2,2-Tetrachloroethane	ND	0.43	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
1,2,4-Trichlorobenzene	ND	0.28	EPA 8260C	7-29-13	7-29-13	
Hexachlorobutadiene	ND	0.33	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichlorobenzene	ND	0.42	EPA 8260C	7-29-13	7-29-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>94</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0729W1					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	7-29-13	7-29-13	
Chloromethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroethane	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Iodomethane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-29-13	7-29-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chloroform	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Trichloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromomethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-29-13	7-29-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-29-13	7-29-13	

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0729W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
Bromoform	ND	1.0	EPA 8260C	7-29-13	7-29-13	
Bromobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,1,2,2-Tetrachloroethane	ND	0.43	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-29-13	7-29-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-29-13	7-29-13	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	7-29-13	7-29-13	
1,2,4-Trichlorobenzene	ND	0.28	EPA 8260C	7-29-13	7-29-13	
Hexachlorobutadiene	ND	0.33	EPA 8260C	7-29-13	7-29-13	
1,2,3-Trichlorobenzene	ND	0.42	EPA 8260C	7-29-13	7-29-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>85</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>91</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>92</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: June 27, 2013
 Laboratory Reference: 1306-255B
 Project: 09-04193-017/002-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0729W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	8.72	9.00	10.0	10.0	87	90	63-142	3	17	
Benzene	8.54	8.85	10.0	10.0	85	89	78-125	4	15	
Trichloroethene	8.36	7.96	10.0	10.0	84	80	80-125	5	15	
Toluene	8.58	7.99	10.0	10.0	86	80	80-125	7	15	
Chlorobenzene	9.29	9.17	10.0	10.0	93	92	80-140	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					93	90	62-122			
Toluene-d8					99	90	70-120			
4-Bromofluorobenzene					100	98	71-120			



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-naphthalene) 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



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: **06-255**

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

Company: Herrera
 Project Number: 09-04193-017/002-001
 Project Name: YSC
 Project Manager: Bruce Carpenter
 Sampled by: Bruce Carpenter

Lab ID	Sample Identification	Number of Containers		Date Sampled	Time Sampled	Matrix	Company	Date	Time	Comments/Special Instructions	Semi-volatiles 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/ MCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture	
		NWTPH-HCID	NWTPH-Gx/BTEX																		
1	YSCGP-9	3	X	6/26/13	8:40	S	Herrera	6/27/13	1500												
2	YSCGP-1	5	X	6/26/13	11:00	W	Herrera	6/27/13	1715												
3	YSCGP-2	3	X	6/26/13	10:10	S	Herrera														
4	YSCGP-10	3	X	6/26/13	10:20	S	Herrera														
5	YSCGP-2	4	X	6/26/13	12:45	W	Herrera														
6	YSCGP-3	5	X	6/27/13	11:20		Herrera														
7	YSCGP-4	7	X	6/27/13	9:50		Herrera														
8	YSCGP-5	7	X	6/27/13	8:30		Herrera														
9	YSCGP-6	7	X	6/26/13	14:00		Herrera														
10	YSCGP-7	7	X	6/26/13	9:15	↓	Herrera														

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	Herrera	6/27/13	1500	Sent Via Courier
<u>[Signature]</u>	Herrera	6/27/13	1715	(X) Added 7/13/13. DB (STA) (*) Added 7/29/13 SD TA



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

July 31, 2013

Peter Jowise
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/003-001
Laboratory Reference No. 1307-205

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on July 30, 2013.

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,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: July 31, 2013
Samples Submitted: July 30, 2013
Laboratory Reference: 1307-205
Project: 09-04193-017/003-001

Case Narrative

Samples were collected on July 30, 2013 and received by the laboratory on July 30, 2013. 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.

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-7					
Laboratory ID:	07-205-02					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-31-13	7-31-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-31-13	7-31-13	
Lube Oil Range Organics	ND	0.42	NWTPH-HCID	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	76	50-150				

Client ID:	MW-8					
Laboratory ID:	07-205-03					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-31-13	7-31-13	
Diesel Range Organics	ND	0.26	NWTPH-HCID	7-31-13	7-31-13	
Lube Oil Range Organics	ND	0.42	NWTPH-HCID	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	79	50-150				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0731W1					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	7-31-13	7-31-13	
Diesel Range Organics	ND	0.25	NWTPH-HCID	7-31-13	7-31-13	
Lube Oil Range Organics	ND	0.40	NWTPH-HCID	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>71</i>	<i>50-150</i>				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-6					
Laboratory ID:	07-205-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloromethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Iodomethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-31-13	7-31-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroform	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Trichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-31-13	7-31-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-6					
Laboratory ID:	07-205-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromoform	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Bromobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1,2,2-Tetrachloroethane	ND	0.35	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-31-13	7-31-13	
1,2,4-Trichlorobenzene	ND	0.29	EPA 8260C	7-31-13	7-31-13	
Hexachlorobutadiene	ND	0.34	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichlorobenzene	ND	0.46	EPA 8260C	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-7					
Laboratory ID:	07-205-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloromethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Iodomethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-31-13	7-31-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroform	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Trichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-31-13	7-31-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-7					
Laboratory ID:	07-205-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromoform	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Bromobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1,2,2-Tetrachloroethane	ND	0.35	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-31-13	7-31-13	
1,2,4-Trichlorobenzene	ND	0.29	EPA 8260C	7-31-13	7-31-13	
Hexachlorobutadiene	ND	0.34	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichlorobenzene	ND	0.46	EPA 8260C	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>97</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-8					
Laboratory ID:	07-205-03					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Chloromethane	ND	2.0	EPA 8260C	7-31-13	7-31-13	
Vinyl Chloride	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Bromomethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Chloroethane	ND	2.0	EPA 8260C	7-31-13	7-31-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Iodomethane	ND	2.0	EPA 8260C	7-31-13	7-31-13	
Methylene Chloride	ND	2.0	EPA 8260C	7-31-13	7-31-13	
(trans) 1,2-Dichloroethene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
2,2-Dichloropropane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
(cis) 1,2-Dichloroethene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Bromochloromethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Chloroform	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1,1-Trichloroethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Carbon Tetrachloride	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloropropene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloroethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Trichloroethene	2.0	0.40	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloropropane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Dibromomethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Bromodichloromethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
2-Chloroethyl Vinyl Ether	ND	2.6	EPA 8260C	7-31-13	7-31-13	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260C	7-31-13	7-31-13	

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-8					
Laboratory ID:	07-205-03					
1,1,2-Trichloroethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Tetrachloroethene	150	2.0	EPA 8260C	7-31-13	7-31-13	
1,3-Dichloropropane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Dibromochloromethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromoethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Chlorobenzene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
Bromoform	ND	2.0	EPA 8260C	7-31-13	7-31-13	
Bromobenzene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,1,1,2,2-Tetrachloroethane	ND	0.70	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichloropropane	ND	0.40	EPA 8260C	7-31-13	7-31-13	
2-Chlorotoluene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
4-Chlorotoluene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,3-Dichlorobenzene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,4-Dichlorobenzene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,2-Dichlorobenzene	ND	0.40	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromo-3-chloropropane	ND	2.8	EPA 8260C	7-31-13	7-31-13	
1,2,4-Trichlorobenzene	ND	0.58	EPA 8260C	7-31-13	7-31-13	
Hexachlorobutadiene	ND	0.68	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichlorobenzene	ND	0.92	EPA 8260C	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0731W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloromethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Vinyl Chloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Iodomethane	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Methylene Chloride	ND	1.0	EPA 8260C	7-31-13	7-31-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chloroform	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Trichloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromomethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromodichloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chloroethyl Vinyl Ether	ND	1.3	EPA 8260C	7-31-13	7-31-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	7-31-13	7-31-13	

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0731W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Tetrachloroethene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Dibromochloromethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Chlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
Bromoform	ND	1.0	EPA 8260C	7-31-13	7-31-13	
Bromobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,1,2,2-Tetrachloroethane	ND	0.35	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	7-31-13	7-31-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	7-31-13	7-31-13	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	7-31-13	7-31-13	
1,2,4-Trichlorobenzene	ND	0.29	EPA 8260C	7-31-13	7-31-13	
Hexachlorobutadiene	ND	0.34	EPA 8260C	7-31-13	7-31-13	
1,2,3-Trichlorobenzene	ND	0.46	EPA 8260C	7-31-13	7-31-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>92</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>86</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-120</i>				

Date of Report: July 31, 2013
 Samples Submitted: July 30, 2013
 Laboratory Reference: 1307-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0731W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	9.92	9.55	10.0	10.0	99	96	63-142	4	17	
Benzene	9.71	9.73	10.0	10.0	97	97	78-125	0	15	
Trichloroethene	9.63	8.81	10.0	10.0	96	88	80-125	9	15	
Toluene	9.22	9.17	10.0	10.0	92	92	80-125	1	15	
Chlorobenzene	10.5	10.7	10.0	10.0	105	107	80-140	2	15	
<i>Surrogate:</i>										
Dibromofluoromethane					90	91	62-122			
Toluene-d8					90	87	70-120			
4-Bromofluorobenzene					97	107	71-120			



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-naphthalene) 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



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

August 12, 2013

Peter Jowise
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/003-001
Laboratory Reference No. 1308-015

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on August 2, 2013.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

Case Narrative

Samples were collected on August 1 and 2, 2013 and received by the laboratory on August 2, 2013. 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.

Halogenated Volatiles (soil) 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.

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-8					
Laboratory ID:	08-015-01					
Gasoline Range Organics	ND	0.12	NWTPH-HCID	8-2-13	8-2-13	
Diesel Range Organics	Detected	0.30	NWTPH-HCID	8-2-13	8-2-13	
Lube Oil Range Organics	ND	0.48	NWTPH-HCID	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>87</i>	<i>50-150</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0802W1					
Gasoline Range Organics	ND	0.10	NWTPH-HCID	8-2-13	8-2-13	
Diesel Range Organics	ND	0.25	NWTPH-HCID	8-2-13	8-2-13	
Lube Oil Range Organics	ND	0.40	NWTPH-HCID	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>77</i>	<i>50-150</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP8-9					
Laboratory ID:	08-015-06					
Gasoline Range Organics	ND	24	NWTPH-HCID	8-5-13	8-5-13	
Diesel Range Organics	ND	59	NWTPH-HCID	8-5-13	8-5-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>83</i>	<i>50-150</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0805S1					
Gasoline Range Organics	ND	20	NWTPH-HCID	8-5-13	8-5-13	
Diesel Range Organics	ND	50	NWTPH-HCID	8-5-13	8-5-13	
Lube Oil Range Organics	ND	100	NWTPH-HCID	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>80</i>	<i>50-150</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

NWTPH-Dx

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-8					
Laboratory ID:	08-015-01					
Diesel Range Organics	0.41	0.30	NWTPH-Dx	8-2-13	8-2-13	
Lube Oil Range Organics	ND	0.48	NWTPH-Dx	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>87</i>	<i>50-150</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0802W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	8-2-13	8-2-13	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				

Analyte	Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE						
Laboratory ID:	08-003-01					
	ORIG	DUP				
Diesel Range Organics	ND	ND		NA	NA	
Lube Oil Range Organics	ND	ND		NA	NA	
<i>Surrogate:</i>						
<i>o-Terphenyl</i>			84 82	50-150		

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-8					
Laboratory ID:	08-015-01					
Dichlorodifluoromethane	ND	0.54	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	2.0	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	2.0	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	2.0	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	2.0	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	0.80	0.40	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	1.3	0.40	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	22	0.40	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	0.40	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-8					
Laboratory ID:	08-015-01					
1,1,2-Trichloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	73	2.0	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	2.0	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,1,1,2,2-Tetrachloroethane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	0.40	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	2.0	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	0.40	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-9					
Laboratory ID:	08-015-02					
Dichlorodifluoromethane	ND	0.27	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-9					
Laboratory ID:	08-015-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-10					
Laboratory ID:	08-015-03					
Dichlorodifluoromethane	ND	14	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	50	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	10	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	50	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	10	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	50	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	50	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	10	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	ND	10	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	10	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	10	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	50	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	10	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	10	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-10					
Laboratory ID:	08-015-03					
1,1,2-Trichloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	2100	50	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	10	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	50	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,1,2,2-Tetrachloroethane	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	10	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	10	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	50	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	10	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	10	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-11					
Laboratory ID:	08-015-04					
Dichlorodifluoromethane	ND	0.27	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-11					
Laboratory ID:	08-015-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>110</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-12					
Laboratory ID:	08-015-05					
Dichlorodifluoromethane	ND	0.27	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-12					
Laboratory ID:	08-015-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>112</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4A					
Laboratory ID:	08-015-09					
Dichlorodifluoromethane	ND	27	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	100	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	20	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	100	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	20	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	100	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	100	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	20	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	110	20	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	40	20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	20	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	20	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	100	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	20	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	20	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4A					
Laboratory ID:	08-015-09					
1,1,2-Trichloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	2800	100	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	20	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	100	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,1,2,2-Tetrachloroethane	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	20	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	20	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	100	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	20	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0805W1					
Dichlorodifluoromethane	ND	0.27	EPA 8260C	8-5-13	8-5-13	
Chloromethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Vinyl Chloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Iodomethane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Methylene Chloride	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chloroform	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Trichloroethene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromomethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromodichloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	8-5-13	8-5-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	8-5-13	8-5-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0805W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Tetrachloroethene	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Dibromochloromethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Chlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Bromoform	ND	1.0	EPA 8260C	8-5-13	8-5-13	
Bromobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	8-5-13	8-5-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	8-5-13	8-5-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	8-5-13	8-5-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>71-120</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0805W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.7	10.9	10.0	10.0	107	109	63-142	2	17	
Benzene	10.0	10.5	10.0	10.0	100	105	78-125	5	15	
Trichloroethene	9.44	9.36	10.0	10.0	94	94	80-125	1	15	
Toluene	9.89	10.0	10.0	10.0	99	100	80-125	1	15	
Chlorobenzene	10.3	10.6	10.0	10.0	103	106	80-140	3	15	
<i>Surrogate:</i>										
Dibromofluoromethane					106	102	62-122			
Toluene-d8					104	100	70-120			
4-Bromofluorobenzene					99	100	71-120			

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4A					
Laboratory ID:	08-015-07					
Dichlorodifluoromethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Chloromethane	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
Vinyl Chloride	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Bromomethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Chloroethane	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Iodomethane	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
Methylene Chloride	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Bromochloromethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Chloroform	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Trichloroethene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Dibromomethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Bromodichloromethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	YSCGP-4A					
Laboratory ID:	08-015-07					
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Tetrachloroethene	0.0012	0.00098	EPA 8260C	8-2-13	8-2-13	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Dibromochloromethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Chlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Bromoform	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Bromobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,1,1,2,2-Tetrachloroethane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2,3-Trichloropropane	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
2-Chlorotoluene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
4-Chlorotoluene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	8-2-13	8-2-13	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>129</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>73-124</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES 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:	MB0802S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Chloromethane	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Bromomethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Chloroethane	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Iodomethane	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
Methylene Chloride	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Bromochloromethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Chloroform	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Trichloroethene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Dibromomethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0802S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Chlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Bromoform	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Bromobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	8-2-13	8-2-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	8-2-13	8-2-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>123</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>121</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: August 12, 2013
 Samples Submitted: August 2, 2013
 Laboratory Reference: 1308-015
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0802S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0474	0.0471	0.0500	0.0500	95	94	56-141	1	15	
Benzene	0.0501	0.0499	0.0500	0.0500	100	100	70-121	0	15	
Trichloroethene	0.0486	0.0493	0.0500	0.0500	97	99	74-118	1	15	
Toluene	0.0487	0.0490	0.0500	0.0500	97	98	75-120	1	15	
Chlorobenzene	0.0478	0.0477	0.0500	0.0500	96	95	75-120	0	15	
<i>Surrogate:</i>										
Dibromofluoromethane					111	111	65-129			
Toluene-d8					108	109	77-122			
4-Bromofluorobenzene					97	99	73-124			

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C**

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	08-015-08					
Client ID:	YSC Soil Cuttings Comp.					
Lead	ND	5.7	6010C	8-7-13	8-7-13	

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 8-7-13
Date Analyzed: 8-7-13

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0807SM1

Analyte	Method	Result	PQL
Lead	6010C	ND	5.0

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 8-7-13

Date Analyzed: 8-7-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-030-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	65.5	62.6	5	5.0	

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 8-7-13

Date Analyzed: 8-7-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 08-030-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	125	184	95	175	88	5	

Date of Report: August 12, 2013
Samples Submitted: August 2, 2013
Laboratory Reference: 1308-015
Project: 09-04193-017/003-001

% MOISTURE

Date Analyzed: 8-2-13

Client ID	Lab ID	% Moisture
YSCG8-9	08-015-06	16
YSCGP-4A	08-015-07	12
YSC Soil Cuttings Comp.	08-015-08	12



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-naphthalene) 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



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

Chain of Custody

Laboratory Number: **08-015**

Turnaround Request
(in working days)

(Check One)

- Same Day
- 1 Day
- 2 Day
- 3 Day
- Standard (7 working days)
(TPH analysis 5 working days)
- (other)

Company: Herrera Environmental
 Project Number: 09-04193-017/003-001
 Project Name: YSC
 Project Manager: Peter Towise
 Sampled by: Bruce Carpenter

Requested Analysis

NWTFH-HCID	NWTFH-G/BTEX	NWTFH-DX	Volatiles by 8260B	Halogenated Volatiles by 8260B	Semivolatiles by 8270D / SIM	PAHs by 8270D / SIM	PCBs by 8082	Pesticides by 8081A	Herbicides by 8151A	Total RCRA Metals (8)	TCLP Metals	HEM by 1664	Total Lead	% Moisture
<input checked="" type="checkbox"/>														

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	# of Cont.
1	YSCGP-8	8/1/13	1515	W	13
2	YSCGP-9	↓	1555	W	3
3	YSCGP-10		1115	W	3
4	YSCGP-11		1000	W	3
5	YSCGP-12		1335	W	3
6	YSCGP-9		1445	S	6
7	YSCGP-4A		1000	S	3
8	YSC Soil Cuttings Comp		8/2/13	715	S
9	YSCGP-4A	8/1/13	855	W	3

Signature	Company	Date	Time	Comments/Special Instructions:
	Herrera Environmental	8/2/13	850	Sent via courier Standard TAT soil samples and YSCGP-8 HClID. (X) Added 8/6/13 DB3 (STA)
	OnSite	8/2/13	1340	

Reviewed by/Date

Chromatograms with final report



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Herrera Environmental
Peter Jowise
2200 Sixth Ave, Ste 1100
Seattle, WA 98121

RE: King County Youth Services Center
Lab ID: 1308140

September 09, 2013

Attention Peter Jowise:

Fremont Analytical, Inc. received 5 sample(s) on 8/21/2013 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method TO-15

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Dee".

Michael Dee
Sr. Chemist / Principal

CC:
Jon Havelock



Date: 09/09/2013

CLIENT: Herrera Environmental
Project: King County Youth Services Center
Lab Order: 1308140

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1308140-001	Alder Tower Basement Mech. R	08/21/2013 12:00 AM	08/21/2013 4:08 PM
1308140-002	Spruce Wing Detention Wing L,	08/21/2013 12:00 AM	08/21/2013 4:08 PM
1308140-003	Alder Tower Basement Storage	08/21/2013 12:00 AM	08/21/2013 4:08 PM
1308140-004	Spruce Wing Roof Above Unit 4	08/21/2013 12:00 AM	08/21/2013 4:08 PM
1308140-005	Alder Tower Penthouse HVAC A	08/21/2013 12:00 AM	08/21/2013 4:08 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Herrera Environmental
Project: King County Youth Services Center

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Air samples are reported in ppbv and ug/m3.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Client: Herrera Environmental
WorkOrder: 1308140
Project: King County Youth Services Center

Client Sample ID: Alder Tower Basement Mech. Room
Lab ID: 1308140-001A
Sample Type: Summa Canister

Date Sampled: 8/21/2013
Date Received: 8/21/2013

Analyte	Concentration		Reporting Limit	Qual	Test Method	Date Analyzed /Analyst
	(ppbv)	(ug/m ³)	(ppbv)			

Volatile Organic Compounds by EPA Method TO-15

1,1-Dichloroethane	<0.200	<0.810	0.200		TO-15	08/22/2013 SG
cis-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Tetrachloroethene (PCE)	<0.300	<2.03	0.300		TO-15	08/22/2013 SG
trans-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Trichloroethene (TCE)	<0.200	<1.07	0.200		TO-15	08/22/2013 SG
Vinyl chloride	<0.200	<0.511	0.200		TO-15	08/22/2013 SG
Surr: 4-Bromofluorobenzene	90.4 %Rec	--	70-130		TO-15	08/22/2013 SG

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit



Client: **Herrera Environmental**
 WorkOrder: 1308140
 Project: King County Youth Services Center

Client Sample ID: Spruce Wing Detention Wing L, Unit 4
 Lab ID: 1308140-002A
 Sample Type: Summa Canister

Date Sampled: 8/21/2013
 Date Received: 8/21/2013

Analyte	Concentration	Reporting Limit	Qual	Test Method	Date Analyzed /Analyst
	(ppbv)	(ug/m ³)	(ppbv)		

Volatile Organic Compounds by EPA Method TO-15

1,1-Dichloroethane	<0.200	<0.810	0.200	TO-15	08/22/2013 SG
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	TO-15	08/22/2013 SG
Tetrachloroethene (PCE)	<0.300	<2.03	0.300	TO-15	08/22/2013 SG
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	TO-15	08/22/2013 SG
Trichloroethene (TCE)	<0.200	<1.07	0.200	TO-15	08/22/2013 SG
Vinyl chloride	<0.200	<0.511	0.200	TO-15	08/22/2013 SG
Surr: 4-Bromofluorobenzene	91.6 %Rec	--	70-130	TO-15	08/22/2013 SG

Qualifiers: B Analyte detected in the associated Method Blank D Dilution was required
 E Value above quantitation range H Holding times for preparation or analysis exceeded
 J Analyte detected below quantitation limits ND Not detected at the Reporting Limit



Client: **Herrera Environmental**
 WorkOrder: 1308140
 Project: King County Youth Services Center

Client Sample ID: Alder Tower Basement Storage Room
 Lab ID: 1308140-003A
 Sample Type: Summa Canister

Date Sampled: 8/21/2013
 Date Received: 8/21/2013

Analyte	Concentration	Reporting Limit	Qual	Test Method	Date Analyzed /Analyst
	(ppbv)	(ug/m ³)	(ppbv)		

Volatile Organic Compounds by EPA Method TO-15

1,1-Dichloroethane	<0.200	<0.810	0.200	TO-15	08/22/2013 SG
cis-1,2-Dichloroethene	<0.200	<0.793	0.200	TO-15	08/22/2013 SG
Tetrachloroethene (PCE)	<0.300	<2.03	0.300	TO-15	08/22/2013 SG
trans-1,2-Dichloroethene	<0.200	<0.793	0.200	TO-15	08/22/2013 SG
Trichloroethene (TCE)	0.289	1.55	0.200	TO-15	08/22/2013 SG
Vinyl chloride	<0.200	<0.511	0.200	TO-15	08/22/2013 SG
Surr: 4-Bromofluorobenzene	91.4 %Rec	--	70-130	TO-15	08/22/2013 SG

Qualifiers: B Analyte detected in the associated Method Blank D Dilution was required
 E Value above quantitation range H Holding times for preparation or analysis exceeded
 J Analyte detected below quantitation limits ND Not detected at the Reporting Limit



Client: Herrera Environmental
WorkOrder: 1308140
Project: King County Youth Services Center

Client Sample ID: Spruce Wing Roof Above Unit 4 (sample 2)
Lab ID: 1308140-004A
Sample Type: Summa Canister

Date Sampled: 8/21/2013
Date Received: 8/21/2013

Analyte	Concentration (ppbv)	Concentration (ug/m ³)	Reporting Limit (ppbv)	Qual	Test Method	Date Analyzed /Analyst
---------	-------------------------	---------------------------------------	------------------------------	------	----------------	---------------------------

Volatile Organic Compounds by EPA Method TO-15

1,1-Dichloroethane	<0.200	<0.810	0.200		TO-15	08/22/2013 SG
cis-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Tetrachloroethene (PCE)	1.09	7.42	0.300		TO-15	08/22/2013 SG
trans-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Trichloroethene (TCE)	<0.200	<1.07	0.200		TO-15	08/22/2013 SG
Vinyl chloride	<0.200	<0.511	0.200		TO-15	08/22/2013 SG
Surr: 4-Bromofluorobenzene	94.5 %Rec	--	70-130		TO-15	08/22/2013 SG

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit



Client: Herrera Environmental
WorkOrder: 1308140
Project: King County Youth Services Center

Client Sample ID: Alder Tower Penthouse HVAC Air Intake
Lab ID: 1308140-005A
Sample Type: Summa Canister

Date Sampled: 8/21/2013
Date Received: 8/21/2013

Analyte	Concentration		Reporting Limit	Qual	Test Method	Date Analyzed /Analyst
	(ppbv)	(ug/m ³)	(ppbv)			

Volatile Organic Compounds by EPA Method TO-15

1,1-Dichloroethane	<0.200	<0.810	0.200		TO-15	08/22/2013 SG
cis-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Tetrachloroethene (PCE)	<0.300	<2.03	0.300		TO-15	08/22/2013 SG
trans-1,2-Dichloroethene	<0.200	<0.793	0.200		TO-15	08/22/2013 SG
Trichloroethene (TCE)	<0.200	<1.07	0.200		TO-15	08/22/2013 SG
Vinyl chloride	<0.200	<0.511	0.200		TO-15	08/22/2013 SG
Surr: 4-Bromofluorobenzene	76.7 %Rec	--	70-130		TO-15	08/22/2013 SG

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit

Work Order: 1308140
CLIENT: Herrera Environmental
Project: King County Youth Services Center

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: 1308140-001AREP	SampType: REP	Units: ppbv	Prep Date: 8/22/2013	RunNo: 9713
Client ID: Alder Tower Basement	Batch ID: R9713		Analysis Date: 8/22/2013	SeqNo: 195459

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.200						0	0	30	
trans-1,2-Dichloroethene	ND	0.200						0	0	30	
1,1-Dichloroethane	ND	0.200						0	0	30	
cis-1,2-Dichloroethene	ND	0.200						0	0	30	
Trichloroethene (TCE)	ND	0.200						0	0	30	
Tetrachloroethene (PCE)	ND	0.300						0	0	30	
Surr: 4-Bromofluorobenzene	9.04		10.00		90.4	70	130		0		

Sample ID: MB-R9713	SampType: MBLK	Units: ppbv	Prep Date: 8/21/2013	RunNo: 9713
Client ID: MBLKW	Batch ID: R9713		Analysis Date: 8/21/2013	SeqNo: 195464

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0850									
trans-1,2-Dichloroethene	ND	0.500									
1,1-Dichloroethane	ND	0.200									
cis-1,2-Dichloroethene	ND	0.200									
Trichloroethene (TCE)	ND	0.0170									
Tetrachloroethene (PCE)	ND	0.0500									
Surr: 4-Bromofluorobenzene	9.44		10.00		94.4	70	130				

Sample ID: LCS-R9713	SampType: LCS	Units: ppbv	Prep Date: 8/21/2013	RunNo: 9713
Client ID: LCSW	Batch ID: R9713		Analysis Date: 8/21/2013	SeqNo: 195465

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	4.81	0.0850	5.000	0	96.1	70	130				
trans-1,2-Dichloroethene	4.66	0.500	5.000	0	93.2	70	130				
1,1-Dichloroethane	4.70	0.200	5.000	0	94.0	70	130				
cis-1,2-Dichloroethene	4.64	0.200	5.000	0	92.9	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1308140
CLIENT: Herrera Environmental
Project: King County Youth Services Center

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method TO-15

Sample ID: LCS-R9713	SampType: LCS	Units: ppbv	Prep Date: 8/21/2013	RunNo: 9713							
Client ID: LCSW	Batch ID: R9713		Analysis Date: 8/21/2013	SeqNo: 195465							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Trichloroethene (TCE)	4.59	0.0170	5.000	0	91.8	70	130				
Tetrachloroethene (PCE)	4.50	0.0500	5.000	0	89.9	70	130				
Surr: 4-Bromofluorobenzene	9.90		10.00		99.0	70	130				

Qualifiers:	B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits	D Dilution was required J Analyte detected below quantitation limits RL Reporting Limit	E Value above quantitation range ND Not detected at the Reporting Limit S Spike recovery outside accepted recovery limits
--------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------

Client Name: **HERRERA**

 Work Order Number: **1308140**

 Logged by: **Clare Griggs**

 Date Received: **8/21/2013 4:08:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA

Air Samples

4. Shipping container/cooler in good condition? Yes No
5. Custody seals intact on shipping container/cooler? Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is the headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

 Person Notified:

 Date:

 By Whom:

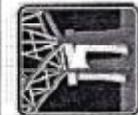
 Via: eMail Phone Fax In Person

 Regarding:

 Client Instructions:

19. Additional remarks:

Item Information



Fremont Analytical
 3600 Fremont Ave N.
 Seattle, WA 98103
 Tel: 206-352-3750
 Fax: 206-352-7178

Air Chain of Custody Record

Laboratory Project No (Internal): 1308140
 Page: 1 of: 1

Date: 8/21/13

Client: Herrera
 Project Name: King County Youth Services Center
 Location: 1211 E. Alder St., Seattle, WA
 Collected by: Jon A. Havelock, Mid-Tox Northwest

Address: 2200 Sixth Ave, Suite 100
 City, State, Zip: Sea, WA 98121
 Tel: 206-787-8220

Project No: 09-04193-017

Reports To (PM): Peter Jowise
 Email: plowis@herrerainc.com

Sample Name	Canister Serial #	Sample Date	Sample Time (M:LN)	Indoor/Outdoor	Sample Volume	Container Type	Lab Cert. Vacuum Pressure	Initial Field Sample Pressure	Final Field Sample Pressure	Analysis Requested	Internal	
											Receipt Date	Final (ps)
1. Alder Tower Basement mech. Room	13967	8/21/2013	4:37	I		Summa	-30" Hg	30	8.75	ACE, TCE, cis 1,2-DCE	8/21/13	-5
2. Spruce Wing Detention Wing L Unit 4	13968	8/21/2013	4:43	I		Summa	-30" Hg	29	8	trans 1,2-DCE, vinyl		-6
3. Alder Tower Basement storage room	13970	8/21/2013	4:45	I		Summa	-30" Hg	29	11	elbriide, And		-9
4. Spruce Wing Roof above Unit 4 (sample 2)	13972	8/21/2013	4:45	O		Summa	-30" Hg	29.5	8	1,1-dichloroethane		-10
5. Alder Tower Penthouse HVAC air intake	13975	8/21/2013	4:49	O		Summa	-30" Hg	29.5	11			-9
6												
7												
8												
9												
10												

Special Remarks: 24hr

Condition: Soils Intact: Y N N/A
 Relinquished x Jon A. Havelock 8/21/13 1608
 Relinquished x [Signature] 8/21/13 1608

TAT -> STD Rush (specify)



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

September 16, 2013

Peter Jowise
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/003-001
Laboratory Reference No. 1309-028

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on September 5, 2013.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: September 16, 2013
Samples Submitted: September 5, 2013
Laboratory Reference: 1309-028
Project: 09-04193-017/003-001

Case Narrative

Samples were collected on September 4 and 5, 2013 and received by the laboratory on September 5, 2013. 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.

Halogenated Volatiles EPA 8260C (soil) 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.

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-2					
Laboratory ID:	09-028-01					
Gasoline Range Organics	ND	26	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	64	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil	Detected	130	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				
Client ID:	GP20-4					
Laboratory ID:	09-028-04					
Gasoline Range Organics	ND	25	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	63	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil Range Organics	ND	130	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				
Client ID:	GP21-3					
Laboratory ID:	09-028-06					
Gasoline Range Organics	ND	24	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	60	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	96	50-150				
Client ID:	GP22-8					
Laboratory ID:	09-028-09					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	58	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil	Detected	120	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				
Client ID:	GP26-3					
Laboratory ID:	09-028-12					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	56	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil	Detected	110	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP33-4					
Laboratory ID:	09-028-15					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	57	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>98</i>	<i>50-150</i>				
Client ID:	GP28-9					
Laboratory ID:	09-028-16					
Gasoline Range Organics	ND	25	NWTPH-HCID	9-9-13	9-9-13	
Diesel Fuel #2	Detected	61	NWTPH-HCID	9-9-13	9-9-13	N
Lube Oil	Detected	120	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>103</i>	<i>50-150</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0909S1					
Gasoline Range Organics	ND	20	NWTPH-HCID	9-9-13	9-9-13	
Diesel Range Organics	ND	50	NWTPH-HCID	9-9-13	9-9-13	
Lube Oil Range Organics	ND	100	NWTPH-HCID	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>103</i>	<i>50-150</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-2					
Laboratory ID:	09-028-01					
Diesel Range Organics	ND	35	NWTPH-Dx	9-12-13	9-12-13	U1
Lube Oil	340	64	NWTPH-Dx	9-12-13	9-12-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	75	50-150				
Client ID:	GP22-8					
Laboratory ID:	09-028-09					
Diesel Range Organics	ND	29	NWTPH-Dx	9-12-13	9-12-13	
Lube Oil	93	58	NWTPH-Dx	9-12-13	9-12-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	77	50-150				
Client ID:	GP26-3					
Laboratory ID:	09-028-12					
Diesel Range Organics	ND	28	NWTPH-Dx	9-12-13	9-12-13	
Lube Oil	190	56	NWTPH-Dx	9-12-13	9-12-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				
Client ID:	GP28-9					
Laboratory ID:	09-028-16					
Diesel Fuel #2	120	31	NWTPH-Dx	9-12-13	9-12-13	N
Lube Oil	1500	61	NWTPH-Dx	9-12-13	9-12-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0912S1					
Diesel Range Organics	ND	25	NWTPH-Dx	9-12-13	9-12-13	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-12-13	9-12-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>80</i>	<i>50-150</i>				

Analyte	Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE						
Laboratory ID:	09-028-12					
	ORIG	DUP				
Diesel Range Organics	ND	ND		NA	NA	
Lube Oil	167	94.2		56	NA	
<i>Surrogate:</i>						
<i>o-Terphenyl</i>			<i>85 75</i>	<i>50-150</i>		

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-2					
Laboratory ID:	09-028-01					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Chloromethane	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
Vinyl Chloride	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Bromomethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Chloroethane	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Iodomethane	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
Methylene Chloride	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Bromochloromethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Chloroform	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Trichloroethene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Dibromomethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Bromodichloromethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
2-Chloroethyl Vinyl Ether	ND	0.15	EPA 8260C	9-15-13	9-15-13	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-2					
Laboratory ID:	09-028-01					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Tetrachloroethene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Dibromochloromethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Chlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Bromoform	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Bromobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
2-Chlorotoluene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
4-Chlorotoluene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromo-3-chloropropane	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
Hexachlorobutadiene	ND	0.0064	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	9-15-13	9-15-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-14					
Laboratory ID:	09-028-02					
Dichlorodifluoromethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Chloromethane	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
Vinyl Chloride	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Bromomethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Chloroethane	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
Trichlorofluoromethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Iodomethane	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
Methylene Chloride	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
2,2-Dichloropropane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Bromochloromethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Chloroform	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Carbon Tetrachloride	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloropropene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Trichloroethene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloropropane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Dibromomethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Bromodichloromethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
2-Chloroethyl Vinyl Ether	ND	0.094	EPA 8260C	9-15-13	9-15-13	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19-14					
Laboratory ID:	09-028-02					
1,1,2-Trichloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Tetrachloroethene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,3-Dichloropropane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Dibromochloromethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromoethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Chlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Bromoform	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Bromobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,1,1,2,2-Tetrachloroethane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichloropropane	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
2-Chlorotoluene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
4-Chlorotoluene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,3-Dichlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,4-Dichlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2-Dichlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
1,2,4-Trichlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichlorobenzene	ND	0.00078	EPA 8260C	9-15-13	9-15-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20-4					
Laboratory ID:	09-028-04					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Chloromethane	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Bromomethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Chloroethane	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Iodomethane	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
Methylene Chloride	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Chloroform	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
2-Chloroethyl Vinyl Ether	ND	0.15	EPA 8260C	9-15-13	9-15-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20-4					
Laboratory ID:	09-028-04					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Bromoform	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-15-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20-12					
Laboratory ID:	09-028-05					
Dichlorodifluoromethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Chloromethane	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
Vinyl Chloride	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Bromomethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Chloroethane	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Iodomethane	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
Methylene Chloride	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Bromochloromethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Chloroform	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Trichloroethene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Dibromomethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Bromodichloromethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-15-13	9-15-13	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20-12					
Laboratory ID:	09-028-05					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Tetrachloroethene	0.037	0.00097	EPA 8260C	9-15-13	9-15-13	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Dibromochloromethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Chlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Bromoform	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Bromobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,1,1,2,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
2-Chlorotoluene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
4-Chlorotoluene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260C	9-15-13	9-15-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21-3					
Laboratory ID:	09-028-06					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21-3					
Laboratory ID:	09-028-06					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21-15					
Laboratory ID:	09-028-07					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.14	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21-15					
Laboratory ID:	09-028-07					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22-8					
Laboratory ID:	09-028-09					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22-8					
Laboratory ID:	09-028-09					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22-18					
Laboratory ID:	09-028-10					
Dichlorodifluoromethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22-18					
Laboratory ID:	09-028-10					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26-3					
Laboratory ID:	09-028-12					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.14	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26-3					
Laboratory ID:	09-028-12					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0060	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>106</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26-24					
Laboratory ID:	09-028-13					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26-24					
Laboratory ID:	09-028-13					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	0.0061	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP33-4					
Laboratory ID:	09-028-15					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP33-4					
Laboratory ID:	09-028-15					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28-9					
Laboratory ID:	09-028-16					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28-9					
Laboratory ID:	09-028-16					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28-18					
Laboratory ID:	09-028-17					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloromethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Iodomethane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chloroform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-15-13	9-16-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28-18					
Laboratory ID:	09-028-17					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromoform	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-15-13	9-16-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES 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:	MB0915S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Chloromethane	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Bromomethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Chloroethane	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Iodomethane	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Chloroform	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-15-13	9-15-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0915S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Bromoform	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-15-13	9-15-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-15-13	9-15-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0915S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0481	0.0478	0.0500	0.0500	96	96	56-141	1	15	
Benzene	0.0558	0.0536	0.0500	0.0500	112	107	70-121	4	15	
Trichloroethene	0.0501	0.0485	0.0500	0.0500	100	97	74-118	3	15	
Toluene	0.0524	0.0514	0.0500	0.0500	105	103	75-120	2	15	
Chlorobenzene	0.0547	0.0524	0.0500	0.0500	109	105	75-120	4	15	
<i>Surrogate:</i>										
Dibromofluoromethane					107	107	65-129			
Toluene-d8					105	111	77-122			
4-Bromofluorobenzene					103	104	73-124			

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19					
Laboratory ID:	09-028-03					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP19					
Laboratory ID:	09-028-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>95</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21					
Laboratory ID:	09-028-08					
Dichlorodifluoromethane	ND	2.0	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	5.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	5.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	2.0	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	2.0	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	5.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	10	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	3.1	1.0	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP21					
Laboratory ID:	09-028-08					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	74	1.0	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	5.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	1.4	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>96</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22					
Laboratory ID:	09-028-11					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	0.27	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP22					
Laboratory ID:	09-028-11					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26					
Laboratory ID:	09-028-14					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	0.44	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP26					
Laboratory ID:	09-028-14					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	26	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>101</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28					
Laboratory ID:	09-028-18					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP28					
Laboratory ID:	09-028-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20A					
Laboratory ID:	09-028-19					
Dichlorodifluoromethane	ND	20	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	50	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	10	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	50	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	20	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	50	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	100	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	10	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	10	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	10	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	10	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	15	10	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	10	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	10	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	50	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	10	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	10	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP20A					
Laboratory ID:	09-028-19					
1,1,2-Trichloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	2000	10	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	10	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	50	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,1,2,2-Tetrachloroethane	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	10	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	10	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	50	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	10	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	10	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	14	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP29					
Laboratory ID:	09-028-20					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP29					
Laboratory ID:	09-028-20					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0909W1					
Dichlorodifluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Chloromethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Trichlorofluoromethane	ND	0.40	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethene	ND	0.40	EPA 8260C	9-9-13	9-9-13	
Iodomethane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Methylene Chloride	ND	2.0	EPA 8260C	9-9-13	9-9-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chloroform	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Trichloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromomethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-9-13	9-9-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-9-13	9-9-13	

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0909W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Tetrachloroethene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Bromoform	ND	1.0	EPA 8260C	9-9-13	9-9-13	
Bromobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-9-13	9-9-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-9-13	9-9-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-9-13	9-9-13	
1,2,3-Trichlorobenzene	ND	0.27	EPA 8260C	9-9-13	9-9-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>96</i>	<i>71-120</i>				

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					SB	SBD	Limits	RPD	Limit	
SPIKE BLANKS										
Laboratory ID:	SB0909W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	11.3	11.0	10.0	10.0	113	110	63-142	3	17	
Benzene	10.2	10.2	10.0	10.0	102	102	78-125	0	15	
Trichloroethene	9.78	9.62	10.0	10.0	98	96	80-125	2	15	
Toluene	10.0	9.90	10.0	10.0	100	99	80-125	1	15	
Chlorobenzene	10.7	10.6	10.0	10.0	107	106	80-140	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					96	99	62-122			
Toluene-d8					99	100	70-120			
4-Bromofluorobenzene					94	97	71-120			

Date of Report: September 16, 2013
 Samples Submitted: September 5, 2013
 Laboratory Reference: 1309-028
 Project: 09-04193-017/003-001

**TOTAL LEAD
 EPA 6010C**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	09-028-01					
Client ID:	GP19-2					
Lead	130	6.4	6010C	9-9-13	9-9-13	
Lab ID:	09-028-04					
Client ID:	GP20-4					
Lead	200	6.3	6010C	9-9-13	9-9-13	
Lab ID:	09-028-06					
Client ID:	GP21-3					
Lead	44	6.0	6010C	9-9-13	9-9-13	
Lab ID:	09-028-09					
Client ID:	GP22-8					
Lead	35	5.8	6010C	9-9-13	9-9-13	
Lab ID:	09-028-12					
Client ID:	GP26-3					
Lead	52	5.6	6010C	9-9-13	9-9-13	
Lab ID:	09-028-15					
Client ID:	GP33-4					
Lead	ND	5.7	6010C	9-9-13	9-9-13	
Lab ID:	09-028-16					
Client ID:	GP28-9					
Lead	33	6.1	6010C	9-9-13	9-9-13	

Date of Report: September 16, 2013
Samples Submitted: September 5, 2013
Laboratory Reference: 1309-028
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 9-9-13
Date Analyzed: 9-9-13

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0909SM1

Analyte	Method	Result	PQL
Lead	6010C	ND	5.0

Date of Report: September 16, 2013
Samples Submitted: September 5, 2013
Laboratory Reference: 1309-028
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 9-9-13

Date Analyzed: 9-9-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-028-15

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	5.0	

Date of Report: September 16, 2013
Samples Submitted: September 5, 2013
Laboratory Reference: 1309-028
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 9-9-13

Date Analyzed: 9-9-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-028-15

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	234	93	240	96	3	

Date of Report: September 16, 2013
Samples Submitted: September 5, 2013
Laboratory Reference: 1309-028
Project: 09-04193-017/003-001

% MOISTURE

Date Analyzed: 9-9&10-13

Client ID	Lab ID	% Moisture
GP19-2	09-028-01	22
GP19-14	09-028-02	10
GP20-4	09-028-04	21
GP20-12	09-028-05	14
GP21-3	09-028-06	16
GP21-15	09-028-07	21
GP22-8	09-028-09	13
GP22-18	09-028-10	8
GP26-3	09-028-12	10
GP26-24	09-028-13	11
GP33-4	09-028-15	12
GP28-9	09-028-16	18
GP28-18	09-028-17	15



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-naphthalene) 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



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

September 19, 2013

Peter Jowise
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/003-001
Laboratory Reference No. 1309-048

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on September 7, 2013.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: September 19, 2013
Samples Submitted: September 7, 2013
Laboratory Reference: 1309-048
Project: 09-04193-017/003-001

Case Narrative

Samples were collected on September 5 and 6, 2013 and received by the laboratory on September 7, 2013. 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.

Halogenated 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.

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP13-3					
Laboratory ID:	09-048-01					
Gasoline Range Organics	ND	24	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	60	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				
Client ID:	GP14-3					
Laboratory ID:	09-048-03					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	58	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	93	50-150				
Client ID:	GP15-2					
Laboratory ID:	09-048-05					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	59	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	120	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				
Client ID:	GP16-3					
Laboratory ID:	09-048-07					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	57	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				
Client ID:	GP17-1					
Laboratory ID:	09-048-09					
Gasoline Range Organics	ND	23	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	57	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-3					
Laboratory ID:	09-048-11					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	56	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	Detected	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	101	50-150				
Client ID:	GP24-0.5					
Laboratory ID:	09-048-14					
Gasoline Range Organics	ND	21	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	53	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	100	50-150				
Client ID:	GP25-3					
Laboratory ID:	09-048-16					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-10-13	9-11-13	
Diesel Range Organics	ND	54	NWTPH-HCID	9-10-13	9-11-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-11-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	53	50-150				
Client ID:	GP27-3					
Laboratory ID:	09-048-18					
Gasoline Range Organics	ND	25	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	62	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil	Detected	120	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				
Client ID:	GP30-1					
Laboratory ID:	09-048-21					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	55	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	102	50-150				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP31-3					
Laboratory ID:	09-048-23					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	56	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	99	50-150				
Client ID:	GP32-3					
Laboratory ID:	09-048-25					
Gasoline Range Organics	ND	22	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	56	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil	Detected	110	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	97	50-150				
Client ID:	GP34-3					
Laboratory ID:	09-048-27					
Gasoline Range Organics	ND	21	NWTPH-HCID	9-10-13	9-11-13	
Diesel Range Organics	ND	52	NWTPH-HCID	9-10-13	9-11-13	
Lube Oil	Detected	110	NWTPH-HCID	9-10-13	9-11-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0910S1					
Gasoline Range Organics	ND	20	NWTPH-HCID	9-10-13	9-10-13	
Diesel Range Organics	ND	50	NWTPH-HCID	9-10-13	9-10-13	
Lube Oil Range Organics	ND	100	NWTPH-HCID	9-10-13	9-10-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>99</i>	<i>50-150</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-3					
Laboratory ID:	09-048-11					
Diesel Range Organics	ND	28	NWTPH-Dx	9-16-13	9-16-13	
Lube Oil Range Organics	ND	56	NWTPH-Dx	9-16-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	94	50-150				
Client ID:	GP27-3					
Laboratory ID:	09-048-18					
Diesel Range Organics	ND	31	NWTPH-Dx	9-16-13	9-17-13	
Lube Oil	140	62	NWTPH-Dx	9-16-13	9-17-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	80	50-150				
Client ID:	GP32-3					
Laboratory ID:	09-048-25					
Diesel Range Organics	ND	28	NWTPH-Dx	9-16-13	9-16-13	
Lube Oil	330	56	NWTPH-Dx	9-16-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				
Client ID:	GP34-3					
Laboratory ID:	09-048-27					
Diesel Range Organics	ND	26	NWTPH-Dx	9-16-13	9-17-13	
Lube Oil	540	52	NWTPH-Dx	9-16-13	9-17-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	85	50-150				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0916S2					
Diesel Range Organics	ND	25	NWTPH-Dx	9-16-13	9-16-13	
Lube Oil Range Organics	ND	50	NWTPH-Dx	9-16-13	9-16-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>89</i>	<i>50-150</i>				

Analyte	Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE						
Laboratory ID:	09-116-01					
	ORIG	DUP				
Diesel Range Organics	ND	ND		NA	NA	U1
Lube Oil	3650	3100		16	NA	
<i>Surrogate:</i>						
<i>o-Terphenyl</i>			<i>85 81</i>		<i>50-150</i>	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP13-3					
Laboratory ID:	09-048-01					
Dichlorodifluoromethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.18	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP13-3					
Laboratory ID:	09-048-01					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0075	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0015	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>120</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP13-14.5					
Laboratory ID:	09-048-02					
Dichlorodifluoromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP13-14.5					
Laboratory ID:	09-048-02					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>109</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP14-3					
Laboratory ID:	09-048-03					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP14-3					
Laboratory ID:	09-048-03					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	0.038	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP14-9.5					
Laboratory ID:	09-048-04					
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	0.0050	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP14-9.5					
Laboratory ID:	09-048-04					
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	0.56	0.047	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP15-2					
Laboratory ID:	09-048-05					
Dichlorodifluoromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP15-2					
Laboratory ID:	09-048-05					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP15-10					
Laboratory ID:	09-048-06					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP15-10					
Laboratory ID:	09-048-06					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP16-3					
Laboratory ID:	09-048-07					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.14	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP16-3					
Laboratory ID:	09-048-07					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0060	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>110</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP16-14.5					
Laboratory ID:	09-048-08					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP16-14.5					
Laboratory ID:	09-048-08					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP17-1					
Laboratory ID:	09-048-09					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP17-1					
Laboratory ID:	09-048-09					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>121</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP17-9.5					
Laboratory ID:	09-048-10					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP17-9.5					
Laboratory ID:	09-048-10					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>106</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>110</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-3					
Laboratory ID:	09-048-11					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.17	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-3					
Laboratory ID:	09-048-11					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0070	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>99</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-11					
Laboratory ID:	09-048-12					
Dichlorodifluoromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP18-11					
Laboratory ID:	09-048-12					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP23-6					
Laboratory ID:	09-048-13					
Dichlorodifluoromethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP23-6					
Laboratory ID:	09-048-13					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>114</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP24-0.5					
Laboratory ID:	09-048-14					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.16	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP24-0.5					
Laboratory ID:	09-048-14					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0065	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>113</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP24-7.5					
Laboratory ID:	09-048-15					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP24-7.5					
Laboratory ID:	09-048-15					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0052	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP25-3					
Laboratory ID:	09-048-16					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloromethane	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromomethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloroethane	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Iodomethane	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
Methylene Chloride	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chloroform	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.15	EPA 8260C	9-17-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP25-3					
Laboratory ID:	09-048-16					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromoform	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	9-17-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-17-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>112</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP25-14					
Laboratory ID:	09-048-17					
Dichlorodifluoromethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP25-14					
Laboratory ID:	09-048-17					
1,1,2-Trichloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>118</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>114</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>105</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP27-3					
Laboratory ID:	09-048-18					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP27-3					
Laboratory ID:	09-048-18					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>120</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>115</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP27-14.5					
Laboratory ID:	09-048-19					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP27-14.5					
Laboratory ID:	09-048-19					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>120</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>109</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP29-9					
Laboratory ID:	09-048-20					
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP29-9					
Laboratory ID:	09-048-20					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP30-1					
Laboratory ID:	09-048-21					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.15	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP30-1					
Laboratory ID:	09-048-21					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>121</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP30-14					
Laboratory ID:	09-048-22					
Dichlorodifluoromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP30-14					
Laboratory ID:	09-048-22					
1,1,2-Trichloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00097	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>104</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP31-3					
Laboratory ID:	09-048-23					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.14	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP31-3					
Laboratory ID:	09-048-23					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>113</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>114</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>107</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP31-16					
Laboratory ID:	09-048-24					
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.11	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP31-16					
Laboratory ID:	09-048-24					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>114</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>108</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP32-3					
Laboratory ID:	09-048-25					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Chloromethane	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
Vinyl Chloride	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Bromomethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Chloroethane	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Iodomethane	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
Methylene Chloride	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Bromochloromethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Chloroform	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Trichloroethene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Dibromomethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Bromodichloromethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
2-Chloroethyl Vinyl Ether	ND	0.15	EPA 8260C	9-18-13	9-19-13	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP32-3					
Laboratory ID:	09-048-25					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Tetrachloroethene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Dibromochloromethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Chlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Bromoform	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Bromobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
2-Chlorotoluene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
4-Chlorotoluene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromo-3-chloropropane	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
Hexachlorobutadiene	ND	0.0064	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	9-18-13	9-19-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>119</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP32-16.5					
Laboratory ID:	09-048-26					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloromethane	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromomethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloroethane	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Iodomethane	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
Methylene Chloride	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloroform	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2-Chloroethyl Vinyl Ether	ND	0.13	EPA 8260C	9-18-13	9-19-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP32-16.5					
Laboratory ID:	09-048-26					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromoform	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP34-3					
Laboratory ID:	09-048-27					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloromethane	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromomethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloroethane	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Iodomethane	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
Methylene Chloride	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chloroform	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Trichloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Dibromomethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2-Chloroethyl Vinyl Ether	ND	0.14	EPA 8260C	9-18-13	9-19-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP34-3					
Laboratory ID:	09-048-27					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Tetrachloroethene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Chlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromoform	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Bromobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
Hexachlorobutadiene	ND	0.0057	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	9-18-13	9-19-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>121</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>118</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>109</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP34-13					
Laboratory ID:	09-048-28					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Chloromethane	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Bromomethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Chloroethane	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Iodomethane	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Chloroform	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-18-13	9-19-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GP34-13					
Laboratory ID:	09-048-28					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Bromoform	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-18-13	9-19-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-19-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>105</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES 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:	MB0917S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Chloromethane	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Bromomethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Chloroethane	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Iodomethane	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Chloroform	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
2-Chloroethyl Vinyl Ether	ND	0.10	EPA 8260C	9-17-13	9-17-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0917S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Bromoform	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-17-13	9-17-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-17-13	9-17-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>116</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES 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:	MB0918S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloromethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromomethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloroethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Iodomethane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
Methylene Chloride	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chloroform	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Trichloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Dibromomethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2-Chloroethyl Vinyl Ether	ND	0.12	EPA 8260C	9-18-13	9-18-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0918S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Chlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromoform	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Bromobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	9-18-13	9-18-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	9-18-13	9-18-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>65-129</i>				
<i>Toluene-d8</i>	<i>120</i>	<i>77-122</i>				
<i>4-Bromofluorobenzene</i>	<i>116</i>	<i>73-124</i>				

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0917S2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0476	0.0477	0.0500	0.0500	95	95	56-141	0	15	
Benzene	0.0566	0.0577	0.0500	0.0500	113	115	70-121	2	15	
Trichloroethene	0.0486	0.0472	0.0500	0.0500	97	94	74-118	3	15	
Toluene	0.0520	0.0512	0.0500	0.0500	104	102	75-120	2	15	
Chlorobenzene	0.0524	0.0518	0.0500	0.0500	105	104	75-120	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					110	110	65-129			
Toluene-d8					112	108	77-122			
4-Bromofluorobenzene					110	106	73-124			

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0918S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0460	0.0449	0.0500	0.0500	92	90	56-141	2	15	
Benzene	0.0541	0.0536	0.0500	0.0500	108	107	70-121	1	15	
Trichloroethene	0.0457	0.0470	0.0500	0.0500	91	94	74-118	3	15	
Toluene	0.0491	0.0506	0.0500	0.0500	98	101	75-120	3	15	
Chlorobenzene	0.0498	0.0507	0.0500	0.0500	100	101	75-120	2	15	
<i>Surrogate:</i>										
Dibromofluoromethane					106	109	65-129			
Toluene-d8					103	108	77-122			
4-Bromofluorobenzene					101	103	73-124			

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**TOTAL LEAD
 EPA 6010C**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	09-048-01					
Client ID:	GP13-3					
Lead	9.8	6.0	6010C	9-12-13	9-12-13	
Lab ID:	09-048-03					
Client ID:	GP14-3					
Lead	ND	5.8	6010C	9-12-13	9-12-13	
Lab ID:	09-048-05					
Client ID:	GP15-2					
Lead	ND	5.9	6010C	9-12-13	9-12-13	
Lab ID:	09-048-07					
Client ID:	GP16-3					
Lead	100	5.7	6010C	9-12-13	9-12-13	
Lab ID:	09-048-09					
Client ID:	GP17-1					
Lead	ND	5.7	6010C	9-12-13	9-12-13	
Lab ID:	09-048-11					
Client ID:	GP18-3					
Lead	ND	5.6	6010C	9-12-13	9-12-13	
Lab ID:	09-048-14					
Client ID:	GP24-0.5					
Lead	28	5.3	6010C	9-12-13	9-12-13	

Date of Report: September 19, 2013
 Samples Submitted: September 7, 2013
 Laboratory Reference: 1309-048
 Project: 09-04193-017/003-001

**TOTAL LEAD
 EPA 6010C**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	09-048-16					
Client ID:	GP25-3					
Lead	110	5.4	6010C	9-12-13	9-12-13	
Lab ID:	09-048-18					
Client ID:	GP27-3					
Lead	53	6.2	6010C	9-12-13	9-12-13	
Lab ID:	09-048-21					
Client ID:	GP30-1					
Lead	9.3	5.5	6010C	9-12-13	9-12-13	
Lab ID:	09-048-23					
Client ID:	GP31-3					
Lead	ND	5.6	6010C	9-12-13	9-12-13	
Lab ID:	09-048-25					
Client ID:	GP32-3					
Lead	ND	5.6	6010C	9-12-13	9-12-13	
Lab ID:	09-048-27					
Client ID:	GP34-3					
Lead	13	5.2	6010C	9-12-13	9-12-13	

Date of Report: September 19, 2013
Samples Submitted: September 7, 2013
Laboratory Reference: 1309-048
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 9-12-13
Date Analyzed: 9-12-13

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0912SM1

Analyte	Method	Result	PQL
Lead	6010C	ND	5.0

Date of Report: September 19, 2013
Samples Submitted: September 7, 2013
Laboratory Reference: 1309-048
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 9-12-13

Date Analyzed: 9-12-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-048-11

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	5.0	

Date of Report: September 19, 2013
Samples Submitted: September 7, 2013
Laboratory Reference: 1309-048
Project: 09-04193-017/003-001

**TOTAL LEAD
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 9-12-13

Date Analyzed: 9-12-13

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 09-048-11

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	222	89	221	88	0	

Date of Report: September 19, 2013
Samples Submitted: September 7, 2013
Laboratory Reference: 1309-048
Project: 09-04193-017/003-001

% MOISTURE

Date Analyzed: 9-10&16-13

Client ID	Lab ID	% Moisture
GP13-3	09-048-01	17
GP13-14.5	09-048-02	9
GP14-3	09-048-03	13
GP14-9.5	09-048-04	11
GP15-2	09-048-05	15
GP15-10	09-048-06	20
GP16-3	09-048-07	12
GP16-14.5	09-048-08	15
GP17-1	09-048-09	12
GP17-9.5	09-048-10	13
GP18-3	09-048-11	10
GP18-11	09-048-12	9
GP23-6	09-048-13	8
GP24-0.5	09-048-14	5
GP24-7.5	09-048-15	15
GP25-3	09-048-16	8
GP25-14	09-048-17	15
GP27-3	09-048-18	19
GP27-14.5	09-048-19	11
GP29-9	09-048-20	9
GP30-1	09-048-21	9
GP30-14	09-048-22	10
GP31-3	09-048-23	10
GP31-16	09-048-24	14
GP32-3	09-048-25	10
GP32-16.5	09-048-26	21
GP34-3	09-048-27	4
GP34-13	09-048-28	12



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-naphthalene) 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



Chain of Custody

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

Laboratory Number: **09-048**

Turnaround Request
(in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)
(TPH analysis 5 Days)

_____ (other)

Company: Hersesa Environmental

Project Number: 09-0493-017/003-001

Project Name: YSC

Project Manager: Peter Towise

Sampled by: Bruce Carpenter

Lab ID	Sample Identification	Number of Containers		Date Sampled	Time Sampled	Matrix	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/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	Pb	% Moisture	
		6	4																					
1	GP13-3	6	4	9/6/13	10:15	S	X				X	X	X									X	X	X
2	GP13-14.5	4	4	9/6/13	10:25		X				X	X	X									X	X	X
3	GP14-3	6	4	9/6/13	10:45		X				X	X	X									X	X	X
4	GP14-9.5	4	4	9/6/13	10:55		X				X	X	X									X	X	X
5	GP15-2	6	4	9/6/13	11:35		X				X	X	X									X	X	X
6	GP15-10	4	4	9/6/13	11:50		X				X	X	X									X	X	X
7	GP16-3	6	4	9/6/13	12:35		X				X	X	X									X	X	X
8	GP16-14.5	4	4	9/6/13	12:45		X				X	X	X									X	X	X
9	GP17-1	6	4	9/6/13	13:25		X				X	X	X									X	X	X
10	GP17-9.5	4	4	9/6/13	13:35		X				X	X	X									X	X	X

Relinquished	Received	Relinquished	Received	Relinquished	Received	Reviewed/Date	Reviewed/Date	Company	Date	Time	Comments/Special Instructions
								Hersesa Environmental	9/7/13	8:00	Sent via Courier Added 9/13/13. DB3 (STA)
									9/7/13	8:55	



Chain of Custody

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

Laboratory Number: **09-048**

Turnaround Request (in working days)

(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days) (TPH analysis 5 Days)

_____ (other)

Company: Herrera Environmental

Project Number: 09-04193-017/003-001

Project Name: YSC

Project Manager: Peter Jowise

Sampled by: Bruce Carpenter

Lab ID	Sample Identification	Number of Containers		Date Sampled	Time Sampled	Matrix	NWTPH-HCID	NWTPH-Gx/BTEX	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 FCRA Metals/ MICA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	Pb	% Moisture	
		6	4																				
11	GP18-3	6	4	9/5/13	15:15	S	X		X	X	X	X	X								X	X	
12	GP18-11	4	4	15:25						X	X	X	X										X
13	GP23-6	4	4	14:30						X	X	X	X										X
14	GP24-0.5	6	4	14:00			X			X	X	X	X										X
15	GP24-7.5	4	4	14:10			X			X	X	X	X										X
16	GP25-3	6	4	16:00			X			X	X	X	X										X
17	GP25-14	4	4	16:10			X			X	X	X	X										X
18	GP27-3	6	4	16:45			X			X	X	X	X										X
19	GP27-14.5	4	4	16:55			X			X	X	X	X										X
20	GP29.9	4	4	11:05			X			X	X	X	X										X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Herrera Environmental	9/7/13	8:00	Sent via Courier ⊗ Added 9/13/13 .DB (STA)
Received					
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date					Chromatograms with final report <input type="checkbox"/>



Chain of Custody

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

Laboratory Number: **09-048**

Turnaround Request (in working days)

- Same Day 1 Day
- 2 Days 3 Days
- Standard (7 Days) (TPH analysis 5 Days)
- _____ (other)

Company: Herrera Environmental

Project Number: 09-04193-017/003-001

Project Name: 1/SC

Project Manager: Peter Towise

Sampled by: Bruce Carpenter

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Number of Containers								% Moisture				
						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
21	GP30-1	9/5/13	13:15	S	6	X					X	X						X
22	GP30-14	↓	13:25		4						X	X						X
23	GP31-3	9/6/13	9:00		6	X					X	X						X
24	GP31-16	↓	9:20		4						X	X						X
25	GP32-3	↓	8:10		6	X					X	X						X
26	GP32-16.5	↓	8:20		4						X	X						X
27	GP34-3	9/5/13	12:05		6	X					X	X						X
28	GP34-13	↓	12:15		4						X	X						X

Signature	Company	Date	Time	Comments/Special Instructions
	Herrera Environmental	9/7/13	8:00	Send via Courier
	Site	9/13	9:55	Added 9/13/13. DB (STA)
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date				Chromatograms with final report <input type="checkbox"/>



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

September 27, 2013

Peter Jowise
Herrera Environmental Consultants, Inc.
2200 6th Avenue, Suite 1100
Seattle, WA 98121

Re: Analytical Data for Project 09-04193-017/003-001
Laboratory Reference No. 1309-205

Dear Peter:

Enclosed are the analytical results and associated quality control data for samples submitted on September 24, 2013.

Please note that the data for the added Diesel analysis will follow in the final report.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures

Date of Report: September 27, 2013
Samples Submitted: September 24, 2013
Laboratory Reference: 1309-205
Project: 09-04193-017/003-001

Case Narrative

Samples were collected on September 23, 2013 and received by the laboratory on September 24, 2013. 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.

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

NWTPH-Dx

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	09-205-10					
Diesel Range Organics	ND	0.26	NWTPH-Dx	9-25-13	9-25-13	
Lube Oil Range Organics	ND	0.41	NWTPH-Dx	9-25-13	9-25-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>80</i>	<i>50-150</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0925W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	9-25-13	9-25-13	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	9-25-13	9-25-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>81</i>	<i>50-150</i>				

Analyte	Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE						
Laboratory ID:	09-205-10					
	ORIG	DUP				
Diesel Range Organics	ND	ND			NA	NA
Lube Oil Range Organics	ND	ND			NA	NA
<i>Surrogate:</i>						
<i>o-Terphenyl</i>			<i>80</i>	<i>75</i>	<i>50-150</i>	

Date of Report: September 27, 2013
Samples Submitted: September 24, 2013
Laboratory Reference: 1309-205
Project: 09-04193-017/003-001

NWTPH-Dx

Date of Report: September 27, 2013
Samples Submitted: September 24, 2013
Laboratory Reference: 1309-205
Project: 09-04193-017/003-001

**NWTPH-Dx
QUALITY CONTROL**

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW1-D					
Laboratory ID:	09-205-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	0.21	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW1-D					
Laboratory ID:	09-205-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	2.7	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>93</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW1-S					
Laboratory ID:	09-205-02					
Dichlorodifluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	100	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	26	20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	21	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	150	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW1-S					
Laboratory ID:	09-205-02					
1,1,2-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	3900	100	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	140	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	170	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-2					
Laboratory ID:	09-205-03					
Dichlorodifluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	100	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	150	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-2					
Laboratory ID:	09-205-03					
1,1,2-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	3000	100	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	140	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	170	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-3					
Laboratory ID:	09-205-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloromethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromomethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloroethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Iodomethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-27-13	9-27-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloroform	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Trichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Dibromomethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-27-13	9-27-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-3					
Laboratory ID:	09-205-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-27-13	9-27-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromoform	ND	1.3	EPA 8260C	9-27-13	9-27-13	
Bromobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	9-27-13	9-27-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2,3-Trichlorobenzene	ND	0.25	EPA 8260C	9-27-13	9-27-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>100</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>103</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>97</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-4					
Laboratory ID:	09-205-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	1.8	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-4					
Laboratory ID:	09-205-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	66	5.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-5					
Laboratory ID:	09-205-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	0.80	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-5					
Laboratory ID:	09-205-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	1.7	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>108</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>105</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-6					
Laboratory ID:	09-205-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-6					
Laboratory ID:	09-205-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>109</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>107</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-7					
Laboratory ID:	09-205-08					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-7					
Laboratory ID:	09-205-08					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>111</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>106</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>94</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-8					
Laboratory ID:	09-205-09					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	5.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	5.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	5.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	5.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	1.9	1.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	7.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-8					
Laboratory ID:	09-205-09					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	98	5.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	7.0	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	8.5	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	1.6	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>99</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	09-205-10					
Dichlorodifluoromethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	10	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	10	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	10	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	10	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	16	2.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	15	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	09-205-10					
1,1,2-Trichloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	230	10	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	14	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	2.0	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	17	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	2.0	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	3.1	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>101</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>88</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-10					
Laboratory ID:	09-205-11					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-10					
Laboratory ID:	09-205-11					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>103</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>88</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C

page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-11					
Laboratory ID:	09-205-12					
Dichlorodifluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	100	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	100	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	150	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

HALOGENATED VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-11					
Laboratory ID:	09-205-12					
1,1,2-Trichloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	3000	100	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	140	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	170	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>101</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>98</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>87</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0926W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloromethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Iodomethane	ND	1.0	EPA 8260C	9-26-13	9-26-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-26-13	9-26-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chloroform	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Trichloroethene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromomethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chloroethyl Vinyl Ether	ND	1.5	EPA 8260C	9-26-13	9-26-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-26-13	9-26-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0926W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-26-13	9-26-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Bromoform	ND	1.4	EPA 8260C	9-26-13	9-26-13	
Bromobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-26-13	9-26-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2-Dibromo-3-chloropropane	ND	1.7	EPA 8260C	9-26-13	9-26-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-26-13	9-26-13	
1,2,3-Trichlorobenzene	ND	0.31	EPA 8260C	9-26-13	9-26-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>107</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>108</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0927W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloromethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Vinyl Chloride	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromomethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloroethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Iodomethane	ND	1.0	EPA 8260C	9-27-13	9-27-13	
Methylene Chloride	ND	1.0	EPA 8260C	9-27-13	9-27-13	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromochloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chloroform	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Trichloroethene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Dibromomethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromodichloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	9-27-13	9-27-13	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-27-13	9-27-13	

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0927W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Tetrachloroethene	ND	1.0	EPA 8260C	9-27-13	9-27-13	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Dibromochloromethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Chlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Bromoform	ND	1.3	EPA 8260C	9-27-13	9-27-13	
Bromobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-27-13	9-27-13	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	9-27-13	9-27-13	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-27-13	9-27-13	
1,2,3-Trichlorobenzene	ND	0.25	EPA 8260C	9-27-13	9-27-13	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>98</i>	<i>62-122</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>70-120</i>				
<i>4-Bromofluorobenzene</i>	<i>98</i>	<i>71-120</i>				

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0926W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	11.9	11.7	10.0	10.0	119	117	63-142	2	17	
Benzene	11.4	11.4	10.0	10.0	114	114	78-125	0	15	
Trichloroethene	10.5	10.0	10.0	10.0	105	100	80-125	5	15	
Toluene	10.6	10.2	10.0	10.0	106	102	80-125	4	15	
Chlorobenzene	10.9	10.5	10.0	10.0	109	105	80-140	4	15	
<i>Surrogate:</i>										
Dibromofluoromethane					102	108	62-122			
Toluene-d8					104	104	70-120			
4-Bromofluorobenzene					93	95	71-120			

Date of Report: September 27, 2013
 Samples Submitted: September 24, 2013
 Laboratory Reference: 1309-205
 Project: 09-04193-017/003-001

**HALOGENATED VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD		Flags
					Recovery	Limits	RPD	Limit		
SPIKE BLANKS										
Laboratory ID:	SB0927W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	10.6	10.4	10.0	10.0	106	104	63-142	2	17	
Benzene	10.2	10.3	10.0	10.0	102	103	78-125	1	15	
Trichloroethene	10.0	9.80	10.0	10.0	100	98	80-125	2	15	
Toluene	10.1	9.87	10.0	10.0	101	99	80-125	2	15	
Chlorobenzene	10.9	10.8	10.0	10.0	109	108	80-140	1	15	
<i>Surrogate:</i>										
Dibromofluoromethane					95	97	62-122			
Toluene-d8					101	100	70-120			
4-Bromofluorobenzene					96	98	71-120			



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-naphthalene) 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



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

Chain of Custody

Laboratory Number: 09-205

Company: Herrera Environmental
 Project Number: 09-04193-017/003-001
 Project Name: YSC
 Project Manager: Peter Jowise
 Sampled by: Barb Carpenter / George Ifthner

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

Lab ID	Sample Identification		Time Sampled		Matrix	Number of Containers	Analytical Parameters										Comments/Special Instructions		
	Date Sampled	Time Sampled	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 PCRA Metals/ MTCA Metals (circle one)	TCLP Metals
1	9/23/13	1220			W	3													
2		1110				3	X	X	X	X	X	X	X	X	X	X	X	X	X
3		1330				3	X	X	X	X	X	X	X	X	X	X	X	X	X
4		1840				3	X	X	X	X	X	X	X	X	X	X	X	X	X
5		1725				3	X	X	X	X	X	X	X	X	X	X	X	X	X
6		1800				3	X	X	X	X	X	X	X	X	X	X	X	X	X
7		1715				3	X	X	X	X	X	X	X	X	X	X	X	X	X
8		1535				3	X	X	X	X	X	X	X	X	X	X	X	X	X
9		1630				3	X	X	X	X	X	X	X	X	X	X	X	X	X
10		1240				5	X	X	X	X	X	X	X	X	X	X	X	X	X
Relinquished	Signature: <u>[Signature]</u>		Company: <u>Herrera Environmental</u>	Date: <u>9/24/13</u>	Time: <u>830</u>	Comments/Special Instructions: <u>Sent via courier</u> <u>Added 9/25/13 DB (STA)</u>													
Received	Signature: <u>[Signature]</u>		Company: <u>Site Env</u>	Date: <u>9/24/13</u>	Time: <u>930</u>														
Relinquished																			
Received																			
Relinquished																			
Received																			
Reviewed/Date	Reviewed/Date		Chromatograms with final report <input type="checkbox"/>																

Chain of Custody

Laboratory Number: **09-205**

Turnaround Request
(in working days)

- (Check One)
- Same Day
 - 1 Day
 - 2 Days
 - 3 Days
 - Standard (7 Days)
(TPH analysis 5 Days)

Standard TAT
(other)

Company: Herrera Environmental
 Project Number: 09-04193-017/003-001
 Project Name: YSC
 Project Manager: Peter Iowise
 Sampled by: Boce Carpenter / George Ithier

Number of Containers

Date Sampled	Time Sampled	Matrix
9/23/13	1610	W
↓	1350	↓

Lab ID	Sample Identification
11	MW-10
12	MW-11

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/ MTCAs Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
					X	X									

Signature	Company	Date	Time	Comments/Special Instructions
	Herrera Environmental	9/24/13	830	Send via courier
	ONSITE ENV	9/24/13	930	

