



A Report Prepared for:
Bethel GRF2, LLC
c/o: Gerrity Group, LLC
973 Lomas Santa Fe Drive
Solana Beach, California

CLEANUP ACTION PLAN

**AMY'S CLEANERS
BETHEL JUNCTION SHOPPING CENTER
PORT ORCHARD, WASHINGTON**

**Site Identification Number: FS 28514228
Cleanup Site ID Number: 970
VCP Number: NW0568**

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LIST OF ACRONYMS AND ABBREVIATIONS

APS	Applied Professional Services, Inc.
ARI	Analytical Resources, Inc.
bgs	Below Ground Surface
BTOC	Below Top of Casing
CAP	Cleanup Action Plan
Cis-1,2-DCE	cis-1,2-Dichloroethene
cm/sec	Centimeters Per Second
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
CUL	Cleanup Level
CZ	Capture Zone
DCU	Dry Cleaning Unit
DO	Dissolved Oxygen
EBI	EnviroBusiness, Inc.
Ecology	State of Washington Department of Ecology
EDR	Environmental Data Resources
EPA	United States Environmental Protection Agency
ESC	ESC Lab Sciences
ESN	ESN Northwest Environmental Services
Fremont	Fremont Analytical Services, Inc.
FS	Feasibility Study
GPR	Ground Penetrating Radar
HVOCs	Halogenated Volatile Organic Compounds
in.w.c.	Inches of Water Column
J&E	Johnson & Ettinger
lb/yr	Pounds Per Year
mg/kg	Milligrams Per Kilogram
ml/min	Milliliters Per Minute
MRL	Method Reporting Limit
MTC	Materials Testing & Consulting, Inc.

MTCA	Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
NFA	No Further Action
NTU	Nephelometric Turbidity Units
ORP	Oxidation-Reduction Potential
PCE	Tetrachloroethene
PES	PES Environmental, Inc.
PID	Photo-ionization Detector
ppm	Parts Per Million
PQL	Practical Quantitation Limit
PSCAA	Puget Sound Clean Air Agency
PVC	Polyvinyl Chloride
Scfm	Standard cubic feet per minute
SIM	Selected Ion Monitoring
SVE	Soil Vapor Extraction
RI	Remedial Investigation
TCE	Trichloroethene
TEE	Terrestrial Ecological Evaluation
USGS	United States Geological Society
$\mu\text{g}/\text{m}^3$	Micrograms Per Cubic Meter
$\mu\text{g}/\text{L}$	Micrograms Per Liter
VC	Vinyl Chloride
VCP	Voluntary Cleanup Program
VOA	Volatile Organic Analysis
VOCs	Volatile Organic Compounds
WAC	Washington Administrative Code

1.0 INTRODUCTION

This Cleanup Action Plan (CAP) has been prepared on behalf of Bethel GRF2, LLC and its affiliate Gerrity Retail Fund 2, Inc. (collectively, Gerrity) for the Site located at 3377 Bethel Road SE, Port Orchard, Washington (Property; Plate 1). The Site is within Bethel Junction Shopping Center.

1.1 Definition of “Site”

For the purpose of this CAP, the word “Site” will refer to an area where contamination released at the Property is located, consistent with the definition of “site” or “facility” in the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA, Chapter 173-340 of the Washington Administrative Code [WAC]). The word “Property” will refer to the area within the property boundary (Plate 2).

1.2 Purpose

The objective of this CAP is to present a summary of previous environmental investigations and provide the details of the proposed cleanup action and confirmation monitoring. The CAP is intended to provide sufficient information to determine whether existing conditions at the Site have been adequately characterized and to determine whether the proposed cleanup action will comply with the requirements of a remedy under WAC 173-340-360.

The Site was entered into Ecology’s Voluntary Cleanup Program (VCP) in October 2000 and Ecology determined that as long as the requirements of a restrictive covenant placed on the property in 2004 continue to be met, no additional cleanup actions are required by the property owner and issued a determination of No Further Action (NFA) in 2005 (see Section 2.3). Although the current status of the cleanup is acceptable to Ecology, and risks to human health and the environment are being appropriately managed, the current property owner conducted additional Site investigations and an evaluation and design of additional cleanup actions in order to reduce contaminant levels to below the applicable cleanup levels (CULs) and provide a basis for removing the restrictive covenant and requesting an unrestricted NFA from Ecology.

This CAP will be submitted to Ecology for review under Ecology’s VCP with a request for Ecology’s opinion that the actions described meet the substantive requirements contained in MTCA and its implementing regulations for characterizing and addressing the contamination at the Site.

1.3 Contact Information

The primary points of contact related to the Site include:

Property Owner: Bethel GRF2, LLC
Environmental Consultant: PES Environmental, Inc.
Ecology Site Manager: Unassigned

1.4 Report Organization

The CAP is organized into 10 sections as follows:

Section 1 – Introduction: Defines the Site, describes the purpose of the CAP, provides contact information, and presents the organization of this report.

Section 2 – Site Background: Provides a summary of the Site location, history and operations, and Site regulatory history.

Section 3 – Environmental Setting: Summarizes the hydrology and geology of the Site and the surrounding region.

Section 4 – Site Investigations and Remedial Design Investigations: Describes the previous investigations conducted at the Site by the previous owner and current property owner as well as the soil vapor extraction system pilot test.

Section 5 – Conceptual Site Model: Provides a summary of the potential sources, transport mechanisms, exposure media and pathways, and receptors of contamination.

Section 6 – Nature and Extent of Contamination: Presents the cleanup levels and describes the nature and extent of soil and groundwater contamination.

Section 7 – Cleanup Action Alternatives and Analysis: Describes the evaluation of potential cleanup action alternatives.

Section 8 – Description of Selected Remedy: Describes the selected remedy, the restoration timeframe, and the performance and compliance monitoring.

Section 9 – Reporting and Schedule: Provides a description of the reports to be produced during the cleanup action and a schedule for implementation and reporting of cleanup action.

Section 10 – References: Lists the sources of information referenced in the document.

2.0 SITE BACKGROUND

This section summarizes the Site location and description and presents the regulatory history of the Site.

2.1 Site Location and Description

The property is located within a mixed commercial/residential neighborhood, located in the eastern part of Port Orchard, Kitsap County, Washington. Bethel Junction shopping center (Property) encompasses approximately 9.24 acres in the northwest quarter (NW¼) of the northwest quarter (NW¼) of Section 01 (S01), Township 23 North (T23N), Range 1 East (R1E). The City of Port Orchard identifies zoning at the property as “commercial”. The surrounding area consists primarily of commercial parcels along Bethel Road SE and SE Lund Avenue; some residential parcels are present east and northeast of the Site. The Property is comprised of Kitsap County Assessor’s Parcel Number 012301-2-111-2009. Bethel Junction shopping center includes three buildings divided into tenant spaces.

According to the United States Geological Survey (USGS) *Bremerton West 7.5-minute Series Topographic Map* dated 1981 (photorevised 1953), the site is situated at an elevation between approximately 280 and 300 feet above mean sea level. The general topography of the Site vicinity slopes downward toward the west.

2.2 Site Background and History

The Property was residential from at least 1938 until it was developed into the Bethel Junction shopping center in 1989. Since the shopping center was constructed, uses include a variety of commercial businesses including a sporting goods store, a grocery store, general retail stores, beauty salons, and restaurants. Gerrity does not plan any substantive changes in the uses of the property. Amy’s Cleaners has operated in its current commercial space (Suite #105) since 1989. The original dry cleaner unit (DCU), operated between 1989 and 2002, used tetrachloroethene (PCE) dry cleaning solvent. In 2002, the PCE-based DCU was replaced by a new DCU that utilizes a petroleum hydrocarbon solvent. Big O Tires, a vehicle service station, is located on the Property and has been in operation since 1989. A limited subsurface investigation was performed in 2010 to evaluate the hydraulic lifts. The investigation did not identify any petroleum hydrocarbons in soil or groundwater at the facility.

2.3 Regulatory History

The first environmental investigation of the Site was conducted in July 2000 by the previous owner of the Property. Four environmental reports were submitted to Ecology including two *Limited Subsurface Investigations* (EBI, 2000 and 2001a), a *Draft Supplemental Subsurface Investigation Report* (EBI, 2001b), and a *Supplemental Subsurface Investigation Report* (EBI, 2003). The Site was entered into Ecology’s VCP in October 2000. Ecology assigned Facility and Site Identification Number “FS 28514228,” Cleanup Site ID Number 970, and VCP Number “NW0568” to the Site.

Based on the results of the previous investigations, the prior owner of Bethel Junction shopping center determined that the subsurface contamination does not present a risk to human health or

the environment as long as it remains undisturbed beneath the concrete floor and in accordance with a restrictive covenant placed on the property in 2004. The restrictive covenant pertains to the PCE-contaminated soil located beneath Suite #105 and restricts any activities that may result in the release or exposure to the environment of the contaminated soil or that could create a new exposure pathway (Appendix A). This information was submitted to Ecology, which issued a letter in 2005 determining that no further action was required (Ecology, 2005). Ecology performed Periodic Reviews in 2010 and 2016 that indicated: (1) the cleanup actions completed at the Site appear to be protective of human health and the environment, (2) soil cleanup levels have not been met but that the cleanup action complies with cleanup standards since the long-term integrity of the containment system is ensured, and (3) the Restrictive Covenant continues to be effective in protecting public health and the environment. Ecology determined that as long as the requirements of the Restrictive Covenant continue to be met, no additional cleanup actions are required by the property owner (Ecology, 2010 and 2016).

Although the current status of the cleanup is acceptable to Ecology, and risks to human health and the environment are being appropriately managed, the current property owner has conducted the additional Site investigations and evaluation and design of the additional cleanup actions described in this CAP in order to reduce contaminant levels to below the applicable CULs and provide a basis for removing the restrictive covenant and requesting an unrestricted NFA from Ecology.

3.0 ENVIRONMENTAL SETTING

This section summarizes the regional and local geology and hydrogeological conditions at the Site. Site-specific geological and hydrogeological information is available from subsurface investigations related to Amy's Cleaners.

3.1 Physical Setting

The Property is located in the central portion of the Puget Sound Lowland, a topographic low between the Cascade Range and the Olympic Mountains. Alluvial valleys and plains, and glacially formed or modified hills and ridges dominate the lowland. The Property lies on a peninsula bounded to the west by Sinclair Inlet and to the east by Puget Sound.

3.2 Climate

Puget Sound has a temperate marine climate, with air masses originating over the Pacific Ocean strongly affecting the climate. The climate is generally overcast, cool, damp, and mild during the autumn, winter, and spring, and warm and dry during the summer. The annual precipitation ranges from about 30 to over 60 inches in the lowland.

The average annual precipitation in the vicinity of the Property is about 45 inches, with approximately 85 percent of it falling between October and April. The prevailing wind direction for most of the year is from the south southwest. The average monthly maximum temperature ranges from a low of 45 degrees Fahrenheit in December to a high of 77 degrees in August. Monthly minimum temperature averages vary from a low of 35 degrees in December to a high of 54 degrees in August.

3.3 Regional and Site Geology

3.3.1 Regional Geology

The Puget Sound Region is underlain by a thick accumulation of Quaternary sediment of alluvial and glacial origin. The shallowest sediments consist primarily of inter-layered and/or sequential river, lake, fan, and terrace deposits of sand, silt, and clay deposited on top of Pleistocene glacial deposits. The uplands in the Puget Sound Lowland are thought to have been largely formed during the last glacial advance between 14,000 and 18,000 years ago (Jones, 1999; Vaccaro and others, 1998), with a complete glacial sequence (from youngest to oldest) consisting of recessional deposits (outwash and lake deposits), ice-contact deposits, ablation till, till, advance outwash, glacial marine deposits, and glacial lake deposits. Older interglacial and glacial deposits are found below the lake deposits. Repeated deposition and erosion during a series of continental and alpine glaciations have shaped the topographic features in the lowland (Vaccaro, 1998; Jones, 1999).

Welch et al (2014) shows glacial till mapped at the surface at and near the Property, with recessional outwash present to the east of the Property. An accompanying cross section near the Property indicates a glacial till thickness of approximately 40 feet, underlain by advance outwash (approximately 80 feet thick), glacial lacustrine deposits (approximately 80 feet), and a thick sequence of older inter-layered sand and gravel, silt, and clay. The thickness of the

unconsolidated deposits near the Property is reported to be approximately 900 feet (Jones, 1999) to 1,300 feet (Welch et al, 2014). Welch et al (2014) reports the nearest extent of an east-west trending fault zone to be approximately 2.7 miles north of the Property.

3.3.2 Site Geology

The geologic materials encountered during drilling and installation of the borings and monitoring wells at the Property included sand, silty sand with gravel, silty sand, sandy silt, and sandy clay. Sand was found in most borings between the bottom of the asphalt or concrete and a maximum depth of 11 feet below ground surface (bgs). The sand locally contained layers of crushed rock, layers of sandy silt or silt, gravel, wood, and carbonized organics. Given the development at the Property, it is likely that the upper portion of the sand could represent fill or native sand re-worked during construction activities. Silty sand was found in every boring drilled at the Property and is the primary lithology encountered during the subsurface investigations. The silty sand was generally brown at shallower depths grading to gray or gray-blue with depth and occasionally contained scattered gravel, roots, and thin gravel, sand, sandy silt, or silt lenses. The silty sand at the base of many of the borings appeared to be consistent with glacial till. Appendix B provides the logs for the borings drilled at the Property, and Plates 3 and 4 present a geologic cross section aligned north-south through the Amy's Cleaners suite.

3.4 Regional and Site Hydrogeology

3.4.1 Regional Hydrogeology

Groundwater flows regionally from topographic highs to topographic lows, with recharge in unpaved areas and discharge to streams, lakes, or saltwater bodies (Vaccaro and others, 1998). Welch et al (2014) identify four aquifers beneath the Property that are sandwiched between five low-permeability confining layers. The uppermost aquifer is the widely-used advance outwash aquifer, consisting of sand, sand and gravel, and some lenses of silt and clay. The mostly-unconfined advance outwash aquifer lies between glacial till on top and the lacustrine deposits below and averages 82 feet thick. Deeper aquifers include the extensive, widely-used, mostly-confined sea level aquifer, the rarely-used, confined glaciomarine aquifer, and the extensive, confined deep aquifer. The groundwater flow direction in the vicinity of the Property in the two aquifers with enough wells to allow contouring of the potentiometric surface (advance outwash and sea level aquifers) is to northwest toward Sinclair Inlet (Welch et al, 2014).

A search of Ecology's water well log database found logs for 55 existing water wells that are located within a 1-mile radius of the Property as follows:

1. Seven wells are identified as Annapolis Water District wells. One Annapolis Water District log records no well screen or perforations and includes a note that the well was capped and left for future drilling. The remaining Annapolis Water District wells are screened or perforated at depths as shallow as 261 to 301 feet bgs and as deep as 1,242 to 1,513 feet bgs, with static groundwater levels ranging from 87 to 264 feet bgs. The Annapolis Water District became the West Sound Utility District in 2007. The West Sound Utility District includes the Property, and the district wells included in Ecology's water well log database only include a portion of the district's wells.

According to the district website (<http://www.wsud.us>), the district has 17 wells ranging in depth from 234 to 1,525 feet deep. Thirteen of the wells are active, two are emergency wells, and two have been drilled but not yet developed.

2. One well is identified as a Kitsap County Public Utility District well that is screened from 870 to 880 feet bgs. The static water level of the well is 241 feet bgs.
3. Two wells correspond to City of Port Orchard wells. One log identifies the well as 601 feet deep, with a static water level of 104 feet bgs. The other log records well perforations from 478 to 625 feet bgs and a static water level of 126 feet bgs.
4. Forty-five logs are identified as private domestic wells. Only one well sources water at less than 35 feet bgs; it is recorded as a 3-foot wide, 12-foot deep, 1930s dug well with cement tile casing and a static water level of 3 feet bgs. The well is located approximately 0.8 miles northwest of the Property. Three of the private domestic wells are screened between 35 and 60 feet bgs, with static water levels between 14 and 26 feet bgs. Sixteen of the wells have screens/perforations between 55 and 100 feet bgs and have static water levels ranging from 10 to 65 feet bgs. Of the 20 domestic wells with screen intervals above 100 feet bgs, only two are located within 0.5 miles of the Property. The closest shallow domestic well to the Property is a 6-inch diameter well screened from 38 to 43 feet bgs with a static water level of 14 feet below the top of the well. This well is located approximately 0.3 to 0.5 miles southwest of the Property (SE ¼, NE ¼, S02, T23N, R1E). The next closest shallow domestic well to the Property is a 6-inch diameter well screened from 74 to 79 feet bgs with a static water level of 27 feet below the top of the well. This well is located approximately 0.5 miles southeast of the Property (NE ¼, SW ¼, S01, T23N, R1E).

Fifteen of the wells have screens/perforations between 101 and 138 feet bgs and have static water levels ranging from 24 to 123 feet bgs. Six of the wells have screens/perforations between 150 and 189 feet bgs, with static water levels ranging from 33 to 153 feet bgs (the second shallowest static water level from this group is 95 feet bgs). Two domestic water wells are screened between 311 and 368 feet bgs and have static water levels of 147 and 155 feet bgs.

3.4.2 Site Hydrogeology

The maximum depth of the subsurface investigations conducted at the Property was 27 feet bgs. Although thin zones of wet soil were noted in most borings between 8 and 14 feet bgs, groundwater was not found in all of the borings with wet soil. In the temporary wells with water at Site, the depth to groundwater ranged from 7.25 to 25.5 feet bgs. In the groundwater wells installed at the Big O Tires parcel, the depth to groundwater was between 2 and 3 feet bgs. Based on the lack of groundwater in many of the borings, the varying depths of groundwater in the borings that encountered it, and the low permeability of the silty sand, it is likely that groundwater in the silty sand unit exists in discontinuous perched lenses that are not laterally extensive.

4.0 SITE INVESTIGATIONS AND REMEDIAL DESIGN ACTIVITIES

This section provides a summary of environmental investigations and remedial design activities conducted at the Site.

4.1 Remedial Investigation Activities – Previous Owner

4.1.1 EnviroBusiness, Inc. (EBI) – Subsurface Investigations

The EBI subsurface investigations were documented in reports previously reviewed by Ecology (EBI, 2000, 2001a, 2001b, and 2003) and are briefly summarized in this section. The sampling locations are presented on Plate 3. The laboratory analytical reports and/or data tables were included with the previously submitted reports. EBI conducted an investigation in July 2000 with the installation of borings B-1, located near the DCU, and B-2 and B-3, located outside of Amy's Cleaners suite, to the south. Two soil samples were collected from B-1 at depths of 2 and 3 feet bgs and six soil samples were collected from B-2 and B-3 (three samples per boring) at depths of 4, 8, and 12 feet bgs. The samples were analyzed for volatile organic compounds (VOCs) using United States Environmental Protection Agency (EPA) Method 8260. One soil sample collected at a depth of 2 feet bgs (B1-2-S1) contained a PCE concentration [0.59 milligrams per kilogram (mg/kg)], above the then current Ecology MTCA Method A Cleanup Level (CUL) of 0.5 mg/kg. Naphthalene was also detected in B1-2-S1 at a concentration of 0.220 mg/kg, significantly below the MTCA Method A CUL of 5.0 mg/kg. Groundwater was not encountered during this investigation, up to 12 feet bgs.

EBI conducted an additional investigation in November 2000 with the installation of borings AC-SB4, located near B-1 and the DCU, AC-SB-5, located inside the Amy's Cleaners suite near the back door, and AC-SB6, located outside of the Amy's Cleaners suite, to the south and near B-2. Four soil samples were collected from AC-SB4 at 3, 4.5, 8 and 11 feet bgs, two soil samples were collected from AC-SB5 at 3 and 5 feet bgs, and two soil samples were collected from AC-SB6 at 3 and 6 feet bgs. The samples were analyzed for halogenated volatile organic compounds (HVOCs) and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021. The analytical results of the soil samples indicated detectable concentrations of cis-1,2-dichloroethene (cis-1,2-DCE), trichloroethene (TCE), chlorobenzene, PCE, dichlorobenzene, ethyl benzene, xylenes, and toluene in the samples collected from AC-SB-4 and detectable concentrations of cis-1,2-DCE and toluene in the samples collected from AC-SB-5. There were no detections above the method reporting limits in AC-SB6 located behind the suite. Only PCE at a depth of 3 feet bgs in AC-SB4 contained a concentration above the then current MTCA Method A CUL of 0.5 mg/kg (PCE at 2.3 mg/kg). Based on a comparison of the historical data to current MTCA Method A and Method B CULs, only TCE in AC-SB4 at a depth of 3 feet bgs exceeded the current CULs. Groundwater was not encountered during this investigation, up to 12 feet bgs. A copy of the analytical data summary table is included in Appendix A.

Based on Ecology's review of the July and November 2000 investigation results and at Ecology's request (for an assessment to define the vertical extent of contamination), EBI advanced two additional soil borings in October 2001 to assess groundwater conditions in the vicinity of the Amy's Cleaners suite. Boring WB-1 was advanced on the north side of the suite to a depth of 26.6 feet bgs. Soil samples were not collected but groundwater was encountered at

25.6 feet bgs and sampled. Boring WB-2 was advanced on the south side of the suite to a depth of 27.1 feet bgs. Groundwater was not encountered in WB-2 and no soil or groundwater samples were collected. The groundwater sample from WB-1 was submitted to ESN Seattle Chemistry Laboratory for analysis with EPA Method 8021B for HVOCs and BTEX. Per EBI's report text, "no detectable levels of the target compounds were identified." The laboratory analytical report and data tables are not available.

Based on Ecology's review of the October 2001 investigation results (which indicated that the groundwater sample from WB-1 was collected in a presumed upgradient direction from the source and that the lateral and vertical extent of contamination still needed to be assessed) and at Ecology's request, EBI advanced three additional soil borings in December 2002. Borings SB-1, SB-2, and SB-3 were advanced within the Amy's Cleaners suite and adjacent to AC-SB-4 and AC-SB-5. Groundwater was not encountered during this investigation, up to 20 feet bgs. The deepest soil samples (20 feet bgs) were analyzed for VOCs using EPA Method 8260 and did not contain detectable concentrations of VOCs.

As described in Section 2.3, based on the information contained in these environmental investigations conducted by the previous owner, the Site was entered into Ecology's VCP in October 2000. The previous owner concluded that the subsurface contamination does not present a risk to human health or the environment as long as it remains undisturbed beneath the concrete floor and in accordance with a restrictive covenant which was placed on the property in 2004. Ecology concurred with this conclusion and issued an NFA determination in 2005 (Ecology, 2005). Ecology subsequently performed Periodic Reviews in 2010 and 2016 that indicated that the Restrictive Covenant continues to be in effect and that no additional cleanup actions are required to protect public health and the environment.

4.1.2 Landau Associates – Vapor Intrusion Assessment – October 2013

A focused vapor intrusion assessment was conducted by Landau Associates in October 2013 (Landau, 2014). This assessment included sampling and analysis of three sub-slab soil gas samples (VP-1, VP-2, and VP-3). Vapor point VP-1 was located near soil boring AC-SB4 (location of previously identified elevated PCE in soil), VP-2 and VP-3 were installed to evaluate the potential lateral extent of contaminants. The sampling locations are shown on Plate 3. The sub-slab samples were collected by installed temporary vapor sampling ports through the floor slab. The probes were allowed to equilibrate for approximately 30 minutes and then purged to evacuate at least 3 to 4 purge volumes from the probes and tubing. The samples were collected in 1-liter Tedlar bags using a peristaltic pump. The samples were submitted to Fremont Analytical, Inc. (Fremont), in Seattle, Washington, for analysis of select HVOCs using EPA Method TO-15. The PCE and TCE concentrations exceeded the then current MTCA Method B soil gas screening levels of 320 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 12 $\mu\text{g}/\text{m}^3$, respectively, as well as the now current MTCA Method B soil gas screening levels of 96 $\mu\text{g}/\text{m}^3$ and 3.7 $\mu\text{g}/\text{m}^3$, respectively. The PCE concentrations in VP-1, VP-2, and VP-3 were 2,590, 5,400, and 5,240 $\mu\text{g}/\text{m}^3$, respectively. TCE was detected in VP-1, VP-2, and VP-3 at concentrations of 976 $\mu\text{g}/\text{m}^3$ (estimated as the concentration was above the quantitation range), 932, and 721 $\mu\text{g}/\text{m}^3$, respectively.

Because the concentrations of PCE and TCE exceeded calculated screening levels, additional assessment including indoor air sampling was conducted to further evaluate the potential for vapor intrusion into the tenant space. Two indoor air samples (ADC-Indoor-1 and ADC-Indoor-2) were collected adjacent to VP-1 and VP-2 within the Amy's Cleaners suite and one ambient air sample was collected on the upwind side of the roof. The air samples were collected in 6-Liter summa canisters over an 8-hour time period. The samples were submitted to Fremont for analysis of select HVOCs using EPA Method TO-15. PCE (up to $4.35 \mu\text{g}/\text{m}^3$) and TCE (up to $7.66 \mu\text{g}/\text{m}^3$) were detected in the indoor air samples and $4.53 \mu\text{g}/\text{m}^3$ and $8.20 \mu\text{g}/\text{m}^3$ in the outdoor samples. The uncorrected TCE concentration exceeded the Method B cleanup level for unrestricted land use of $0.37 \mu\text{g}/\text{m}^3$ and the uncorrected PCE concentrations were below the Method B cleanup level for unrestricted land use of $9.6 \mu\text{g}/\text{m}^3$ for indoor air. However, after correcting for detected background concentrations, Landau reported that the indoor air detections were below the Method B levels and that there was no evidence of vapor intrusion under normal operating site conditions (i.e., HVAC system on and access doors closed). The sampling locations figure and data tables are included in Appendix A.

4.2 Remedial Investigation Activities – Current Property Owner

4.2.1 PES Environmental, Inc. – Vapor Investigation of Suite #103 – May 2015

As part of the investigation of the contamination associated with the Amy's Cleaners suite (Suite #105), PES evaluated conditions within the adjacent vacant suite (Suite #103) by collecting one indoor air sample, one ambient (background) air sample, and one sub-slab soil gas sample (PES, 2015a). The purpose of this sampling was to confirm that the soil contamination beneath the Amy's Cleaners suite did not present an unacceptable health risk to future occupants of Suite #103.

4.2.1.1 Field Activities

Indoor Air Sampling. PES collected one indoor air sample (Indoor_Air_052215) from within Suite #103 and one ambient air sample (Outdoor_Air_052215) on the roof of the Big Lots store located upwind of the suite. Sampling procedures and methods were performed consistent with Ecology's "*Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*" (Ecology, 2009). The samples were collected over an 8-hour time period on May 22, 2015. The air samples were submitted to Fremont for analysis of VOCs using EPA Method TO-15 with selected ion monitoring (SIM).

Sub-Slab Soil Gas Sampling. One soil gas sample (Subslab_Air_052215) was collected on May 22, 2015, at a location approximately 5 feet from the wall between the suite and Amy's Cleaners across from where the DCU is located (Plate 3). A small hole was drilled through the concrete slab using a rotohammer drill bit and then Teflon tubing was installed through the hole into the soil beneath the slab. The annular space between the sample tubing and concrete was sealed at the top with hydrated bentonite. Upon sealing of the surface entry points, the sampling train was connected. Leak testing of the sampling train was performed using helium as the tracer gas and a helium meter. The sub-slab sample was collected in a 6-Liter summa with the flow regulator set to fill over 70 minutes [<100 milliliters per minute (ml/min)]. The soil gas sample was submitted to Fremont for analysis of VOCs using EPA Method TO-15-SIM.

4.2.1.2 Results

PES conducted a data quality review of the investigation chemistry data consistent with EPA data review guidelines (EPA, 2008). Data completeness, holding times, laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, laboratory control samples, quantitation limits, method blanks, and trip blanks were reviewed. PES assigned the following data qualifiers, as needed:

- J qualifier: result is an estimate based on laboratory quality control results.

No data were rejected based on the data validation review, and PES judged all of the data acceptable for use. The laboratory analytical report and data validation memorandum are included in Appendix C.

Indoor Air Sampling. The results of the indoor and ambient air sampling are summarized in Table 1. A total of seven VOCs were detected in the indoor air sample, four of which (benzene, carbon tetrachloride, chloromethane, and toluene) were detected at similar concentrations in the ambient (background) sample. The other three VOCs (hexane, PCE, and TCE) were not detected in the ambient air sample. As indicated in Table 1, all of these VOC compounds are well below their associated risk-based indoor air cleanup levels for commercial site use.

Sub-Slab Soil Gas Sampling. The sub-slab soil gas sample results are summarized in Table 2. A total of 13 VOCs were detected in the sub-slab soil gas samples, generally at low levels. PCE and TCE were detected at elevated concentrations, likely associated with the adjacent Amy's Cleaners suite. To evaluate the significance of these soil gas concentrations, consistent with Ecology's vapor intrusion evaluation guidance (Ecology, 2009), PES utilized the vapor intrusion model developed by Johnson and Ettinger (J&E Model) and modified by the EPA (Environmental Quality Management, Inc., 2004) to assess vapor intrusion beneath Suite #103. The advanced version of the J&E vapor intrusion model (SG-ADV, Version 3.1; 02/04) was used to estimate the potential concentrations of the detected VOCs in indoor air within the suite. The input parameters used for the J&E Model included both conservative default values recommended by EPA and Ecology, and available site-specific values (e.g., building dimensions and floor thickness). Table 3 presents the input parameters used for the model. As can be seen in Table 2, all of the predicted indoor air concentrations are below their respective cleanup levels.

4.2.1.3 Conclusions

Based on the sampling conducted in Suite #103 on May 22, 2015, the measured concentrations of VOCs detected in indoor air were all below their respective risk-based cleanup levels. VOCs detected in the sub-slab soil gas sample beneath the suite correlated with the known contamination associated with the adjacent dry cleaner premises. However, predicted indoor air concentrations derived from the sub-slab VOC concentrations did not exceed indoor air cleanup levels.

4.2.2 PES Environmental, Inc. – Phase II Investigation – June/July 2015

The objective of the 2015 Phase II investigation was to further investigate the soil contamination around the DCU, including in the adjacent vacant Suite #103, and develop a more aggressive cleanup action that will allow for the existing restrictive covenant to be removed and an unrestricted NFA determination to be obtained (PES, 2015b).

4.2.2.1 Field Activities

Utility Location. On May 22, 2015, under subcontract to PES, Applied Professional Services, Inc. (APS), of North Bend, Washington, located the subsurface utilities around the planned drilling locations. APS used radio-frequency locating equipment to locate conductible utilities in both suites around the planned drilling locations. APS used a video camera to locate and document the integrity of the sanitary sewer pipeline within the Amy's Cleaners suite and north to the connection to the main line within the parking lot.

Soil Borings and Temporary Well Installations. Soil borings SB-7 through SB-9 were installed in Suite #103 on June 12, 2015; soil borings SB-10 through SB-13 were installed within the Amy's Cleaners suite on June 25, 2015; and soil borings SB-14 through SB-17 were installed within the Amy's Cleaners suite on July 9, 2015. The borings were installed by PES's subcontractor Environmental Services Network Northwest, Inc. (ESN) using a direct-push drilling rig. The boring locations are shown on Plate 3. More borings were installed within Suite #103 than originally planned due to the inability to drill within the boiler room in the Amy's Cleaners suite due to space limitations.

The borings were installed with a limited access rig and required concrete coring through the floor slab of each suite. Soil samples were collected during drilling of the full bore depth using 4-foot-long core barrels lined with new acetate sleeves. In all locations, the borings were advanced to the maximum depth possible with the limited access rig (11 to 16 feet bgs). PES observed the soil samples for lithologic characterization and field-screened the soil cores for volatile organics with a photo-ionization detector (PID). At least three samples were collected from each boring for analysis of VOCs using EPA Method 8260. Soil samples were collected using syringe samplers consistent with the EPA Method 5035 protocols and placed in laboratory-provided bottles preserved with methanol. Additional sample volume was collected in unpreserved glass soil sample jars for analysis of soil moisture content. Sample bottles were sealed, labeled, and placed in coolers on ice and shipped under chain-of-custody seal to Fremont.

Two soil samples from SB-7 and one soil sample each from SB-10 through SB-13 were submitted to Analytical Resources, Inc. (ARI) for grain-size analysis using sieve and hydrometer (ASTM D-421 and D-422). ARI subcontracted the analysis to Materials Testing & Consulting, Inc. (MTC).

Due to unexpectedly encountering shallow perched groundwater in SB-8, temporary wells were installed in all of the soil borings. The temporary wells were constructed with nominal 3/4-inch-diameter, flush-threaded Schedule 40 polyvinyl chloride (PVC) and a 5-foot-long well screen with 0.020-inch wide slots. The annular space around the well screen was backfilled with #2/12 silica sand. The temporary wells were allowed to stabilize for a minimum of one hour to

determine if water accumulated in the well. Wells SB-9, SB-12, and SB-14 did not accumulate any/sufficient water to purge and sample. In wells with enough water present (SB-7, SB-8, SB-10, SB-11, SB-13, SB-15, and SB-17), the wells were purged prior sampling. Samples were collected using low-flow sampling methods. A peristaltic pump was used to purge and sample the water from each well at rates less than 100 ml/min. Minimal purging was possible due to the very low re-charge rates, and the majority of the samples were effectively grab samples with elevated turbidity. New disposable polyethylene tubing (silicon tubing at the pump head) was used, with the sample intake approximately 0.5-feet above the bottom of each well screen. When possible, PES monitored pumping rates and field parameters (pH, temperature, specific conductance, dissolved oxygen [DO], and oxidation-reduction potential [ORP]) during well purging.

Upon completion of purging of each temporary well, a perched groundwater sample was collected from the discharge end of the peristaltic pump tubing. The same pump rate used at the end of well purging was used during sample collection. The volatile organic analysis (VOA) vials were filled by allowing the sample water to pour down the inside of the sample bottles without splashing directly onto the base. All sample containers were prepared and provided by the project laboratory. Following water sample collection, the sample containers were labeled for identification and immediately placed in insulated coolers containing ice. The coolers containing the samples were then delivered under chain-of-custody protocol to the laboratory.

After the temporary well was sampled, the boring was abandoned by knocking out the bottom cap of the PVC and filling the boring with bentonite as the PVC was extracted, consistent with Chapter 173-160 WAC. The top of the abandoned boring was filled with concrete. The groundwater samples were submitted to the laboratory for analysis of VOCs by EPA Method 8260.

The boring logs are provided in Appendix B.

Soil Vapor Extraction Pipe Installation in Suite #103 and Trench Soil Sampling. As discussed above, the results of PES's vapor intrusion evaluation and analysis of soil samples collected within vacant Suite #103 did not indicate a significant vapor intrusion risk. Nevertheless, in consultation with Gerrity and because the suite was vacant, it was determined that a sub-slab horizontal soil vapor extraction (SVE) system extraction pipe be installed beneath Suite #103 while it was unoccupied and prior to a new tenant occupying the suite. PES designed, coordinated, and oversaw the excavation of the trench and installation of the 4-inch diameter 0.020-inch slotted extraction pipe within the trench as shown on Plate 3. Wyser Construction Company, Inc. (Wyser), under subcontract to PES, completed the work on July 6 and 7, 2015.

The SVE trench is approximately 37 feet long, one foot wide, and four feet deep. After saw-cutting the concrete floor, Wyser utilized a vacuum truck to remove the soil. The soil was placed into a soil container and transported for disposal to the Waste Management, Inc. Greater Wenatchee Regional Landfill as non-hazardous "Contained In Soils" after receiving a "Contained In Determination" from Ecology. Approximately 6 cubic yards of soil was removed. PES collected five soil samples from the limits of the trench and submitted the samples to Fremont for select-list HVOC analysis using EPA Method 8260.

The SVE pipe was installed with a 2-foot bed of clean sand granular fill, capped with 15-millimeter visqueen, topped with general fill, compacted and completed at the surface with re-enforced concrete. The pipe was terminated at the surface directly south of the edge of the sidewalk behind the suite, inside an 8-inch diameter well monument.

Limited Building Inspections. PES conducted a limited inspection of Suite #103 on June 12, 2015 concurrent with the installation of the soil borings in the suite. The purpose of the inspection was to observe existing building conditions to evaluate whether there were potential vapor intrusion pathways either through the floor slab or between Suite #103 and the adjacent Amy's Cleaners suite. In conjunction with the SVE piping installation on July 6, 2015, PES conducted a supplemental inspection of the portion of the concrete floor slab that was exposed during SVE trench construction.

4.2.2.2 Results

Tables 4, 5, and 6 provide the soil boring, groundwater, and trench soil sampling analytical results, respectively. Appendix B provides the boring logs, Appendix C provides the laboratory analytical reports and data validation memoranda, Appendix D provides the field sampling forms and building survey form, and the geotechnical laboratory reports are provided in Appendix E.

Sanitary Sewer. APS confirmed that the sanitary sewer pipeline, accessed from the cleanout located in the southern portion of the suite, travels north approximately 90 feet where it angles to the west and connects into a green-colored PVC pipe. It travels another 37 feet to a connection with the main line within the parking lot. Observations of the main line were not possible due to the high flow rates within the pipe. The video of the sanitary line under the Amy's Cleaners suite showed a small amount of water flowing consistently down the pipe, no obvious damage to the pipe, and there did not appear to be any low spots or sags. Joints were observed approximately every 20 feet (e.g., near the boiler room, just north of the DCU, north part of the suite); these joints had some discoloration, but there were not obvious gaps or separations in between the pipe sections. Overall, the video did not identify signs of obvious leaks. It should be noted that the floor drain near the southeast corner of the DCU was identified after the video was taken and more information regarding the floor drain is included in Section 4.2.3.1 below.

Lithology and Hydrogeology. The soil types observed during drilling to the maximum drilled depth of 16 feet bgs consisted of sand, sand with silt, silty sand, sand with gravel, sandy silt, and silt. The borings were terminated when conditions indicated that the very dense till-like layer was encountered or refusal (depths ranging from 11 to 16 feet). Evaluation of the grain-size distributions for samples collected from SB-7 and SB-10 through SB-13 indicated median hydraulic conductivities ranging from 9.8×10^{-5} to 2.2×10^{-4} cm/sec, which are within the range of silty sand hydraulic conductivities. The hydraulic conductivity calculations are included in Appendix E.

Two- to six-inch zones of wetness were encountered in the majority of the borings at depths ranging from 8 to 14 feet. The temporary wells installed in SB-9, SB-12, SB-14, and SB-16 were dry after being allowed to sit for one to four hours. Depth to water measurements in the temporary wells installed in borings SB-7, SB-10, SB-11, SB-13, SB-15, and SB-17 ranged from 12.5 to 14 feet. Depth to water in SB-8 was 8.8 feet. During sampling, the temporary wells

would often pump dry attempting to fill the three 40-ml VOA bottles required for the VOC analysis. The wells were allowed to recharge in order to complete the sampling.

Field Screening. Field PID measurements of the retrieved soil samples were typically less than 20 parts per million (ppm). Elevated PID readings were measured in SB-11 (located 5 ft east of the DCU; up to 951 ppm at 2-feet bgs) and in SB-15 (located approximately 10 ft north of the DCU; up to 228 ppm at 10.5 feet bgs). Field PID measurements and observations are included on the boring logs (Appendix B).

Data Validation Review. PES conducted a data quality review of the investigation chemistry data consistent with USEPA data review guidelines. Data completeness, holding times, laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, laboratory control samples, quantitation limits, field duplicates, method blanks, and trip blanks were reviewed. PES assigned the following data qualifiers, as needed:

- J qualifier: result is an estimate based on field and laboratory quality control results.

No data were rejected based on the data validation review, and PES judged all of the data acceptable for use. No VOCs were detected in the trip blanks submitted with the soil and water samples that were collected on July 9, 2015

Soil Matrix. Tables 4 and 6 summarize the soil results which are also shown on Plate 5. VOCs were detected in all but seven of the 42 primary soil samples submitted for VOC analysis during this investigation. Five of the seven samples without VOC detections were associated with the Suite #103 sampling. VOC concentrations below CULs were detected in SB-8 and SB-9. PCE was detected at concentrations up to 0.572 mg/kg (SB-16), exceeding the CUL of 0.05 mg/kg at a maximum depth of 6 feet bgs. TCE was detected at concentrations up to 0.660 mg/kg (SB-11), exceeding the CUL of 0.03 mg/kg at a maximum depth of 6 feet bgs. PCE and TCE were not detected above the method reporting limits (MRLs) in any of the 9 to 10.5 foot soil samples collected from every boring location (the deep sample in SB-7 was collected at 13 feet bgs).

Groundwater. VOCs were detected in all of the seven samples of the shallow perched groundwater collected from the temporary wells (Table 5 and Plate 6). As noted above, this shallow perched groundwater was not consistently found in the temporary wells and not at all in previous shallow soil borings, and the recharge rates observed during sampling were very low. It is not clear whether this perched groundwater is the result of a leaking utility line (water, sanitary sewer), but for purposes of this discussion, the results are compared with MTCA CULs.

PCE was only detected in SB-10 at a concentration of 1.52 micrograms per liter ($\mu\text{g/L}$), below the CUL of 5 $\mu\text{g/L}$ and TCE was not detected in any of the samples. Concentrations of cis-1,2-DCE below the MTCA Method B CUL were detected in the samples collected from SB-7, SB-8, SB-15, and SB-17. Concentrations of cis-1,2-DCE and/or vinyl chloride exceeding CULs were detected in samples collected from SB-10, SB-11, and SB-13. cis-1,2-DCE was detected at concentrations up to 61.6 $\mu\text{g/L}$ (SB-11), exceeding the CUL of 16 $\mu\text{g/L}$. Vinyl chloride was detected at concentrations up to 0.706 $\mu\text{g/L}$ (SB-11), exceeding the CUL of 0.2 $\mu\text{g/L}$.

Data Validation Review. PES conducted a data quality review of the investigation chemistry data consistent with USEPA data review guidelines. Data completeness, holding times,

laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, laboratory control samples, quantitation limits, field duplicates, method blanks, and trip blanks were reviewed. PES assigned the following data qualifiers, as needed:

- J qualifier: result is an estimate based on field and laboratory quality control results.

No data were rejected based on the data validation review, and PES judged all of the data acceptable for use. No VOCs were detected in the trip blanks submitted with the soil and water samples that were collected on July 9, 2015.

Limited Building Inspections. Although the initial inspection on June 12, 2015 did not include removal of the carpet or destructive inspection of the drywall, and therefore was somewhat limited, several penetrations through the floor slab in the back of the suite were noted as well as penetrations in the demising wall between Suite #103 and the Amy's Cleaners suite above the drop ceiling (e.g., sprinkler piping, other pipes near the back of the suite).

The July 6, 2015 inspection of the concrete slab exposed during construction of the SVE trench noted several cracks in the slab. It was also noted that there was no rebar or wire mesh in the concrete, potentially a contributing factor in the development of these cracks.

4.2.2.3 Conclusions

As shown in the data presented on Plate 5, the results define an area of shallow soil contamination within the central portion of the Amy's Cleaners suite, and along the western portion of Suite #103, where VOC concentrations are above the applicable MTCA CULs. The investigation adequately defined the vertical extent of contamination, with the deepest sample containing VOCs exceeding CULs at depths of 6 feet collected at SB-16 and SB-17. None of the 9 foot or deeper samples had VOCs exceeding CULs, and most were below the analytical MRLs.

With respect to the lateral extent of contamination, the previous investigation results appear to adequately define the extent to the south (AC-SB5 and SB-1) and southeast (SB-8 and SB-9) of the DCU. In the other directions (northeast, north, and west), contamination above CULs was found in the perimeter borings. Although the previous results provided a good basis for evaluating and selecting a cleanup action, additional information was required to estimate the lateral extent of contamination in the northern portion of the Amy's Cleaners suite and in the adjacent suites on either side.

With respect to groundwater at the site, the results of prior groundwater investigations suggest a limited area where perched groundwater is present at all and an even smaller area where VOCs exceed the CULs. Seven of the 11 borings installed had sufficient water present to allow for the collection of samples through temporary well screens. Of these seven, only three borings, located near the DCU (SB-10, -11, and -13) had VOCs exceeding the applicable CULs. Other locations either had VOC concentrations in groundwater below CULs or were dry.

The depth of contamination appears to be limited to within the upper 9 feet below grade, and appears to have impacted an approximately 1 to 2 feet thick shallow perched groundwater zone at varying depths in the locations encountered, generally around the former DCU.

4.2.3 PES Environmental, Inc. – Design Investigation – July/September 2016

Based on a review of the previous investigation actions, PES conducted a focused cleanup action evaluation to identify an appropriate cleanup technology to attain an unrestricted NFA for the Site. The preliminary determination was that soil vapor extraction (SVE) was the preferred technology and a remedial design investigation was conducted to support the design of an SVE system. This investigation included confirming the extent of shallow soil VOC concentrations and gathering additional information on the nature of the shallow perched groundwater found beneath the dry cleaner tenant space. The work included drilling and sampling eight direct-push borings in the adjacent tenant spaces and north of the Amy's Cleaners suite (Plate 5). Vapor monitoring probes were installed in six of the soil borings to confirm vacuum influence during future operation of an SVE system. Additionally, three borings were advanced and sampled with a hand auger in the tenant space west of the Amy's Cleaners suite (occupied by The UPS Store, Suite #107). The investigation also included an evaluation of the drain line located behind the DCU, and an evaluation of subsurface features that may influence the SVE system vapor flow.

4.2.3.1 Field Activities

Subsurface Utility Assessment/Vapor Flow Evaluation. In order to evaluate subsurface utilities both for SVE subsurface vapor flow as well as the installation of a horizontal SVE well, PES retained APS to identify the location of subsurface utilities. On July 15, 2016, APS used radio-frequency locating equipment, ground-penetrating radar, and fiberglass rods with an attached video camera to locate conductible and non-conductible utilities in the Amy's Cleaners suite, within Suite #107, the vacant Suite #103, in the parking lot immediately behind the dry cleaner, and in the walkway and driveway in front of the dry cleaner. APS was unable to scope the floor drain located near the DCU due to the presence of a "P-trap". However, based on field observations and scoping the sanitary sewer line from the cleanout located in the back of the Amy's Cleaners suite, PES was able to determine that the floor drain connected to the sanitary sewer line with a lateral connection straight to the south (Plate 3).

Soil Boring Drilling and Sampling. On July 17 and 18, 2016, soil borings SB-18 through SB-23, and VP-8 and VP-9 were installed by ESN using a direct-push drilling rig to a maximum depth of 15 feet bgs. On September 18, 2016, soil borings SB-24 through SB-26 were installed by PES using a hand auger to a maximum depth of 3 feet bgs. The boring locations are shown on Plate 5. Soil borings SB-24 through SB-26 were installed to refine the horizontal boundary of VOCs above CULs. Borings VP-8 and VP-9 were installed to confirm vacuum influence during operation of a planned SVE system. Direct-push borings were installed with a limited access rig. Soil samples were collected continuously during drilling using 4-foot-long core barrels lined with new acetate sleeves. Hand auger borings were installed with a 3.25-inch soil auger and soil samples were collected continuously during drilling. The hand auger was decontaminated between borings using a non-phosphate soap wash and double rinsed with distilled water. PES observed the soil samples for lithologic characterization and field-screened the soil cores for VOCs with a PID. PES collected at least three samples from SB-18 through SB-23 and one sample from SB-24 through SB-26 for VOC analysis using EPA Method 8260. Soil samples were collected using syringe samplers consistent with the EPA Method 5035 protocols and placed in laboratory-provided bottles preserved with methanol. Additional sample volume was collected in unpreserved glass soil sample jars for analysis of soil moisture content. Sample

bottles were sealed, labeled, and placed in coolers on ice and shipped under chain-of-custody seal to Fremont.

One soil sample from each direct-push boring (SB-18 to SB-23) was submitted to ARI for grain-size analysis using sieve and hydrometer (ASTM D-421 and D-422). ARI subcontracted the analysis to MTC. The samples were collected from approximately 5 to 8 feet bgs in all of the borings with the exception of SB-20 collected from approximately 4 to 7 feet bgs.

Temporary Well Installation and Groundwater Sampling. Borings drilled deep enough to potentially encounter groundwater (SB-18, SB-19, SB-21, SB-22, and SB-23) were left open for at least 40 minutes to see if water would enter the open borings. No water was observed in SB-18, SB-19, SB-21, so the borings were abandoned with hydrated bentonite. Since water accumulated in SB-22 and SB-23, temporary wells were constructed in those borings. The temporary wells consisted of nominal ¾-inch-diameter, flush-threaded Schedule 40 PVC and a 5-foot-long well screen with 0.020-inch wide slots. The annular space around the well screen was backfilled with 10 x 20 Silica Sand. The temporary wells were allowed to accumulate water for a minimum of 45 minutes prior to development and sampling.

The samples were collected using low-flow sampling methods. A peristaltic pump was used to purge and sample groundwater from each well. Minimal well development was possible due to the low recharge rate and the temporary wells going dry during purging. New disposable polyethylene tubing (silicon tubing at the pump head) was used, with the sample intake approximately 0.5-feet above the bottom of each well screen. PES monitored pumping rates and field parameters (pH, temperature, specific conductance, DO, and ORP) during purging of SB-23. The low recharge rate of SB-22 prevented measurement of field parameters. Each well was pumped at approximately 50 to 80 mL/min.

Groundwater samples were collected from the discharge end of the peristaltic pump tubing. The same pump rate used at the end of well purging was used during sample collection. The VOA vials were filled by allowing the sample water to pour down the inside of the sample bottles without splashing directly onto the base. All sample containers were prepared and provided by the project laboratory. Following water sample collection, the sample containers were labeled for identification and immediately placed in insulated coolers containing ice. The coolers containing the samples were then submitted to Fremont under chain-of-custody protocol for analysis of VOCs by EPA Method 8260.

After the groundwater sampling was completed, the temporary wells were removed from the borings. Borings SB-18, SB-20, SB-21, and SB-23 were converted to vapor probes VP-4 through VP-7 correspondingly. PVC casing was installed in borings VP-8 and VP-9 to keep the borehole open until they could be converted to temporary vapor probes during the performance of the SVE pilot test (see Section 4.3 below). The remaining borings were abandoned by filling the borehole with bentonite, consistent with Chapter 173-160 WAC.

The boring logs and temporary well completion details are provided in Appendix B.

Vapor Probe Installation. Four of the boring locations were completed as vapor probes VP-4 to VP-7 to be used to confirm vacuum influence during the SVE pilot test during the future

operation of the SVE system. The borings were backfilled with hydrated bentonite to a depth of approximately 3.5 feet bgs. The probes were constructed of Teflon tubing with a stainless steel screen set to the top of screen at a depth of approximately 3 feet bgs within a sand filter pack and included a valve. The annular space above the filter pack was filled with hydrated bentonite. The probes were completed at the surface with 6-inch monuments set in concrete.

Two additional temporary vapor probes VP-8 and VP-9 were installed within Suite #103 for use with the SVE pilot test. The probes were installed as described above with a stainless steel screen set to the top of screen at a depth of approximately 2.5 feet bgs within a sand filter pack, but were completed with monuments or set in concrete. The probes were removed by PES with oversight by a licensed Professional Engineer at the conclusion of the SVE pilot test and completed at the surface with concrete.

4.2.3.2 Design Investigation Results

Tables 4 and 5 provide the soil and groundwater analytical results, respectively. Appendix B provides the boring logs, Appendix C provides the laboratory analytical reports and data validation memoranda, and Appendix D provides the field sampling forms.

Lithology and Hydrogeology. The soil types primarily observed during drilling to the maximum drilled depth of 15 feet bgs consisted of sand and silty sand. Occasional thin layers of sandy silt were also encountered. The direct push borings were typically terminated in a very dense till-like silty sand. Six samples from SB-18, SB-19, SB-20, SB-21, SB-22, and SB-23 were analyzed for grain size (from approximately 5 to 8 feet bgs). Evaluation of the resulting grain-size distributions for SB-18 and SB-19 indicated hydraulic conductivities ranging from 1×10^{-2} cm/sec to 5.83×10^{-3} cm/sec, consistent with sand containing significant portion of gravel. Evaluation of the resulting grain-size distributions for SB-20, SB-21, SB-22, and SB-23 indicated hydraulic conductivities ranging from 5.4×10^{-4} cm/sec to 3.0×10^{-4} cm/sec, consistent with silty sand. The hydraulic conductivity calculations are included in Appendix E. No water was encountered during drilling, but water accumulated in borings SB-22 and SB-23 at depths ranging from approximately 7 to 12 feet bgs.

Field Screening. Field PID measurements of the retrieved soil samples were typically less than 10 ppm. PID readings from 10 to 25 ppm were measured in the samples collected from boring SB-22. Field PID measurements and observations are included on the boring logs (Appendix B).

Data Validation Review. PES conducted a data quality review of the investigation chemistry data consistent with USEPA data review guidelines. Data completeness, holding times, laboratory instrument calibrations, surrogate recoveries, matrix spike and matrix spike duplicates, laboratory control samples, quantitation limits, method blanks, and trip blanks were reviewed. PES assigned the following data qualifiers, as needed:

- J qualifier: result is an estimate based on laboratory quality control results.

No data were rejected based on the data validation review, and PES judged all of the data acceptable for use.

Soil Matrix. As seen in Table 4, HVOCs were detected in only six of the 15 soil samples submitted for HVOC analysis during this investigation. HVOC concentrations below CULs were detected in SB-18, SB-24, SB-25, and SB-26. PCE was detected at concentrations of 0.140 and 0.0945 mg/kg in the 3-foot samples collected from SB-19 and SB-20 (located along the eastern edge of Suite #107 near the Amy's Cleaners suite), respectively. These concentrations exceed the CUL of 0.05 mg/kg. PCE was detected at concentrations below the CUL in samples collected at 3 feet bgs in samples collected in borings SB-18 and SB-24 through -26, west of SB-19 and SB-20. The soil analytical results are summarized on Plate 5.

Additional non-halogenated VOCs were also detected in the two soil borings advanced in Suite #103 (SB-22 and SB-23). Benzene, toluene, xylenes, and 4-isopropyltoluene were detected in the 6 foot sample collected from SB-22 and 4-isopropyltoluene in the 6 foot sample collected from SB-23. Only benzene, detected at a concentration of 0.0693 mg/kg exceeded a potentially applicable CUL of 0.03 mg/kg.

Groundwater Results. VOCs were not detected above the MRL in the two groundwater samples collected from the temporary wells (Table 5). The groundwater analytical results for select HVOCs are summarized on Plate 6.

4.3 Soil Vapor Extraction System Pilot Test – August 2016

4.3.1 SVE Pilot Test Field Activities

A SVE pilot test was conducted utilizing the existing horizontal SVE well HSVE-1 installed beneath the western edge of Suite #103 on August 8, 2016. The purpose of the pilot test was to provide information that assist with the design of an SVE system to remediate VOCs to concentrations below applicable unrestricted CULs. SVE involves inducing airflow in the subsurface with an applied vacuum to promote volatilization of contaminants from unsaturated soil and shallow groundwater so that they may be carried advectively to the surface for collection and treatment (if required).

Pilot test equipment included a vacuum blower (Rotron EN 454), moisture knockout drum, interconnecting 2-inch pipe and hoses, 2-inch discharge stack, a dilution valve for adjusting flow rate and vacuum at HSVE-1, and several sampling/monitoring ports.

Vapor points VP-4 through VP-9 (Plate 3) were utilized for monitoring vadose zone vacuum and field VOC concentrations during the pilot test. The vapor points are located radially and at varying distances from HSVE-1. PES anticipated that the backfill for the existing north-south sanitary sewer line located approximately 10 feet west of HSVE-1 beneath Amy's Cleaners (Plate 3) could be a potential source of short circuiting during the pilot test. Therefore three vapor probe locations were placed west of HSVE-1 including VP-4 (27 feet west) and VP-5 (29 feet west-northwest) inside the UPS Store (Suite #107), and VP-6 (42 feet north-northwest) in the sidewalk near the entrance of Amy's Cleaners, and three vapor probes were located inside Suite #103 east of HSVE-1 including VP-7 (19.3 feet northeast), VP-8 (9 feet east), and VP-9 (14.4 feet east).

The pilot test included baseline monitoring followed by running the blower for a period of approximately 4.5 hours over two steps of increasing applied vacuum and flow rates. Baseline monitoring included measuring static pressure and field VOC concentrations with a PID in vapor probes VP-4 through VP-9. Periodic monitoring was conducted during the pilot test to collect design data for the purposes of developing a SVE capture zone. Pilot test monitoring included measuring vapor flow rate, vacuum, temperature, and field VOC concentrations at HSVE-1 and the discharge stack, vacuum and temperature at the blower, and vacuum and field VOC concentrations at each of the vapor probes. Monitoring was performed shortly after turning on the SVE blower, at intervals of every 30 to 35 minutes for the first 3.5 hours of the pilot test, and again at the end of the pilot test. An effluent air sample was collected and analyzed for VOCs using EPA Method TO-15 near the end of the pilot test. The purpose of the vapor sample was to determine a conservative or worst case concentration for evaluating vapor treatment and air discharge permit requirements. The SVE pilot test field forms are included in Appendix D.

4.3.2 SVE Pilot Test Results

Data collected during the pilot test are summarized in Tables 7 and 8, and detected laboratory VOC concentrations in the stack sample are included in Table 9. Table 7 also includes an estimated mass discharge rate using the pilot test well vapor flow rate measured at the end of Step 2. The laboratory analytical report and data validation memorandum included in Appendix C.

Baseline monitoring indicated that all six vapor probes were at equilibrium with atmospheric pressure, and field VOC concentrations were detected in all six probes at concentrations of 1.1 parts per million by volume (ppmv, VP-6) to 18.1 ppmv (VP-9). The first step of the pilot test was operated for 127 minutes at an average flow rate of 48 standard cubic feet per minute (scfm) and 10 inches of water column (in.w.c.) vacuum. The second step was operated for 150 minutes at an average flow rate of 86 scfm and 17 in.w.c. vacuum. Step 1 required that the dilution valve be partly open allowing fresh air to enter the blower downstream of HSVE-1, and Step 2 operated with the dilution valve fully closed.

Vadose Zone Monitoring. An increase in vacuum was observed shortly after pilot test startup in VP-4, VP-5, VP-7, VP-8, and VP-9, and vacuum increased at VP-6 after 47 minutes had elapsed. For the vapor probes closest to HSVE-1 (VP-7, VP-8, and VP-9), vacuum increased again at Step 2 and remained elevated through the end of the pilot test (0.2 to 1.8 in.w.c.). For the probes furthest from HSVE-1 (VP-4, VP-5, and -VP6), vacuum remained relatively low (0 to 0.08 in.w.c.) and did not change substantially during the remainder of the pilot test. Field VOC concentrations in all six vapor probes were between 2 and 3 ppmv shortly after pilot start, and slowly declined to 1 to 2 ppmv by the end of the test.

Vapor monitoring. Field VOC concentrations in HSVE-1 increased from 0.3 ppmv at the beginning of the pilot test, increased to a maximum of 2.1 ppmv near the end of Step 1, and decreased slightly to 1.5 ppmv at the end of the pilot test.

Vapor Sampling. The stack vapor sample collected near the end of Step 2 included a total VOC concentration of 228 $\mu\text{g}/\text{m}^3$. 69 percent was PCE (158 $\mu\text{g}/\text{m}^3$), with the remaining VOCs split roughly 60/40 as chlorinated VOCs potentially related to the PCE release (TCE, cis-1,2-DCE,

trans-1,2-dichloroethene, and vinyl chloride), and non-chlorinated VOCs unrelated to the PCE (1-propene, acetone, hexane, isopropyl alcohol, naphthalene, and styrene).

Mass Discharge. Based on conditions at the end of the pilot test, the estimated mass discharge rate during the pilot test was approximately 0.65 pounds per year (lb/yr) total VOCs, 0.45 lb/yr PCE, and 0.006 lb/yr vinyl chloride (Table 7). It is anticipated that the pilot test conditions approximate the maximum anticipated discharge conditions for the SVE system.

The pilot test discharge rates are three orders of magnitude below the Puget Sound Clean Air Agency (PSCAA) threshold, exempting a discharge permit per PSCAA Regulation I, Article 6, Section 6.03 (C) (94). Furthermore, the discharge rates are also well below *de minimus* threshold values listed in WAC 173-460-150, which by definition indicates that the discharges do not pose a threat to human health or the environment and therefore are exempt from Ecology regulations.

SVE Area of Influence. As indicated by the vacuum monitoring results, apparent influence from HSVE-1 was evident in the eastern vapor probes VP-7, VP-8, and VP-9 located inside Suite #103. The relatively low vacuum in the closest probe VP-8 (9 feet) suggests a degree of heterogeneity, influence from shallow utility lines, and preferential vapor flow patterns within the vadose zone. Vacuum influence in the western vapor probes VP-4 and VP-5 was considerably less compared to the eastern probes, and did not change significantly during the pilot test. The relatively stable conditions at VP-6 indicate that the vacuum influence at this location was insignificant. It seems likely that the presence of sanitary sewer line backfill 10 feet west of HSVE-1 reduced the vacuum influence to the west. The total extent of measurable vacuum influence extended 29 feet from HSVE-1 (VP-5), although with the presence of shallow utility lines beneath the building, it is uncertain whether the entire 29 foot zone is receiving adequate SVE coverage. Based on our experience, a vacuum area of influence is likely between 20 and 25 feet.

5.0 CONCEPTUAL SITE MODEL

A Conceptual Site Model (CSM) identifies potential or suspected sources of hazardous substances, types of contaminants, potentially contaminated media, and actual or potential exposure pathways and receptors. The CSM is graphically presented on Plate 7.

5.1 Sources and Transport Mechanisms

5.1.1 Contaminant Sources

Spills and releases from dry cleaning operations, primarily in the vicinity of the DCU, are the primary source of contamination. Contaminants include PCE and PCE-degradation products (TCE, cis-1,2-DCE, and vinyl chloride).

5.1.2 Contaminant Fate and Transport Mechanisms

The potential fate and transport mechanisms currently applicable to the Site include:

- Adsorption of PCE to soil;
- Biodegradation or abiotic degradation of PCE in the subsurface;
- Migration of PCE-containing liquids through the soil and into the shallow, perched groundwater;
- Leaching of contaminants in the shallow soil to shallow, perched groundwater;
- Volatilization of contaminants from soil; and
- Volatilization of contaminants from shallow, perched groundwater.

Based on the previous investigation results, the following potentially complete exposure pathways and receptors were identified.

5.1.3 Soil

The Site is currently covered with pavement or buildings. There is the potential that human receptors (site worker) could be exposed to contaminants present in the soil via direct contact (and potential incidental ingestion) during subsurface construction activities. Human exposure to the soil is a potentially complete current and future exposure pathway. The restrictive covenant restricts activities that may result in the release or exposure to the environment of the contaminated soil or that could create a new exposure pathway (Appendix A).

Ecological exposure to the soil does not appear to be a complete exposure pathway. Given the buildings and pavement covering the soil and the commercial/industrial use of the property and surrounding area, terrestrial ecological exposure to the soil is unlikely. The site meets the conditions for a primary exclusion as stated in WAC 173-340-7491(1)(c)(i). The Terrestrial Ecological Evaluation (TEE) Process Primary Exclusion form is included in Appendix F.

The indoor air sampling indicates that vapor intrusion is not occurring and there is not a potential that indoor workers or customers in a commercial setting could be exposed to volatile COCs at concentrations exceeding the risk-based cleanup levels through inhalation of vapors originating from contaminated media beneath the building. The limited extent of soil with COCs exceeding cleanup levels indicates there are not exposure pathways to off-property receptors.

5.1.4 Groundwater

Although there are active water supply wells located within 1 mile of the Property, the limited extent of affected perched groundwater indicates the potential for ingestion of contaminated groundwater from potable uses of groundwater is unlikely. Consistent with the requirements of WAC 173-340-720(2) related to the definition of potable groundwater, the shallow, perched groundwater beneath the Property is determined to be nonpotable. The shallow, perched groundwater at the Property does not currently serve as a drinking water source as there are no shallow water supply wells located within 0.25 miles of the Property (WAC 173-340-720(2)(a)), and the 40-foot-thick glacial till that contains or is beneath the shallow, perched groundwater at the Property is of low permeability, with a very low likelihood that a water well completed in the unit would be able to achieve the minimum flow rate for potable groundwater (0.5 gallons per minute; WAC 173-340-720(2)(b)(i)). Additionally, the shallow, perched groundwater at the Property exists in perched lenses that are likely not laterally extensive. Therefore, ingestion of groundwater is not a current or potential future exposure pathway.

Similar to soil, there is the potential that human receptors (site workers) could be exposed to contaminants present in shallow, perched groundwater via direct contact (and potential incidental ingestion) during subsurface construction activities beneath the Site. Therefore, human exposure to shallow groundwater is a potentially complete current and future exposure pathway that is currently controlled through the existing restrictive covenant.

The indoor air sampling indicates that vapor intrusion is not occurring and there is not a potential that indoor workers or customers in a commercial setting could be exposed to volatile COCs at concentrations exceeding the risk-based cleanup levels through inhalation of vapors originating from contaminated groundwater beneath the building. Due to the limited extent of groundwater with COCs above the cleanup levels, this pathway is also considered incomplete off of the Property.

5.1.5 Summary of Exposure Pathways and Receptors

The current, complete, but minor exposure pathways include:

- Potential exposure to site workers through direct contact with and incidental ingestion of contaminated soil during site maintenance activities that disturb the existing structures or building floor slabs (i.e., soil excavation); and
- Potential exposure to site workers through direct contact with and incidental ingestion of contaminated shallow perched groundwater during site maintenance activities that disturb the existing structures or floor slabs to a depth sufficient to encounter groundwater (i.e., soil excavation).

6.0 NATURE AND EXTENT OF CONTAMINATION

This section presents a summary of the Site soil and groundwater data following the previous investigations. Based on the low concentrations (and below potentially applicable CULs) and the infrequent detections of VOCs not related to PCE (chlorobenzene, dichlorobenzene, toluene, ethylbenzene, xylenes, and 4-Isopropyltoluene), the following discussions regarding nature and extent of contamination are limited to PCE and the degradation products associated with the historical dry cleaning operations and previously detected above potentially applicable CULs. In addition, because benzene was only detected one time (SB-22 at a depth of 6 feet bgs) in any soil sample and was detected at a concentration not significantly above the potentially applicable CUL, benzene is not considered a contaminant of concern for the Site. SB-22 is not located near the sources of contamination for the dry cleaner. Finally, as described in Section 8, the SVE system designed to address PCE and associated VOCs will also remove benzene and the other non-dry cleaning VOCs.

The COCs identified for the Site are PCE and TCE in soil and cis-1,2-DCE and vinyl chloride in groundwater.

6.1 Cleanup Levels

MTCA provides several methods for determining cleanup levels including Method A (tables and applicable state and federal laws), Method B (universal method), and Method C (conditional method). Method C is typically used where Method A or B cleanup levels are impossible to achieve or for certain industrial properties. The applicability of Method A is described in WAC 173-340-704(1). Method A may be used to establish cleanup levels at sites that have few hazardous substances and meet one of the following criteria:

- Sites undergoing a routine cleanup action as defined by WAC 173-340-200; or
- Sites where numerical standards are available either in the MTCA regulations or applicable state and federal laws for all indicator hazardous substances.

Due to the routine nature of the contamination and the limited number of hazardous substances, MTCA Method A CULs, where available, are applicable for the Site. The soil and groundwater CULs are summarized below.

6.1.1 Soil Cleanup Levels

The MTCA Method A CULs for soil are for “unrestricted land uses” and are protective of direct contact and groundwater:

- PCE – 0.05 mg/kg
- TCE – 0.03 mg/kg

6.1.2 Groundwater Cleanup Levels

The MTCA Method A CULs for groundwater are for drinking water purposes. Standard Method B CULs were selected when a Method A CUL was not available:

- Cis-1,2-DCE – 16 µg/L (MTCA Method B)
- Vinyl Chloride – 0.2 µg/L

6.2 Soil Quality

As data shown on Plate 5 indicate, the analytical results of soil borings define an area within the central portion of the Amy's Cleaners suite, along the western portion of Suite #103, and along the eastern portion of Suite #107 where VOC concentrations are above CULs. The investigation adequately defined the vertical extent of contamination; the deepest sample containing VOCs exceeding CULs was the 6 foot samples collected at SB-16 and SB-17. None of the 9 foot or deeper samples had VOCs exceeding CULs, and most were below MRLs.

With respect to the lateral extent of contamination, the results of the investigations appear to adequately define the of shallow soil contamination in all directions. The limits of the assumed area of soil contamination are shown on Plate 8.

6.3 Groundwater Quality

The results of the groundwater investigation presented on Plate 6 suggest an area of limited size where VOCs exceed the CULs, and in fact suggest a limited area where shallow perched groundwater is present at all. Nine of the 20 borings installed by PES had sufficient water present to allow for collected of samples through temporary well screens. Of these nine, only three borings located immediately around the DCU (SB-10, SB-11, and SB-13) had VOCs exceeding the applicable CULs. The limits of the assumed area of shallow perched groundwater contamination are also shown on Plate 8.

7.0 CLEANUP ACTION ALTERNATIVES AND ANALYSIS

This section presents the preliminary evaluation of cleanup approaches reported in PES's *Limited Phase II Assessment and Focused Cleanup Action Evaluation* (PES, 2015b).

7.1 Cleanup Action Alternatives

The former dry cleaning operations, primarily in the vicinity of the DCU, are the primary source of contamination. The depth of contamination appears to be limited to within the upper 9 feet below grade, and appears to have impacted a small area of an approximately 1- to 2-foot thick shallow perched groundwater zone at varying depths in the locations encountered. The remedy evaluation focuses on remediating shallow soil and the shallower perched groundwater.

The following includes discussion of typical remediation technologies which are commonly used to remediate shallow soil at dry cleaner cleanup sites. Only those technologies with the reasonable potential to achieve MTCA Method A CULs in shallow soil and groundwater are discussed. The identified potentially applicable technologies include excavation and SVE.

Excavation. Excavation may be deployed both above and below the groundwater table to remove areas of contaminated soil above and/or within the contaminated groundwater plume. Excavated soil would be loaded into licensed trucks and transported for offsite disposal at an approved facility. Excavated areas may require shoring or other actions to protect the building structures, and protection and/or temporary relocation of tenant utilities. Excavation within the tenant spaces would be disruptive and would likely be difficult to implement, especially if excavations extend into multiple tenant spaces (i.e., beneath demising walls).

Soil Vapor Extraction. SVE is an established an *in situ* remediation technology that removes VOCs from the unsaturated zone by applying a vacuum to induce airflow from the impacted zone into a collection well or network of collection wells. VOCs already in the vapor phase are readily removed, and VOCs in the liquid phase (i.e., typically sorbed onto soil particles) are partitioned into the vapor phase as the air stream flows through zones of contamination. SVE may also remove liquid VOCs from the upper few feet of groundwater (such as the observed shallow perched groundwater at the site), although will be ineffective at removing VOCs trapped deeper below the water table. The silty sand vadose zone at this site is expected to be suitable for SVE; however, VOC removal efficiency can be affected by soil heterogeneity. More permeable backfill within the existing sanitary sewer trench (estimated 3 to 6 feet depth) may also limit the lateral extent of the shallow SVE capture zone. SVE wells would be connected by above ground or below ground piping to a vacuum blower, and the blower, associated equipment, and controls would likely be installed in a small fenced area behind the building. Based on the expected limited mass of chlorinated solvent residuals in soil and groundwater, and the results of the SVE pilot test, an SVE system would likely be exempt from PSCAA and Ecology requirements, and the blower effluent may be discharged directly to the atmosphere without treatment.

These technologies, applied alone or in tandem, are potentially viable approaches to remediate the residual PCE and breakdown products in shallow soil and groundwater at this site. Excavation has been screened out for further consideration due to difficulties and potential

hazards of implementing excavation inside the building and occupied tenant spaces. Based on the observed distribution of VOCs, the evaluation of cleanup options described in the *Limited Phase II Assessment and Focused Cleanup Action Evaluation*, and SVE pilot testing, the preferred remedial approach for the site consists of: (1) soil vapor extraction to remediate the observed vadose zone contamination and the shallow perched groundwater; and (2) confirmation soil sampling to document the remedial effectiveness and compliance with CULs. The confirmation sampling will also include further evaluation of shallow perched groundwater encountered during the investigation. The design and implementation of this remedial approach is described in detail below.

8.0 DESCRIPTION OF SELECTED REMEDY

This section describes the cleanup action that will be implemented to address the soil and minimal shallow perched groundwater contamination identified in Section 6.0.

8.1 Site Description

The Site with residual COC concentrations to be addressed is the shallow soil located beneath Suite #105 and the adjacent suites to the east and west. In addition, there is a small area of shallow perched contaminated groundwater located in the immediate vicinity of the DCU. The areas exceeding cleanup levels are shown on Plate 8.

8.2 Description of the Cleanup Action

An SVE system will be implemented to treat vadose zone soil and shallow perched groundwater beneath Suites #103, #105, and #107. This system will include two horizontal SVE wells in the vadose zone (Plate 8). The overall remediation objective is to reduce the mass of PCE and breakdown products in the residual source area to lower concentrations to below MTCA CULs in soil and groundwater. The SVE system is expected to operate for 6 to 12 months, and it will be operated until PCE and other chlorinated VOC concentrations in SVE discharge vapors reach asymptotic levels. At that time, soil samples will be collected from several locations to verify that the remedial action has successfully reduced VOC concentrations in soil below applicable MTCA CULs. The confirmation sampling will also include further evaluation of shallow perched groundwater encountered during the investigation. The proposed confirmation sampling locations are shown on Plate 8.

Based on pilot test results, extracted vapors may be discharged directly to the atmosphere at concentrations below regulated levels, and the SVE discharge will be monitored and tested to verify compliance with PSCAA and Ecology discharge regulations. One new horizontal extraction well will be installed. The locations of the existing horizontal SVE well (HSVE-1) and the planned new well (HSVE-2) are shown on Plate 8. A *Soil Vapor Extraction System Design Memorandum* has been prepared and is included as Appendix G. The design memorandum provides the basis of the SVE design with supporting design calculations, a description of how the system will be constructed, construction drawings, and planned SVE operations.

8.3 Cleanup Standards and Point of Compliance

The cleanup standards were presented in Section 6.1 and the soil and groundwater points of compliance are the entire Site.

8.4 Restoration Timeframe

A preliminary remediation timeframe of six to twelve months is estimated.

8.5 Performance and Compliance Monitoring

A Sampling and Analysis Plan (SAP) is included in Appendix H and describes the proposed SVE vapor, soil, and groundwater sampling methods, consistent with the requirements of WAC 173-340-410.

8.5.1 SVE System Vapor

Performance monitoring will be performed periodically to assess whether changes in system performance are needed to optimize contaminant removal efficiency. Performance monitoring will include monitoring VOC concentrations in each horizontal SVE well, stack emissions monitoring, and monitoring existing soil vapor probes for vacuum and VOC concentrations. Stack samples will be collected monthly and will be analyzed for VOCs by EPA Method TO-15 to verify compliance with PSCAA and Ecology toxic pollutant source discharge regulations.

As soil gas concentrations decline, it may be necessary to perform shutdown and rebound testing to help optimize system operations and to determine when the system should be completely shut down. This testing includes temporarily shutting down the SVE system for a period of time (e.g., one month), restarting the system, and field monitoring the VOC concentration response at individual SVE wells during restart.

8.5.2 Soil

After the SVE system vapor concentrations reach asymptotic levels and shutdown and rebound testing indicate little remaining contaminant mass, the SVE system will be permanently shut down. At that time, soil samples will be collected to verify that the cleanup action has successfully reduced VOC concentrations in soil below their respective CULs or further delineate areas that require additional treatment. Confirmation soil samples will be collected to confirm remediation of PCE- and TCE-impacted soil encountered during site characterization activities. These proposed locations are shown on Plate 8. The borings will be advanced using a limited-access direct-push drilling rig to refusal (generally 14 feet bgs). Soil samples will be collected at depths of 0.5, 3, and 6 feet bgs and submitted for laboratory analysis of VOCs using EPA Method 8260.

8.5.3 Shallow Perched Groundwater

If water is encountered in the confirmation soil borings, temporary wells will be installed and allowed to accumulate water for a minimum of 1 hour. Monitoring will consist of collecting depth to water measurements and, if a sufficient amount of water accumulates to allow sampling, collecting groundwater samples for laboratory analysis. Groundwater samples will be collected using similar procedures as for the site characterization investigations and will be analyzed for VOCs using EPA Method 8260.

8.6 Schedule for Implementation

The SVE system design is attached and construction of the system is anticipated to take approximately 4 to 5 months. Milestone activities include pre-construction bidding, coordination, subcontracting, and procurement (2.5 to 3 months), system construction and testing

(3 to 4 weeks), and SVE system startup (3 to 4 weeks). System startup is anticipated to occur in the third quarter of 2017. The SVE system is expected to operate until the middle of 2018 with confirmation soil and perched groundwater samples collected in mid-2018.

8.7 Institutional/Engineering Controls

Assuming that the confirmation soil and groundwater samples show that COCs have been reduced to below the applicable CULs, the existing restrictive covenant will be terminated and no additional institutional and/or engineering controls will be necessary at the conclusion of the planned cleanup actions.

9.0 REPORTING AND SCHEDULE

The cleanup action will be performed as an independent action under Ecology's VCP. At the completion of the cleanup actions, a Cleanup Action Completion report will be prepared and submitted to Ecology for review and to request an opinion of No Further Action without the need of institutional or engineering controls (i.e., an unrestricted NFA). The report will summarize the scope of work, field activities, data analyses and evaluation, and conclusions.

The SVE system is expected to operate until the middle of 2018 at which time confirmation sampling will be conducted. Based on the expected schedule, the Cleanup Action Completion report will be submitted toward the end of 2018. If it appears that the SVE system will operate significantly longer than one year, a progress report will be prepared and submitted to Ecology that documents the system operations, maintenance, and monitoring activities.

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TABLES

**Table 1
Summary of Detected VOCs in Indoor Air
Former Hallmark Suite (Suite 103)
Bethel Junction Shopping Center
Port Orchard, WA**

Constituent	Indoor Air	Ambient Air	Indoor Air	Modified Method B (Commercial) Indoor Air Cleanup Level (µg/m3)
	Indoor_Air_052215	Outdoor_Air_052215	Corrected for Ambient	
	5/22/2015	5/22/2015	5/22/2015	
	8-hour	8-hour	8-hour	
Benzene	0.338	0.202	0.136	0.9
Carbon Tetrachloride	0.671	0.707	NC	1.17
Chloromethane	1.09	1.24	NC	630
Hexane	6.27	0.247 U	6.27	4,900
Tetrachloroethene	1.75	0.339 U	1.75	26.9
Toluene	2.47	2.40	0.07	35,000
Trichloroethene	0.376	0.0914 U	0.376	1.03
<p>Notes:</p> <ol style="list-style-type: none"> All results in µg/m³ (micrograms per cubic meter). Volatile Organic Compound (VOC) analysis by EPA Method TO-15-SIM. Detected results shown in bold. U = not detected at or above the concentration shown. Modified Method B cleanup levels were calculated using Method B residential cleanup levels obtained from Ecology's Draft Vapor Intrusion Guidance, 2009; Table B-1 (updated April 6, 2015), modified to reflect commercial exposure scenario (adult, 6 days/week, 10 hours/day). Measured indoor air concentrations corrected for ambient air concentrations consistent Ecology's Draft Vapor Intrusion Guidance, 2009. NC = Not calculable. Indicates measured indoor air concentration less than ambient air concentrations. 				

Table 2
Summary of Detected VOCs in Sub-Slab Soil Gas
Former Hallmark Suite (Suite 103)
Bethel Junction Shopping Center
Port Orchard, Washington

Compound	Subslab_Air_052215 ($\mu\text{g}/\text{m}^3$)	J&E Predicted Indoor Air Concentration ($\mu\text{g}/\text{m}^3$)	Modified Method B - Commercial Indoor Air Cleanup Level ($\mu\text{g}/\text{m}^3$)
Benzene	0.436	0.00036	0.90
Carbon Tetrachloride	0.415	0.00035	1.17
Chloroform	2.69	0.0022	0.30
cis-1,2-Dichloroethene	15.8	0.013	NL
Ethylbenzene	2.96	0.0024	7,000
m&p-Xylene	5.37	0.0045	701
Naphthalene	7.13	0.006	0.21
Hexane	0.932	0.00077	4,900
o-Xylene	2.44	0.002	701
Tetrachloroethene	13,000 J	10.8	26.9
Toluene	2.69	0.0022	35,000
trans-1,2-Dichloroethene	1.3	0.0011	NL
Trichloroethene	476 J	0.396	1.03

Notes:

- All results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
- Detected VOCs are summarized in this table; see laboratory analytical report for entire VOC analytical results.
- Analyses for volatile organic compounds (VOCs) using USEPA Method TO-15-SIM.
- Predicted indoor air concentrations exceeding Modified Method B commercial cleanup level are shaded.
- Modified Method B cleanup levels were calculated using Method B residential cleanup levels obtained from Ecology's Draft Vapor Intrusion Guidance, 2009; Table B-1 (updated April 6, 2015), modified to reflect commercial exposure scenario (adult, 6 days/week, 10 hours/day).
- J&E predicted indoor air concentration - calculated using advanced version of the John and Ettinger (J&E) vapor intrusion model (SG ADV, Version 3.1; 02/04); see Table 3 for input parameters.
- NL = Not listed.
- J = estimated

Table 3
Johnson and Ettinger Model Input Parameters
Former Hallmark Suite (Suite 103)
Bethel Junction Shopping Center, Port Orchard, Washington

Parameter	Symbol	Units	Input Value	Comment
Depth below grade to top of enclosed floor space	L_f	cm	10	Actual thickness of concrete floor slab
Soil gas sampling depth below grade	L_s	cm	12	Sub slab depth during sampling
Average soil/ groundwater temp	T_s	°C	10	Average groundwater temperature measured during sampling
Soil type	--	unitless	S	Sand conservatively selected although significant areas of finer grain material are present on-site
Soil vapor permeability	k_v	cm^2	NA	Calculated by model
Soil dry bulk density	ρ_b^A	g/cm^3	1.66	Default based on soil type
Soil total porosity	n^A	cm^3/cm^3	0.375	Default based on soil type
Soil water-filled porosity	q_w^A	cm^3/cm^3	0.05	Default based on soil type
Floor thickness	L_{crack}	cm	10	Actual thickness of concrete floor slab
Soil-building pressure differential	DP	$\text{g}/\text{cm}\cdot\text{s}^2$	40	Default.
Floor length	L_B	cm	1830	Hallmark Suite - 60 ft long (1,830 cm)
Floor width	W_B	cm	915	Hallmark Suite - 30 ft wide (915 cm)
Enclosed space height	H_B, L_F	cm	305	Assumed height of approx. 305 cm (10 ft)
Floor-wall seam crack width	w	cm	0.1	Default.
Indoor air exchange rate	ER	1/hr.	1	Based on CAL EPA and Ecology guidance for commercial spaces with maintained HVAC system
Average vapor flow rate into building	Q_{soil}	L/m	7	Calculated per Ecology Guidance using $Q_{\text{soil}} = (5 \text{ L}/\text{min}) \times (\text{perimeter in cm}/4,000 \text{ cm})$ $Q_{\text{soil}} \text{ Hallmark Suite} = 7 \text{ L}/\text{min}$
Soil organic carbon fraction	f_{OC}	unitless	0.002	Conservative value based on range reported in AFCEE (1996).
Note: NA = Not applicable.				

Table 4
Select Soil Analytical Results
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (mg/kg)			
			PCE	TCE	tDCE	cDCE
Former Hallmark Suite (Suite 103)						
SB-7	6/12/15	0 to 4	0.0893	0.0222 U	0.0222 U	0.0222 U
		4 to 8	0.0229 U	0.0229 U	0.0229 U	0.0458
		13	0.0199 U	0.0199 U	0.0199 U	0.0279
SB-8	6/12/15	0.5	0.0489	0.0272 U	0.0272 U	0.0272 U
		5	0.0243 U	0.0243 U	0.0243 U	0.296
		10	0.0251 U	0.0251 U	0.0251 U	0.0251 U
SB-9	6/12/15	0.5	0.0432	0.0251 U	0.0251 U	0.0251 U
		5	0.0199 U	0.0199 U	0.0199 U	0.0199 U
		9	0.0213 U	0.0213 U	0.0213 U	0.0213 U
SB-22	7/18/16	3	0.0201 U	0.0201 U	0.0201 U	0.0201 U
		6	0.0272 U	0.0272 U	0.0272 U	0.0272 U
		9.5	0.0188 U	0.0188 U	0.0188 U	0.0188 U
SB-23	7/18/16	3	0.0432	0.0237 U	0.0237 U	0.0237 U
		6	0.0240 U	0.0240 U	0.0240 U	0.0240 U
		9	0.0200 U	0.0200 U	0.0200 U	0.0200 U
Amy's Dry Cleaner Suite (Suite 105)						
SB-10	6/25/15	0.5	0.166	0.0225 U	0.0225 U	0.0225 U
		3	0.269	0.0222	0.0222 U	0.0222 U
		10	0.0199 U	0.0199 U	0.0199 U	0.0682
SB-11 dup	6/25/15	0.5	0.656	0.0230	0.0200 U	0.0200 U
		2	0.179 J	0.660	0.0234 U	0.113
		2	0.313 J	0.551	0.026 U	0.0802
		9	0.0214 U	0.0214 U	0.0214 U	0.0252
SB-12	6/25/15	0.5	0.0995	0.0249 U	0.0249 U	0.0249 U
		3	0.0986	0.225	0.016 U	0.0600
		9	0.0225 U	0.0225 U	0.0225 U	0.192
SB-13	6/25/15	0.5	0.232	0.0213	0.0213 U	0.0213 U
		3	0.136	0.0450	0.0205 U	0.119
		9	0.0214 U	0.0214 U	0.0214 U	0.0263
SB-14	7/9/15	0.5	0.321	0.0207 U	0.0207 U	0.0207 U
		3	0.0441	0.173	0.0268	0.0856
		6	0.0465	0.0210	0.0196 U	0.0851
		9	0.0277 U	0.0277 U	0.0277 U	0.176
SB-15 dup	7/9/15	0.5	0.104	0.0289 U	0.0289 U	0.0289 U
		3	0.0464	0.126	0.0200 U	0.0584
		6	0.0437	0.0230 U	0.0230 U	0.0230 U
		10.5	0.0197 U	0.0197 U	0.0197 U	0.0197 U
		10.5	0.0205 U	0.0205 U	0.0205 U	0.0261
SB-16	7/9/15	0.5	0.0527	0.0227 U	0.0227 U	0.0227 U
		3	0.0762	0.0210 U	0.0210 U	0.0210 U
		6	0.572	0.142	0.0235 U	0.0235 U
		9	0.0200 U	0.0200 U	0.0200 U	0.194
SB-17	7/9/15	0.5	0.0736	0.0304 U	0.0304 U	0.0304 U
		3	0.0828	0.0230 U	0.0230 U	0.0230 U
		6	0.0526	0.0469	0.0229 U	0.0229 U
		9	0.0210 U	0.0210 U	0.0210 U	0.0210 U
The UPS Store Suite (Suite 107)						
SB-18	7/17/16	3	0.0197 U	0.0197 U	0.0197 U	0.0197 U
		6	0.0229 U	0.0229 U	0.0229 U	0.162
		9	0.0257 U	0.0257 U	0.0257 U	0.0257 U
SB-19	7/17/16	3	0.140	0.0221 U	0.0221 U	0.0221 U
		6	0.0231 U	0.0231 U	0.0231 U	0.0231 U
		9	0.0243 U	0.0243 U	0.0243 U	0.0243 U
SB-20	7/17/16	3	0.0945	0.0242 U	0.0242 U	0.0242 U
		6	0.0224 U	0.0224 U	0.0224 U	0.0224 U
		7	0.0198 U	0.0198 U	0.0198 U	0.0198 U
SB-24	9/18/16	3	0.0329	0.0258 U	0.0258 U	0.0258 U
SB-25	9/18/16	3	0.0462	0.0264 U	0.0264 U	0.0264 U
SB-26	9/18/16	3	0.0330	0.0206 U	0.0206 U	0.0206 U
North of Amy's Dry Cleaners Suite						
SB-21	7/17/16	3	0.0208 U	0.0208 U	0.0208 U	0.0208 U
		6	0.0227 U	0.0227 U	0.0227 U	0.0227 U
		9	0.0282 U	0.0282 U	0.0282 U	0.0282 U
MTCA Method A/B Unrestricted CULs			0.05 (A)	0.03 (A)	1,600 (B)	160 (B)
Notes:						
1. bgs = below ground surface						
2. U = result is less than the laboratory practical quantitation limit (PQL)						
3. PCE = tetrachloroethene, TCE = trichloroethene, cDCE = cis-1,2-dichloroethene, tDCE = trans-1,2-dichloroethene						
4. (A) = MTCA Method A soil cleanup level (CUL)						
5. (B) = MTCA Method B soil cleanup level (ingestion only)						
6. Bold indicates that the compound was detected above the PQL, and shading indicates the concentration exceeds the MTCA Method A or B CUL						
7. dup = field duplicate sample result						
8. Volatile Organic Compounds (VOCs) analyzed by USEPA Method 8260. Only detected VOCs are shown; see laboratory report for the complete analyte list.						
9. mg/kg = milligrams per kilogram						

Table 5
Groundwater Analytical Results
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (µg/L)			
			PCE	cDCE	Vinyl Chloride	
SB-7-W	6/12/15	12.5	1.00 U	6.67	0.200 U	
SB-8-W	6/12/15	9	1.00 U	13.1	0.200 U	
SB-10-W	6/25/15	13.38	1.52	18.3	0.200 U	
SB-11-W	6/25/15	13.70	1.00 U	61.6	0.706	J
SB-13-W	6/25/15	14.01	1.00 U	37.3	0.658	J
SB-15-W	7/9/15	14.5	1.00 U	8.22	0.200 U	
SB-17-W	7/9/15	13	1.00 U	10.4	0.200 U	
SB-22-071816	7/18/16	11.5	1.00 U	1.00 U	0.200 U	
SB-23-071816	7/18/16	14.5	1.00 U	1.00 U	0.200 U	
MTCA Method A/B CULs			5 (A)	16 (B)	0.2 (A)	
Notes:						
<ol style="list-style-type: none"> 1. bgs = below ground surface 2. U = result is less than the laboratory practical quantitation limit (PQL) 3. PCE = tetrachloroethene, cDCE = cis-1,2-dichloroethene, tDCE = trans-1,2-dichloroethene 4. (A) = MTCA Method A groundwater cleanup level (CUL) 5. (B) = MTCA Method B groundwater cleanup level 6. Bold indicates that the compound was detected above the PQL, and shading indicates the concentration exceeds the MTCA Method A or B CUL 7. Volatile Organic Compounds (VOCs) analyzed by USEPA Method 8260. Only detected VOCs are shown; see laboratory report for the complete analyte list. 8. µg/L = micrograms per liter 						

Table 6
Soil Analytical Results - Trench Samples
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (mg/kg)		
			PCE	TCE	cDCE
Trench 1-1	7/6/2015	1	0.0216 U	0.0216 U	0.0216 U
Trench 2-4	7/6/2015	4	0.0206 U	0.0206 U	0.0206 U
Trench 3-1	7/6/2015	1	0.147	0.0712	0.0202 U
Trench 4-4	7/6/2015	4	0.0216 U	0.0345	0.0598
Trench 5-4	7/6/2015	4	0.131	0.507	0.300
Method A Unrestricted CUL			0.05 (A)	0.03 (A)	160 (B)
Notes:					
<ol style="list-style-type: none"> 1. bgs = below ground surface 2. U = result is less than the laboratory practical quantitation limit (PQL) 3. PCE = tetrachloroethene, TCE = trichloroethene, cDCE = cis-1,2-dichloroethene 4. (A) = MTCA Method A soil cleanup level (CUL) 5. (B) = MTCA Method B soil cleanup level (ingestion only) 6. Bold indicates the compound was detected above the PQL, and shading indicates the concentration exceeds the MTCA Method A or B CUL 7. Volatile Organic Compounds (VOCs) analyzed by USEPA Method 8260. Only detected VOCs are shown; see laboratory report for the complete analyte list. 8. mg/kg = milligrams per kilogram 					

Table 8
SVE Pilot Test Summary - Vapor Probes
Bethel Junction
Port Orchard, Washington

Vapor Point ID	Distance from SVE Well	Time	Elapsed Time (min.)	PID (ppmv)	Vacuum (in.w.c.)	Vacuum Change (in.w.c.)	Comments
VP-4	~27 ft	845	0	4.8	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		945	27	2.4	0.08	0.08	
		1015	57	2.0	0.04	-0.04	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1045	87	2.7	0.03	-0.01	
		1115	117	2.5	0.03	0.00	
		1150	152	2.7	0.00	-0.03	
		1225	187	2.0	0.04	0.04	
		1255	217	1.8	0.00	-0.04	
1355	277	1.2	0.04	0.04			
VP-5	~29 ft	840	0	5.2	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		940	22	3.2	0.05	0.05	
		1010	52	3.5	0.06	0.01	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1040	82	2.5	0.05	-0.01	
		1110	112	2.5	0.02	-0.03	
		1145	147	1.5	0.06	0.04	
		1220	182	1.9	0.07	0.01	
		1250	212	1.8	0.08	0.01	
1350	272	1.2	0.06	-0.02			
VP-6	~42 ft	825	0	1.1	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		935	17	2.3	0.00	0.00	
		1005	47	2.3	0.10	0.10	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1035	77	1.6	0.02	-0.08	
		1105	107	1.2	0.02	0.00	
		1140	142	1.3	0.02	0.00	
		1215	177	0.8	0.02	0.00	
		1245	207	1.2	0.02	0.00	
1345	267	1.1	0.02	0.00			

Table 8
SVE Pilot Test Summary - Vapor Probes
Bethel Junction
Port Orchard, Washington

Vapor Point ID	Distance from SVE Well	Time	Elapsed Time (min.)	PID (ppmv)	Vacuum (in.w.c.)	Vacuum Change (in.w.c.)	Comments
VP-7	19.3 ft	820	0	11.5	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		930	12	3.4	1.10	1.10	
		1000	42	3.3	1.00	-0.10	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1030	72	3.3	1.00	0.00	
		1100	102	2.5	1.00	0.00	
		1135	137	3.0	1.50	0.50	
		1210	172	2.3	1.70	0.20	
		1240	202	1.6	1.70	0.00	
1340	262	2.1	1.80	0.10			
VP-8	9 ft	816	0	6.2	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		925	7	2.9	0.15	0.15	
		955	37	3.5	0.14	-0.01	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1025	67	3.2	0.14	0.00	
		1055	97	2.6	0.02	-0.12	
		1130	132	2.8	0.10	0.08	
		1205	167	2.1	0.30	0.20	
		1235	197	2.8	0.22	-0.08	
1335	257	2.3	0.20	-0.02			
VP-9	14.4 ft	810	0	18.1	0.00	-	Baseline reading with system off; turned on at 918 Step 1 - Blower vacuum of 10 in.w.c.
		920	2	3.1	1.10	1.10	
		950	32	2.8	1.00	-0.10	Step 2 - Blower vacuum of 17 in.w.c. at 1125
		1020	62	2.3	1.00	0.00	
		1050	92	2.3	1.00	0.00	
		1125	127	2.5	1.40	0.40	
		1200	162	2.3	1.70	0.30	
		1230	192	2.3	1.80	0.10	
1330	252	2.1	1.80	0.00			
Notes: 1. Soil vapor extraction (SVE) pilot test conducted on August 8, 2016 2. PID = Photoionization Detector measuring volatile organic compound concentration in parts per million by volume (ppmv) 3. in.w.c. = inches of water column							

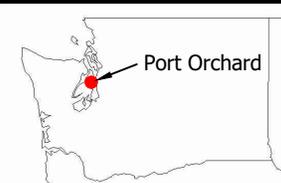
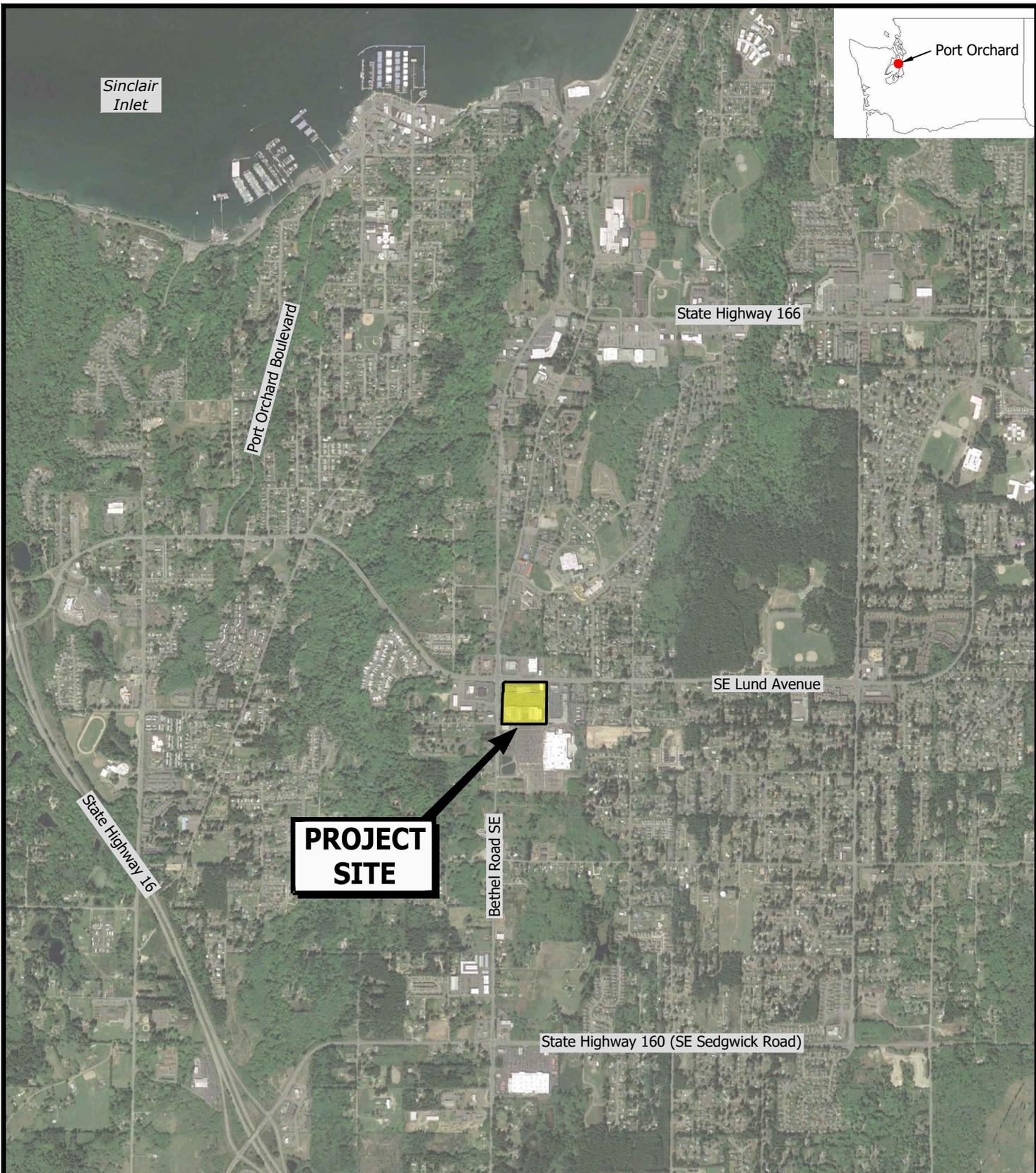
Table 9
SVE Pilot Test - Stack Sample VOC Detections
Bethel Junction
Port Orchard, Washington

Detected VOCs	Concentration ($\mu\text{g}/\text{m}^3$)
1-Propene	8.52
Acetone	13.0
Cis-1,2-Dichloroethene	15.9
Hexane	1.37
Isopropyl Alcohol	3.27
Naphthalene	1.57
Styrene	1.83
Tetrachloroethene	158
Trans-1,2-Dichloroethene	2.62
Trichloroethene	19.8
Vinyl Chloride	2.20

Notes:

1. Soil vapor extraction (SVE) pilot test conducted on August 8, 2016
2. Volatile Organic Compounds (VOCs) analyzed by USEPA Method TO-15.
Only detected VOCs are shown; see laboratory report for the complete analyte list.
3. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

ILLUSTRATIONS



Sinclair Inlet

Port Orchard Boulevard

State Highway 166

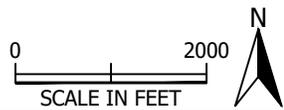
SE Lund Avenue

State Highway 16

PROJECT SITE

Bethel Road SE

State Highway 160 (SE Sedgwick Road)



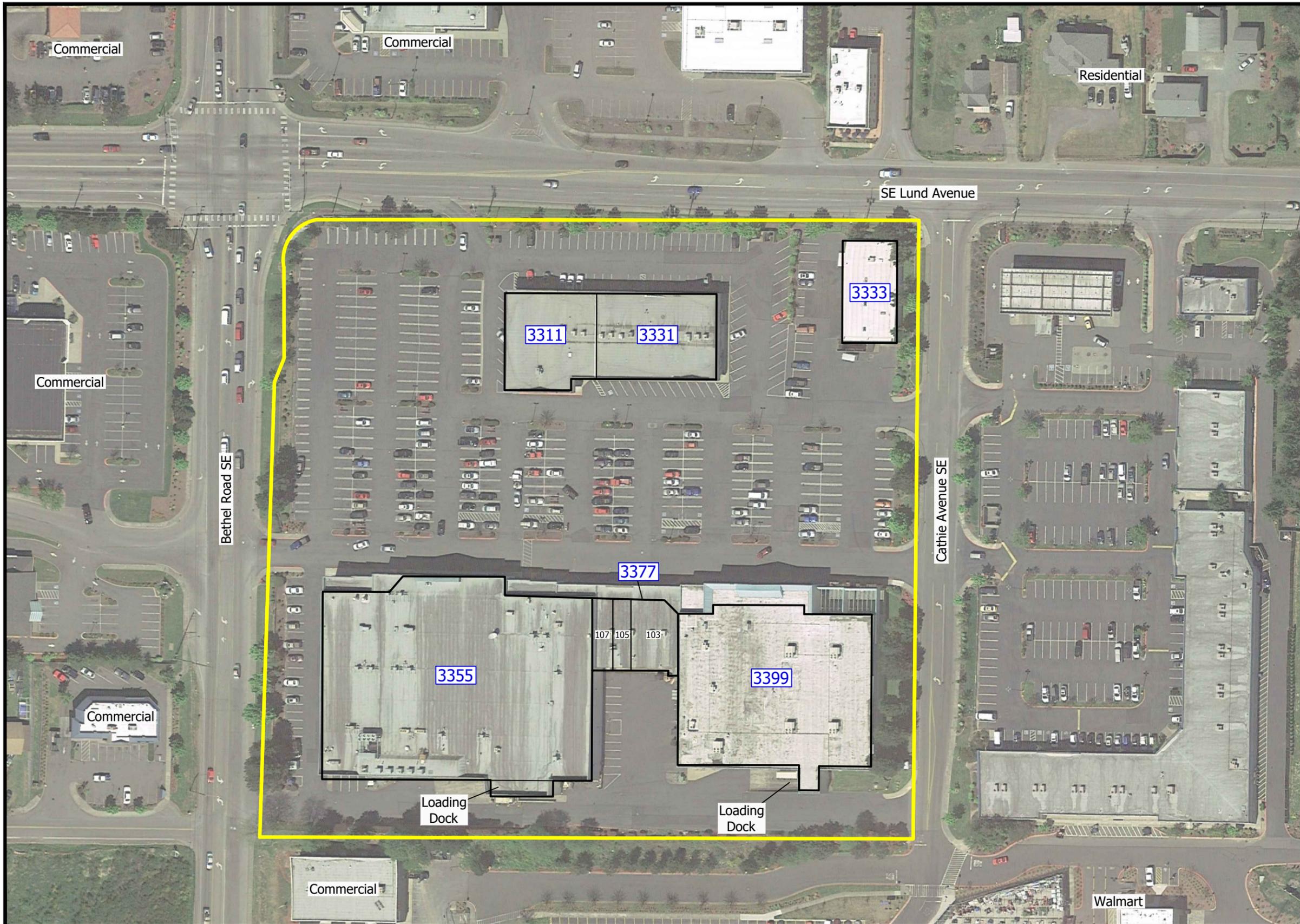
Aerial Photo: June 6, 2016 (Google 2016)



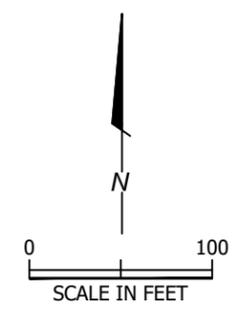
PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

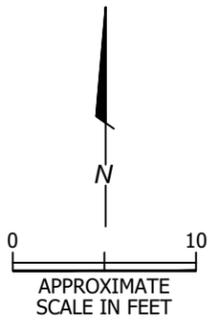
PLATE
1



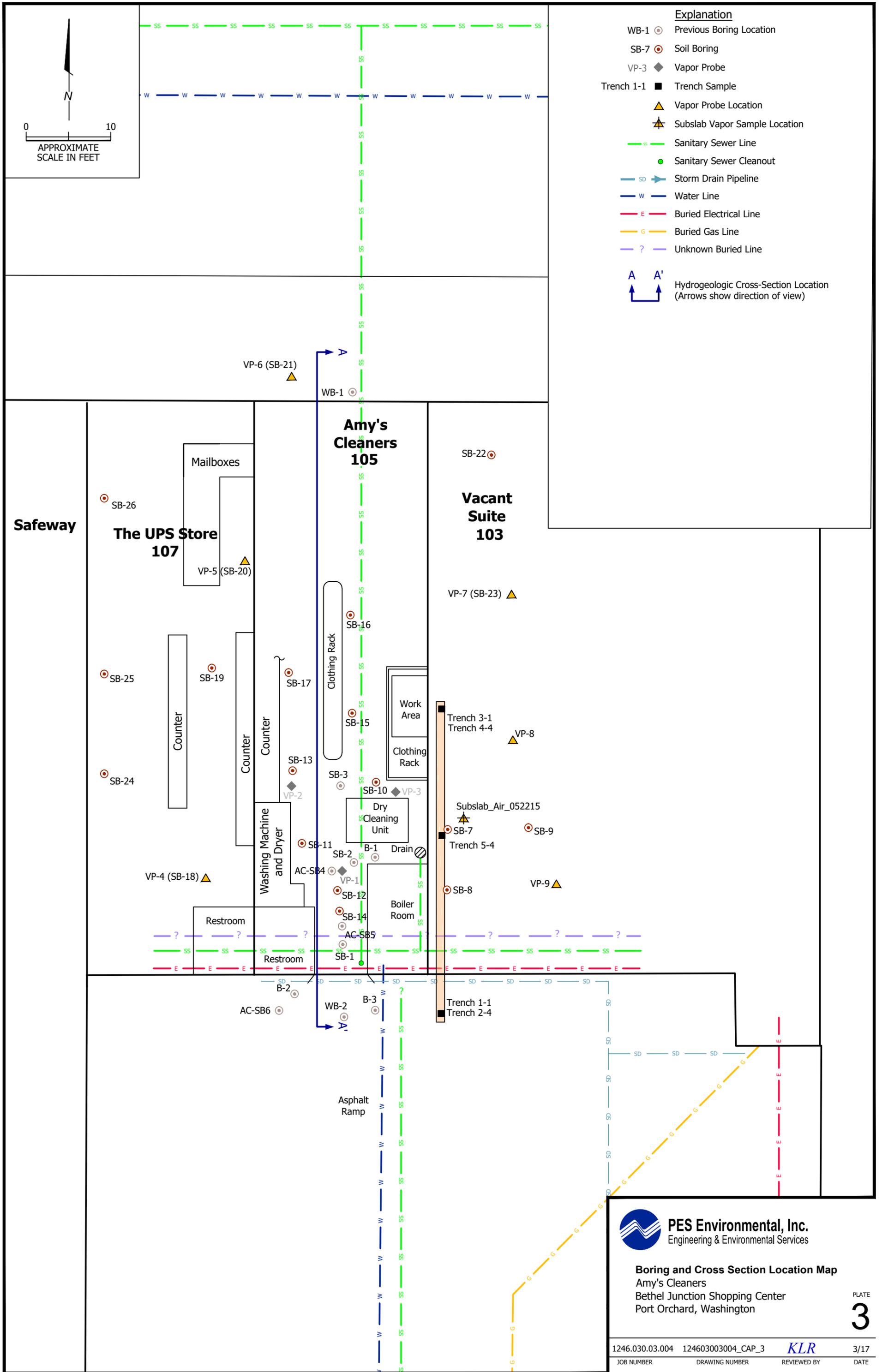
- Explanation**
- Approximate Property Boundary
 - 3333 Building Addresses on Bethel Road SE
 - 103 Building Suite Number



Aerial Photo: May 4, 2013 (Google 2014)



- Explanation**
- WB-1 Previous Boring Location
 - SB-7 Soil Boring
 - VP-3 Vapor Probe
 - Trench 1-1 Trench Sample
 - Vapor Probe Location
 - Subslab Vapor Sample Location
 - Sanitary Sewer Line
 - Sanitary Sewer Cleanout
 - Storm Drain Pipeline
 - Water Line
 - Buried Electrical Line
 - Buried Gas Line
 - Unknown Buried Line
 - Hydrogeologic Cross-Section Location (Arrows show direction of view)

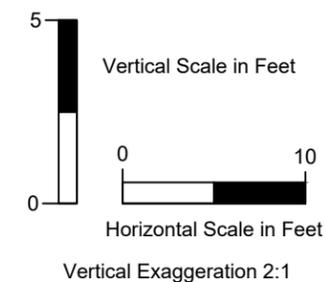
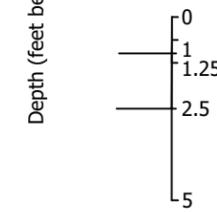
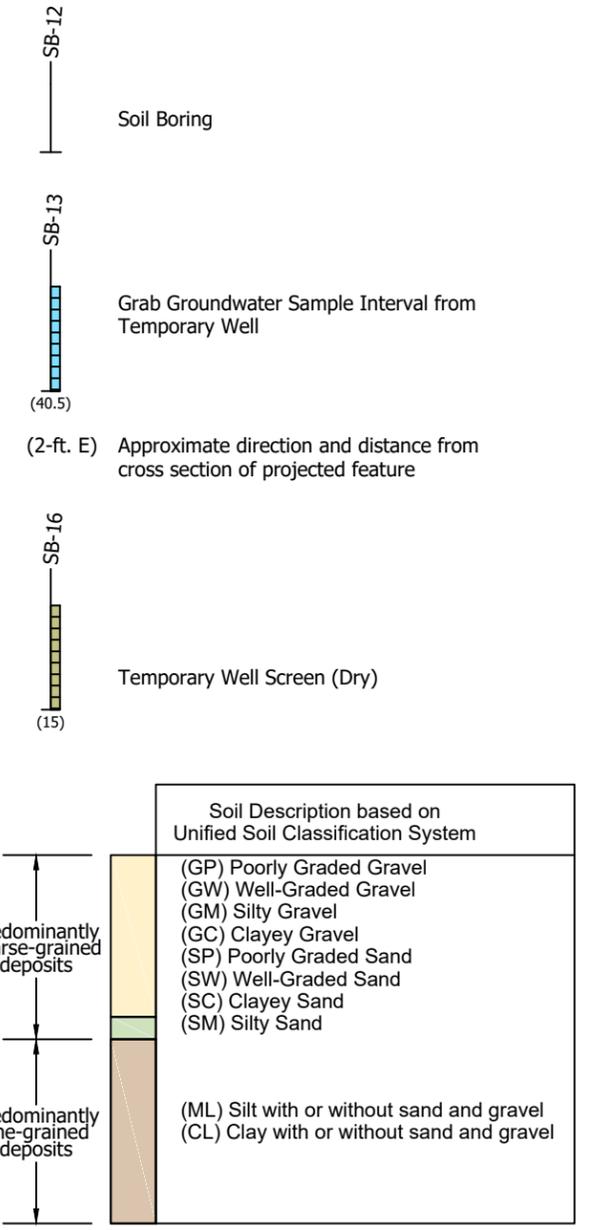
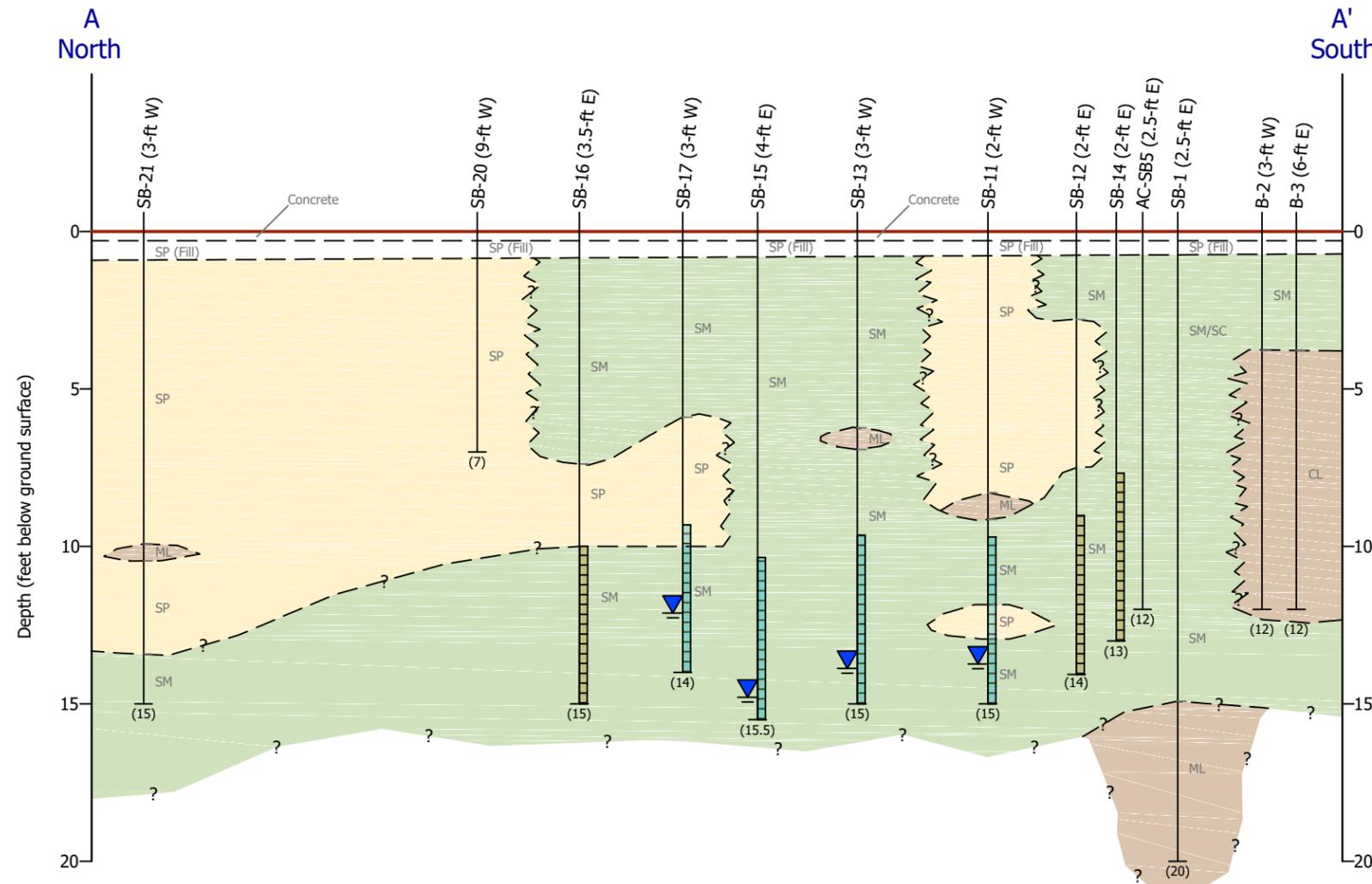


Boring and Cross Section Location Map
 Amy's Cleaners
 Bethel Junction Shopping Center
 Port Orchard, Washington

PLATE
3

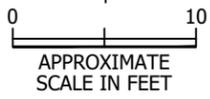
Explanation

-  Approximate Ground Surface Elevation
-  Geologic Contact
-  Perched Groundwater elevation at time of drilling



PES Environmental, Inc.
Engineering & Environmental Services

Hydrogeologic Cross Section A-A'
Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington



Explanation

- WB-1 Previous Boring Location
- SB-7 Soil Boring
- VP-3 Vapor Probe
- Trench 1-1 Trench Sample
- Vapor Probe Location
- Sanitary Sewer Line
- Sanitary Sewer Cleanout
- Storm Drain Pipeline
- Water Line
- Buried Electrical Line
- Buried Gas Line
- Unknown Buried Line

J = Estimated Value
 All concentrations in milligrams per kilogram (mg/kg)
 Depths in feet below ground surface
 PCE = tetrachloroethene
 TCE = trichloroethene
 cDCE = cis-1,2-dichloroethene
 tDCE = trans-1,2-dichloroethene
 ND = not detected at or above the laboratory practical quantitation limit (PQL); see Table 1 for the PQLs

Shading indicates the concentration exceeds the cleanup level

SB-7 through SB-9 soil samples collected on June 12, 2015
 SB-10 through SB-13 soil samples collected on June 25, 2015
 Trench soil samples collected on July 6, 2015
 SB-14 through SB-17 soil samples collected on July 9, 2015
 SB-18 through SB-23 soil samples collected on July 17 and 18, 2016
 SB-24 through SB-26 soil samples collected on September 18, 2016

Soil Cleanup Levels (mg/kg)				
PCE	TCE	cDCE	tDCE	
0.05	0.03	160	1,600	

Reference: Soil cleanup levels based on the Washington State Department of Ecology Model Toxics Control Act Cleanup Regulation (Chapter 173-340 WAC) Method A (PCE and TCE) or Method B (cDCE and tDCE) cleanup levels.

SB-21/VP-6				
Depth	PCE	TCE	cDCE	tDCE
3	ND	ND	ND	ND
6	ND	ND	ND	ND
9	ND	ND	ND	ND

SB-16				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.0527	ND	ND	ND
3	0.0762	ND	ND	ND
6	0.572	0.142	ND	ND
9	ND	ND	ND	0.194

SB-15				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.104	ND	ND	ND
3	0.0464	0.126	ND	0.0584
6	0.0437	ND	ND	ND
10.5	ND	ND	ND	ND

SB-17				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.0736	ND	ND	ND
3	0.0828	ND	ND	ND
6	0.0526	0.0469	ND	ND
9	ND	ND	ND	ND

SB-20/VP-5				
Depth	PCE	TCE	cDCE	tDCE
3	0.0945	ND	ND	ND
6	ND	ND	ND	ND
7	ND	ND	ND	ND

SB-26				
Depth	PCE	TCE	cDCE	tDCE
3	0.0330	ND	ND	ND

SB-19				
Depth	PCE	TCE	cDCE	tDCE
3	0.14	ND	ND	ND
6	ND	ND	ND	ND
9	ND	ND	ND	ND

SB-25				
Depth	PCE	TCE	cDCE	tDCE
3	0.0462	ND	ND	ND

SB-24				
Depth	PCE	TCE	cDCE	tDCE
3	0.0329	ND	ND	ND

SB-13				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.232	0.0213	ND	ND
3	0.136	0.0450	ND	0.119
9	ND	ND	ND	0.0263

SB-18/VP-4				
Depth	PCE	TCE	cDCE	tDCE
3	ND	ND	ND	ND
6	ND	ND	0.162	ND
9	ND	ND	ND	ND

SB-11				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.656	0.0230	ND	ND
2	0.179 J	0.660	ND	0.113
9	ND	ND	ND	0.0252

SB-12				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.0995	ND	ND	ND
3	0.0986	0.225	ND	0.0600
9	ND	ND	ND	0.192

SB-14				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.321	ND	ND	ND
3	0.0441	0.173	0.0268	0.0856
6	0.0465	0.0210	ND	0.0851
9	ND	ND	ND	0.176

SB-22				
Depth	PCE	TCE	cDCE	tDCE
3	ND	ND	ND	ND
6	ND	ND	ND	ND
9.5	ND	ND	ND	ND

SB-23/VP-7				
Depth	PCE	TCE	cDCE	tDCE
3	0.0432	ND	ND	ND
6	ND	ND	ND	ND
9	ND	ND	ND	ND

Trench 3/4				
Depth	PCE	TCE	cDCE	tDCE
1	0.147	0.0712	ND	ND
4	ND	0.0345	0.0598	ND

SB-10				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.166	ND	ND	ND
3	0.269	0.0222	ND	ND
10	ND	ND	ND	0.0682

SB-9				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.0432	ND	ND	ND
5	ND	ND	ND	ND
10	ND	ND	ND	ND

SB-7				
Depth	PCE	TCE	cDCE	tDCE
0 to 4	0.0893	ND	ND	ND
4 to 8	ND	ND	ND	0.0458
13	ND	ND	ND	0.0279

Trench 5				
Depth	PCE	TCE	cDCE	tDCE
4	0.131	0.507	0.300	ND

SB-8				
Depth	PCE	TCE	cDCE	tDCE
0.5	0.0489	ND	ND	ND
5	ND	ND	ND	0.296
10	ND	ND	ND	ND

Trench 1/2				
Depth	PCE	TCE	cDCE	tDCE
1	ND	ND	ND	ND
4	ND	ND	ND	ND

Amy's Cleaners 105

Vacant Suite 103

Safeway

The UPS Store 107

Mailboxes

Counter
Counter
Counter

Clothing Rack

Work Area
Clothing Rack

Washing Machine and Dryer

Dry Cleaning Unit

Drain

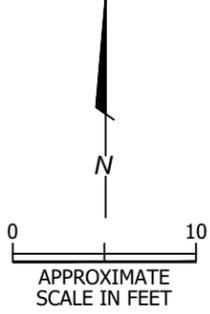
Boiler Room

Restroom

Asphalt Ramp



Soil Analytical Results
 Amy's Cleaners
 Bethel Junction Shopping Center
 Port Orchard, Washington



- Explanation**
- WB-1 Previous Boring Location
 - SB-7 Soil Boring
 - VP-3 Vapor Probe
 - Vapor Probe Location
 - Sanitary Sewer Line
 - Sanitary Sewer Cleanout
 - Storm Drain Pipeline
 - Water Line
 - Buried Electrical Line
 - Buried Gas Line
 - Unknown Buried Line

J = Estimated Value
 All concentrations in micrograms per liter (µg/l)
 PCE = tetrachloroethene
 TCE = trichloroethene
 cDCE = cis-1,2-dichloroethene
 U = not detected at or above the indicated laboratory practical quantitation limit (PQL)
 Shading indicates the concentration exceeds the cleanup level
SB-23 (14.5 ft) = Sample ID with Sample Depth in feet below ground surface

Groundwater Cleanup Levels (µg/L)				
PCE	TCE	cDCE	VC	
5	5	16	0.2	

Reference: Groundwater cleanup levels based on the Washington State Department of Ecology Model Toxics Control Act Cleanup Regulation (Chapter 173-340 WAC) Method A (PCE, TCE, and VC) or Method B (cDCE) cleanup levels.

SB-22 (11.5 ft)

Date	PCE	TCE	cDCE	VC
07/18/16	1.00 U	0.500 U	1.00 U	0.200 U

SB-21
 Dry
 VP-6 (SB-21)
 WB-1

SB-23 (14.5 ft)

Date	PCE	TCE	cDCE	VC
07/18/16	1.00 U	0.500 U	1.00 U	0.200 U

VP-7 (SB-23)

SB-17 (13 ft)

Date	PCE	TCE	cDCE	VC
07/09/15	1.00 U	0.500 U	10.4	0.200 U

SB-19
 Dry

SB-15 (14.5 ft)

Date	PCE	TCE	cDCE	VC
07/09/15	1.00 U	0.500 U	8.22	0.200 U

SB-10 (13.38 ft)

Date	PCE	TCE	cDCE	VC
06/25/15	1.52	0.500 U	18.3	0.200 U

SB-13 (14.01 ft)

Date	PCE	TCE	cDCE	VC
06/25/15	1.00 U	0.500 U	37.3	0.658 J

SB-11 (13.70 ft)

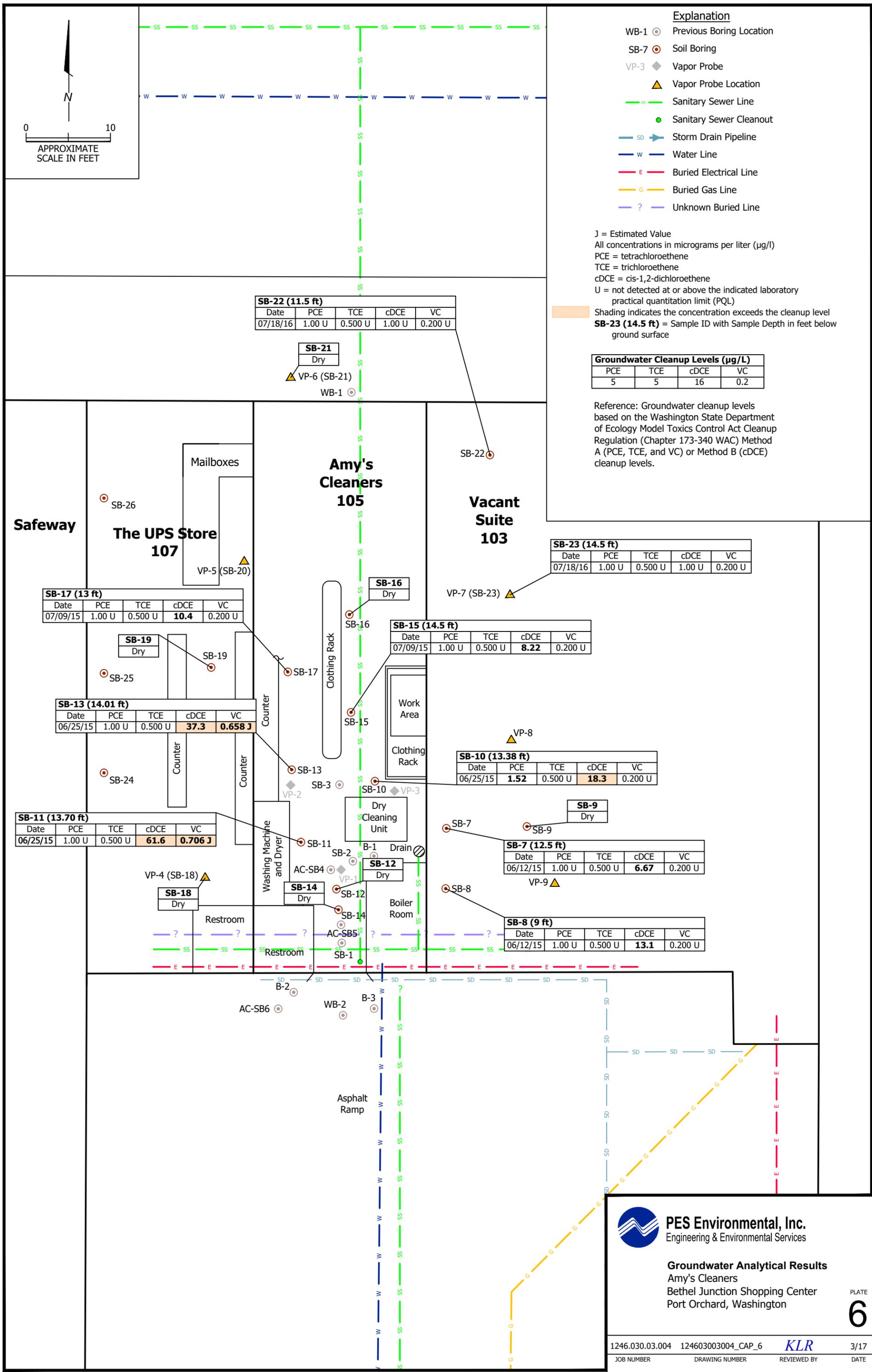
Date	PCE	TCE	cDCE	VC
06/25/15	1.00 U	0.500 U	61.6	0.706 J

SB-7 (12.5 ft)

Date	PCE	TCE	cDCE	VC
06/12/15	1.00 U	0.500 U	6.67	0.200 U

SB-8 (9 ft)

Date	PCE	TCE	cDCE	VC
06/12/15	1.00 U	0.500 U	13.1	0.200 U

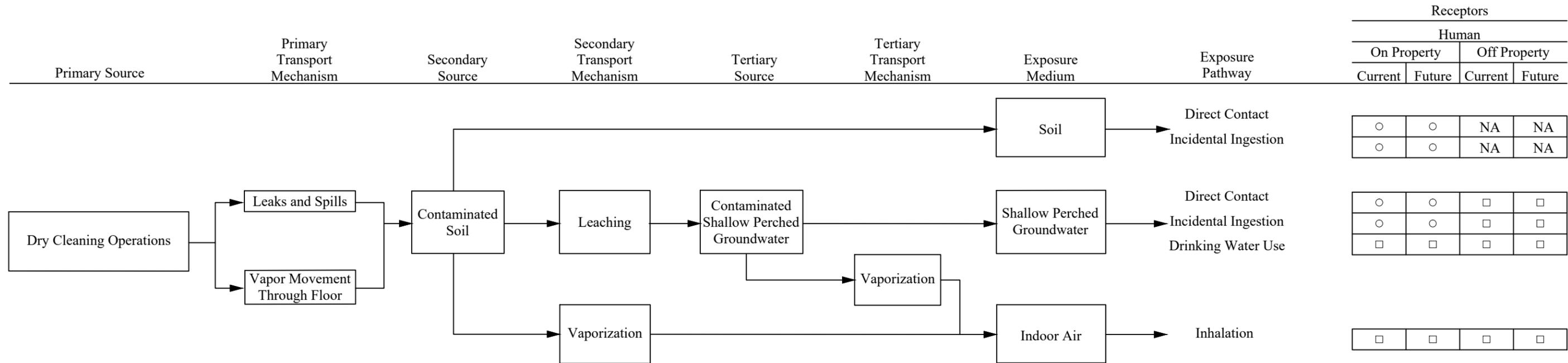



PES Environmental, Inc.
 Engineering & Environmental Services

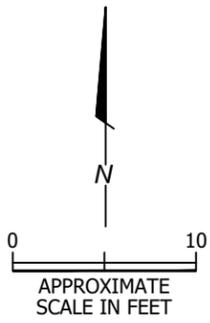
Groundwater Analytical Results
 Amy's Cleaners
 Bethel Junction Shopping Center
 Port Orchard, Washington

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 JOB NUMBER DRAWING NUMBER REVIEWED BY DATE

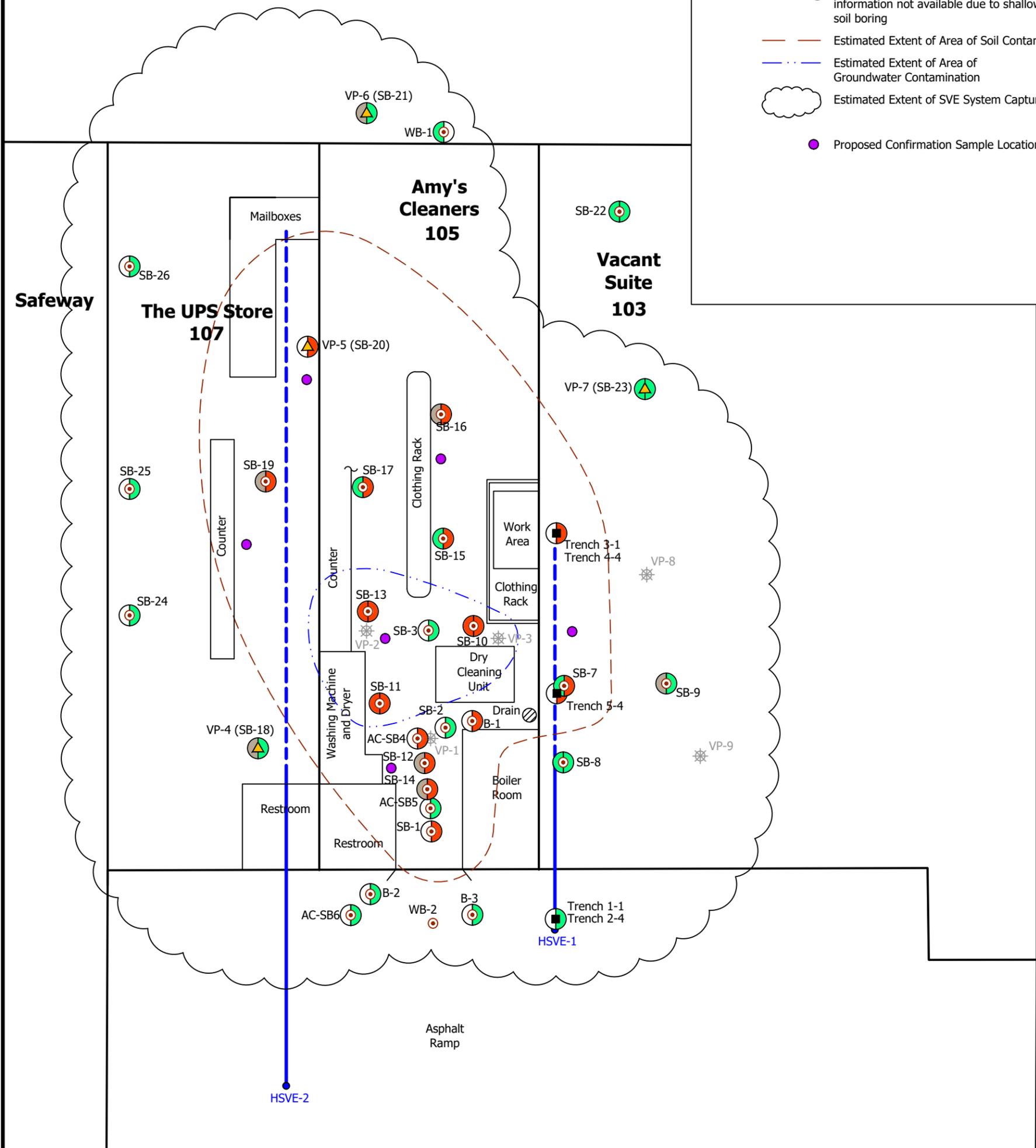
PLATE
6



Legend
 NA Not applicable
 ● Complete exposure pathway
 ○ Complete but minor exposure
 □ Incomplete exposure pathway



- Explanation**
- SB-7 Soil Boring
 - Trench 1-1 Trench Sample
 - Vapor Probe Location
 - VP-8 Decommissioned Vapor Monitoring Probe
 - HSVE-1 Existing and Planned Horizontal SVE Well
 - Groundwater Contaminant of Concern (COC) Concentration above applicable Cleanup Levels (CULs)
 - Groundwater COC Concentration below applicable CULs or Method Reporting Limits (MRLs)
 - Dry
 - Soil COC Concentration above applicable CULs
 - Soil COC Concentration below applicable CULs or MRLs
 - Soil sample not collected or groundwater information not available due to shallow soil boring
 - Estimated Extent of Area of Soil Contamination
 - Estimated Extent of Area of Groundwater Contamination
 - Estimated Extent of SVE System Capture Zone
 - Proposed Confirmation Sample Location



PES Environmental, Inc.
Engineering & Environmental Services

Area of Contamination and Proposed Confirmation Sampling Locations
Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE
8

APPENDIX A
PREVIOUS ENVIRONMENTAL DOCUMENTS

6.4 Environmental Covenant

Tavitac Bethel, LLC
c/o Robertson Properties
120 N. Robertson Blvd.
Los Angeles, CA 90048



E-W

Document title(s): **Restrictive Covenant**

Reference number(s) of document(s) assigned or released (if applicable): **N/A**

Grantor(s): **Tavitac Bethel, LLC**

Grantee(s): **Washington State Department of Ecology
The Public**

Legal description (abbreviated):

Ptn NW ¼ NW ¼ S1-T23N-R1E

LAND TITLE COMPANY
has placed this document of
record as a restrictive covenant
and accepts no liability for the
accuracy or validity of the
document.

Assessor's Tax Parcel Number(s): **012301-2-111-2009**

Tavitac Bethel, LLC
c/o Robertson Properties
120 N. Robertson Blvd.
Los Angeles, CA 90048
Attn: Mr. James D. Vandever

RESTRICTIVE COVENANT

This declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g), and WAC 173-340-440 by Tavitac Bethel, LLC, its successors and assigns, and the Washington State Department of Ecology.

Legal Description:

That portion of the Northwest quarter of the Northwest Quarter of Section 1, Township 23 North, Range 1 East, W.M., in Kitsap County, Washington, described as follows:

Commencing at the Northwest corner of the Northwest quarter of the Northwest quarter of said Section 1; thence along the North line thereof 40 feet to the intersection of the Easterly right of way line of Bethel Road with said North line; thence South $01^{\circ}53'41''$ west along said easterly right of way line 45.95 feet to the true point of beginning; thence continuing South $01^{\circ}53'41''$ West 614.06 feet; thence South $88^{\circ}26'52''$ East 650.02 feet; thence North $01^{\circ}43'03''$ East 330.00 feet; thence North $01^{\circ}53'41''$ East 290.00 feet to the Southerly right of way line of Lund Avenue being 40.00 feet normal distance South of the North line of said Section 1; thence along said Southerly right of way line and parallel to said North section line North $88^{\circ}26'52''$ West of 634.34 feet; thence South $69^{\circ}31'54''$ West 15.86 feet to the true point of beginning;

Except that portion conveyed to Kitsap County for Bethel Road under Auditor's File No. 9411170159.

Tax Parcel I.D. #012301-2-111-2009



RESTRICTIVE COVENANT
for Tavitac Bethel LLC
Amy's Cleaners Property

This Declaration of Restrictive Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Tavitac Bethel, LLC, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

An independent subsurface investigation occurred at the property that is the subject of this Restrictive Covenant. The subsurface investigations conducted at the property are described in the following documents:

1. Limited Subsurface Investigation
Amy's Cleaners
3377 Bethel Road Southeast
Port Orchard, Washington
EnviroBusiness, Inc., dated July 14, 2000
2. Limited Subsurface Investigation
Amy's Cleaners
3377 Bethel Road Southeast
Port Orchard, Washington
EnviroBusiness, Inc., dated March, 2001
3. Draft Supplemental Subsurface Investigation Report
Amy's Cleaners
3377 Bethel Road Southeast
Port Orchard, Washington
EnviroBusiness, Inc., dated October 30, 2001
4. Supplemental Subsurface Investigation Report
Amy's Cleaners
3377 Bethel Road Southeast
Port Orchard, Washington
EnviroBusiness, Inc., dated October 30, 2001

These documents are on file at Ecology's Northwest Regional Office.

This Restrictive Covenant is required because residual concentrations of tetrachloroethylene (PCE) exceed the Model Toxics Control Act Method A Residential Cleanup Level for soil established under WAC 173-340-740.



The undersigned, Tavitac Bethel, LLC, is the fee owner of real property in the County of Kitsap State of Washington, that is subject to this Restrictive Covenant. The Property that is the subject of this Covenant is the portion, and unit, of tax parcel 012301-2-111-2009 that is located at #105 3377 Bethel Road Southeast in Port Orchard, and is shown in the attached diagram (hereafter "Property"). Tax parcel 012301-2-111-2009 is legally described as follows:

That portion of the Northwest quarter of the Northwest Quarter of Section 1, Township 23 North, Range 1 East, W.M., in Kitsap County, Washington, described as follows:

Commencing at the Northwest corner of the Northwest quarter of the Northwest quarter of said Section 1; thence along the North line thereof 40 feet to the intersection of the Easterly right of way line of Bethel Road with said North line; thence South 01°53'41" west along said easterly right of way line 45.95 feet to the true point of beginning; thence continuing South 01°53'41" West 614.06 feet; thence South 88°26'52" East 650.02 feet; thence North 01°43'03" East 330.00 feet; thence North 01°53'41" East 290.00 feet to the Southerly right of way line of Lund Avenue being 40.00 feet normal distance South of the North line of said Section 1; thence along said Southerly right of way line and parallel to said North section line North 88°26'52" West of 634.34 feet; thence South 69°31'54" West 15.86 feet to the true point of beginning;

Except that portion conveyed to Kitsap County for Bethel Road under Auditor's File No. 9411170159.

Tavitac Bethel, LLC, by way of remedial action (the "Remedial Action"), makes the following declarations as to limitations, restrictions, and uses to which the Property may be put, and specifies that such declarations shall constitute covenants to run with the land, as provided by law, and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

Section 1. The Property contains PCE-contaminated soil located beneath the portion of the #105 3377 Bethel Road Southeast building in the vicinity of the dry cleaning machine and floor drain located in the southern portion of the building. The Owner shall not alter, modify, or remove the existing structure at the #105 3377 Bethel Road Southwest in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology. Any activity on the Property that may

4  200403030372
Page: 4 of 7
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LAND TITLE CO COVEN 425.00 Kitsap Co, WA

result in the release or exposure to the environment of the contaminated soil that is contained beneath that portion of the #105 3377 Bethel Road building, or creates a new exposure pathway, is prohibited.

Section 2. Any activity on the Property that may interfere with the integrity of the existing concrete floor and continued protection of human health and the environment is prohibited.

Section 3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property, or creates a new exposure pathway, is prohibited without prior written approval from Ecology.

Section 4. The Owner of the Property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property, except that the Owner need not give advance written notice to Ecology if the Owner leases a subunit of a building on the Property when such lease expressly prohibits any activity which is inconsistent with the terms of this Restrictive Covenant pursuant to Section 5. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued maintenance of the Remedial Action.

Section 5. The Owner must restrict leases of the Property to uses and activities consistent with the Restrictive Covenant and notify all lessees of the Property of the restrictions on the use of the Property.

Section 6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action; to take samples, to inspect remedial actions conducted at the Property, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

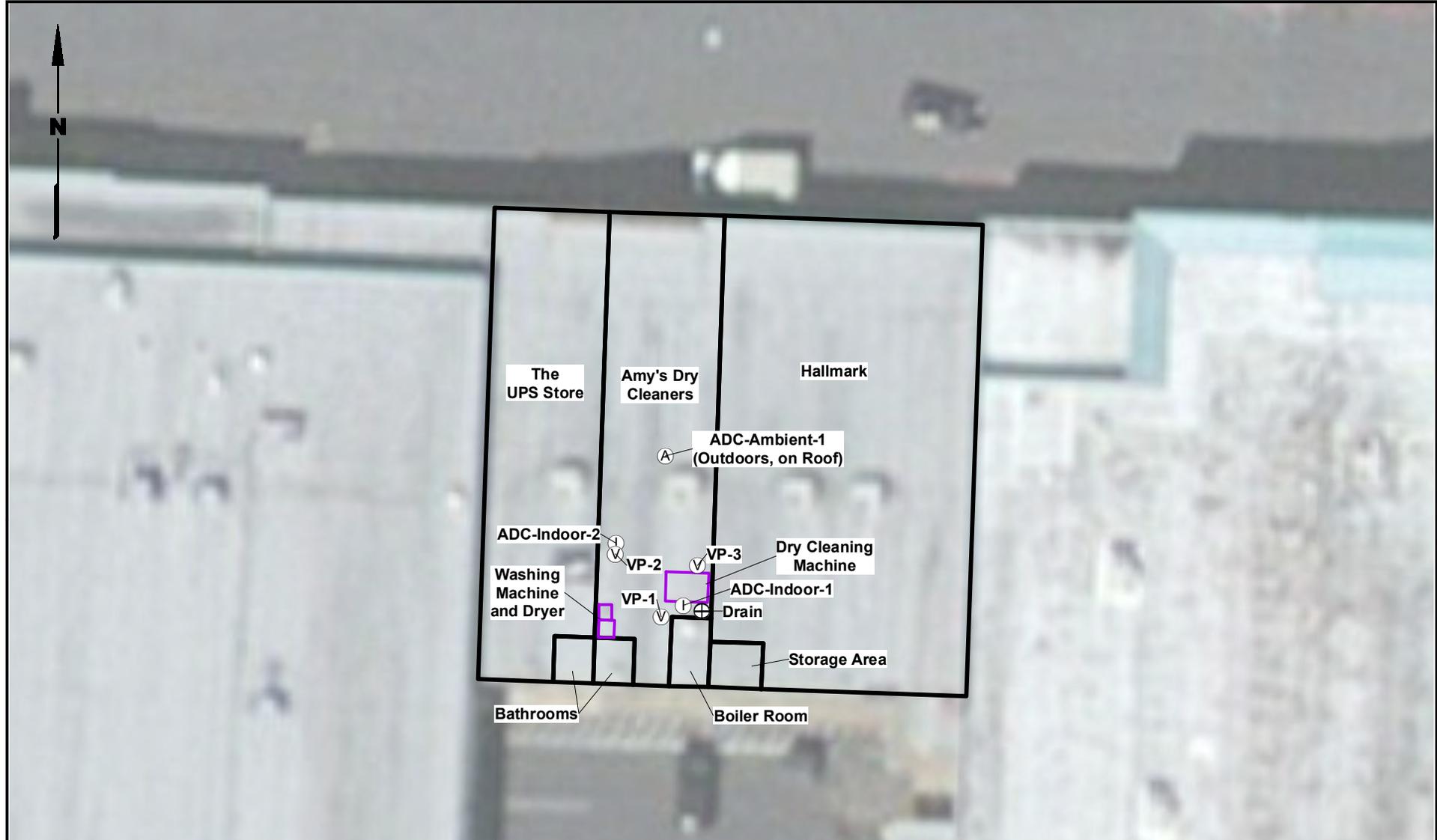


	<p>AUDITOR'S NOTE LEGIBILITY FOR RECORDING AND COPYING UNSATISFACTORY IN A PORTION OF THIS INSTRUMENT WHEN RECEIVED.</p>
	January 7, 2003
	not to scale
Site Plan	
Amy's Cleaners Port Orchard, Washington	EBI Project No: 22-2551
 LAND TITLE CO COVEN \$25.00 200403030372 Page: 7 of 7 03/03/2004 02:31P Kitsap Co, WA	

Table 1 - Summary of Soil Sample Analytical Results

Detected Analyte	WDOE Method B Soil Cleanup Levels	Sample ID/ Location	Sample Depth	Analytical Result
cis-1,2-Dichloroethene	800 mg/kg	AC-SB4	3.0 feet bgs	360 µg/kg
		AC-SB4	4.5 feet bgs	340 µg/kg
		AC-SB4	8.0 feet bgs	530 µg/kg
		AC-SB4	11.0 feet bgs	1,900 µg/kg
		AC-SB5	3.0 feet bgs	380 µg/kg
		AC-SB5	5.0 feet bgs	750 µg/kg
Trichloroethene	90.900 mg/kg	AC-SB4	3.0 feet bgs	230 µg/kg
Chlorobenzene	1,600 mg/kg	AC-SB4	8.0 feet bgs	64 µg/kg
Tetrachloroethene	19.607 mg/kg	AC-SB4	3.0 feet bgs	2,300 µg/kg
		AC-SB4	4.5 feet bgs	85 µg/kg
		AC-SB4	8.0 feet bgs	78 µg/kg
m-Dichlorobenzene	41.66 mg/kg	AC-SB4	4.5 feet bgs	110 µg/kg
		AC-SB4	8.0 feet bgs	168 µg/kg
p-Dichlorobenzene	41.66 mg/kg	AC-SB4	4.5 feet bgs	98 µg/kg
		AC-SB4	8.0 feet bgs	135 µg/kg
o-Dichlorobenzene	41.66 mg/kg	AC-SB4	4.5 feet bgs	73 µg/kg
		AC-SB4	8.0 feet bgs	110 µg/kg
Toluene	16,000 mg/kg	AC-SB5	5.0 feet bgs	84 µg/kg
Ethylbenzene	8,000 mg/kg	AC-SB4	8.0 feet bgs	62 µg/kg
Total Xylenes	160,000 mg/kg	AC-SB4	4.5 feet bgs	120 µg/kg
		AC-SB4	8.0 feet bgs	133 µg/kg

Notes: mg/kg = milligrams per kilogram
 µg/kg = micrograms per kilogram
 bgs = below ground surface



Legend

- (A) Ambient Air Sample
- (1) Indoor Air Sample
- (▽) Sub-Slab Vapor Sample
- (⊕) Drain

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Source: Esri World Imagery.



Bethel Junction Shopping Center Port Orchard, Washington	Sampling Locations	Figure 2
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TABLE 1
SOIL GAS ANALYTICAL RESULTS
AMY'S DRY CLEANERS TENANT SPACE
BETHEL JUNCTION SHOPPING CENTER
PORT ORCHARD, WASHINGTON

	Method B Soil Gas Screening Levels (a)	VP-1 1310245-001A 10/25/2013	VP-2 1310245-002A 10/25/2013	VP-3 1310245-003A 10/25/2013
VOLATILES ($\mu\text{g}/\text{m}^3$)				
Method TO-15				
Tetrachloroethene	320	2,590 E	5,400	5,240
trans-1,2-Dichloroethene	910	7.14	14.2	15.4
Trichloroethene	12	976 E	932	721
Vinyl Chloride	9.3	0.217 U	0.217 U	0.217 U

(a) Calculated using a vapor attenuation factor of 0.03.

E = Value is above quantitation range; no dilutions could be conducted on the sample due to sample volume.

U = Indicates the compound was not detected at the reported concentration.

Bold = Detected compound concentration exceeds screening level.

TABLE 2
AIR ANALYTICAL RESULTS
AMY'S DRY CLEANERS TENANT SPACE
BETHEL JUNCTION SHOPPING CENTER
PORT ORCHARD, WASHINGTON

	Screening Level (a)	ADC-Ambient-1 1401072-003A 1/9/2014	ADC-Indoor-1 1401072-001A 1/9/2014	ADC-Indoor-1 (corrected for ambient air) (b)	ADC-Indoor-2 1401072-002A 1/9/2014	ADC-Indoor-2 (corrected for ambient air) (b)
VOLATILES ($\mu\text{g}/\text{m}^3$)						
Method TO-15						
Tetrachloroethene	9.6	4.53	3.99	0	4.35	0
trans-1,2-Dichloroethene	27	0.793 U	0.791 U	0	0.791 U	0
Trichloroethene	0.37	8.20	7.34	0	7.66	0
Vinyl Chloride	0.28	0.217 U	0.217 U	0	0.217 U	0

(a) MTCA Method B cleanup level for air.

(b) Corrected concentrations calculated by subtracting the reported ambient air concentration (sample ADC-Ambient-1) from the reported indoor air concentration. Negative values were adjusted to zero.

$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter.

U = The compound was not detected at the reported concentration.

APPENDIX B
BORING LOGS

BORING LOG

Boring Location	B-1/Interior east of machine, south of floor drain	Elevation and Datum	
Drilling Company	TEG	Completion Depth	3' bgs
Drilling Equipment	Hand Auger	Number of Samples	2
Type/Diameter of Casing		Water Depth	N/A
Type of Perforation		Start Date	7/3/00
Type of Perforation Backfill		Completion Date	7/3/00
Type of Seal		Date Developed and Sampled	7/3/00
		Logged By	JMS
		Checked By	JMS

DEPTH (Feet)	DESCRIPTION	LOG DATA					SAMPLE LOG		REMARKS
		MOISTURE CONTENT	USCS	WELL CONST	OVA-PPM	BLOW COUNT	SAMPLE ID	SAMPLE INTERVAL	
0-	Dry, light-medium brown silty sand with occasional large cobblestones	10%			1.0		B1-2-S1	1'	No odor, stain detected
"		"			1.3		B1-3-S2	1'	
5-	Refusal encountered								
10-									
15-									
20-									
25-									

EBI ENVIROBUSINESS, INC.	Project Number	Boring #
	20-0641D	B-1
	Project Location	Page
	Amy's Cleaners, 3377 Bethel Road S.E., Port Orchard	1

BORING LOG

Boring Location	B-2/southeast of rear doorway	Elevation and Datum	
Drilling Company	TEG	Completion Depth	12' bgs
Drilling Equipment	Truck-mounted hydraulic rig	Number of Samples	3
Type/Diameter of Casing		Water Depth	N/A
Type of Perforation		Start Date	7/3/00
Type of Perforation Backfill		Completion Date	7/3/00
Type of Seal		Date Developed and Sampled	7/3/00
		Logged By	JMS
		Checked By	JMS

DEPTH (Feet)	DESCRIPTION	LOG DATA					SAMPLE LOG		REMARKS
		MOISTURE CONTENT	USCS	WELL CONST	OVA-PPM	BLOW COUNT	SAMPLE ID	SAMPLE INTERVAL	
0									
4	Slightly moist, light to medium brown silty sand with occasional large cobblestones and a clay layer	10%			0.7		B2-4-S3	4'	No odor, staining detected
8	Slightly moist, medium brown clay with some silty sand and large cobblestones	20%			0.0		B2-8-S4	4'	"
12	Moist, dark brown/grey clay with some silty sand and large cobblestones	40%			0.0		B2-12-S5	4'	"
15									
20									
25									

EB. ENVIROBUSINESS, INC.	Project Number	20-0641D	Boring #	B-2
	Project Location	Amy's Cleaners, 3377 Bethel Road S.E., Port Orchard		Page

BORING LOG

Boring Location		B-3/northeast of rear doorway		Elevation and Datum					
Drilling Company		TEG		Completion Depth		12' bgs			
Drilling Equipment		Truck-mounted hydraulic rig		Number of Samples		3			
Type/Diameter of Casing				Water Depth		N/A			
Type of Perforation				Start Date	7/3/00	Completion Date	7/3/00		
Type of Perforation Backfill				Date Developed and Sampled		7/3/00			
Type of Seal				Logged By	JMS	Checked By	JMS		
DEPTH (Feet)	DESCRIPTION	LOG DATA					SAMPLE LOG		REMARKS
		MOISTURE CONTEN	USCS	WELL CONST	OVA- PPM	BLOW COUNT	SAMPLE ID	SAMPLE INTERVA L	
0									
4	Slightly moist, light to medium brown silty sand with occasional large cobblestones and a clay layer	10%			0.8		B3-4-S6	4'	No odor, stainin detected
8	Slightly moist, medium brown clay with some silty sand and large cobblestones	30%			0.0		B3-8-S7	4'	"
12	Moist, dark brown/grey clay with some silty sand and large cobblestones	60%			0.0		B3-12-S8	4'	"
15									
20									
25									
EBI ENVIROBUSINESS, INC.		Project Number					Boring #		
		20-0641D					B-3		
		Project Location					Page		
		Amy's Cleaners, 3377 Bethel Road S.E., Port Orchard					3		

Borehole Log and Well Construction Diagram

Boring/Well Number:

AC-SB4

Client: Amy's Cleaners	Project Number: 00-37
Drilling Contractor: TEG Northwest	
Drilling Method: Strataprobe	
Logged By: Eric Chapman	Company: ARCS
Date: 11-30-00	
Page: 1 of 1	

Depth (feet)	Graphic Symbol
3	
6	
9	
12	

Recovery (inches)	USGS Soil Type	Description	PID Reading	Sample Name
32"	SM	Slightly moist silty sand with gravels and few cobbles. Moderate brown to brownish gray color.	11.5	AC-SB4-3
36"	SM/SC	Slightly moist silty sand with gravels and few cobbles changing to fine-grained sand with silt and clay layers. Moderate brown to brownish gray color.	0.7	AC-SB4-4.5
28"	SM/SC	Moist silty sand with clay and gravels. Moderate brown to brownish gray color.	0.0	AC-SB4-8
32"	SM/SC	Moist silty sand with clay and gravels, changing to dense fine-grain sand with silt at 11'. Brownish gray color. Dry at bottom of interval.	0.0	AC-SB4-11 AC-SB4-12

Borehole Log and Well Construction Diagram

Boring/Well Number:

AC-SB5

Client: Amy's Cleaners	Project Number: 00-37
Drilling Contractor: TEG Northwest	
Drilling Method: Strataprobe	
Logged By: Eric Chapman	Company: ARCS
Date: 11-30-00	
Page: 1 of 1	

Depth (feet)	Graphic Symbol
3	
6	
9	
12	

Recovery (inches)	USGS Soil Type	Description	PID Reading	Sample Name
24"	SM	Slightly moist silty sand with gravels and few cobbles. Moderate brown to brownish gray color.	0.0	AC-SB5-3
30"	SM/SC	Slightly moist, fine-grained sand with silt and clay layers. Moderate brown to brownish gray color.	0.0	AC-SB5-5
30"	SM/SC	Moist silty sand with clay and gravels. Moderate brown to brownish gray color.	0.0	AC-SB5-8
36"	SM/SC	Moist silty sand with clay and gravels, changing to dense fine-grain sand with silt at 11'. Brownish gray color.	0.0	AC-SB5-10 AC-SB5-12

BORING LOG

BORING NO.: SB-1
 PROJECT CODE: _____
 CADD FILE: _____
 PROJECT: 22-255
 LOCATION: AMY'S CLEANERS
PORT ORCHARD, WA

TOTAL DEPTH: 20'
 SURFACE ELEVATION: _____
 DRILLING METHOD: DIETZ PULSIF
 DRILLED BY: LACEY
 LOGGED BY: D. DOMINGO
 DATE COMPLETED: 12/18/02

DEPTH (feet)	SAMPLE IDENTIFICATION AND RESULTS	PIG HEAD SPACE	STANDARD PENETRATION (n)	H ₂ O LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	BOREHOLE ABANDONMENT
0					0-3" concrete floor		0	
5		φ			Silty SAND - grayish-brown, med grained sand, moderately well sorted, slightly moist, median dense, trace of fine gravels, no odor	SM	5	
10		φ					10	
15		φ			Trace of clay		15	
20	SB-1-20	φ			Sandy SILT - gray, well sorted, fine grained sand, slightly moist, median dense, trace of fine gravels, no odor	ML	20	
25					End of Boring Depth 20' No groundwater encountered		25	
30							30	
35							35	
40							40	

LEGEND

NOTES: Start: 0950
End: 1059

NOTE: CLASSIFICATION OF SOILS BASED ON THE UNITED STATES CLASSIFICATION SYSTEM

BORING LOG

BORING NO.: SB-2
 PROJECT CODE: _____
 CADD FILE: _____
 PROJECT: 22-2551
 LOCATION: ART'S CLEANERS
PART COURTYARD

TOTAL DEPTH: 20'
 SURFACE ELEVATION: _____
 DRILLING METHOD: DIRECT PUSH
 DRILLED BY: LACEY
 LOGGED BY: D. DOMINGO
 DATE COMPLETED: 12/18/02

DEPTH (feet)	SAMPLE IDENTIFICATION AND RESULTS	PIG HEAD SPACE	STANDARD PENETRATION (n)	H ₂ O LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	BOREHOLE ABANDONMENT
0					0-2" Concrete Floor		0	
5		φ			Silty SAND - grayish-brown, med. grained sand, moderately well sorted, slightly moist, medium dense, trace of fine gravel, no odor	SM	5	
10		φ					10	
15		φ			Sandy SILT - gray, well sorted, fine-med. grained sand, slightly moist, medium dense, no odor	ML	15	
20	SB-2-20	φ			End of Boring Depth 20' No groundwater encountered		20	
25							25	
30							30	
35							35	
40							40	

LEGEND

NOTES: Start: 1102
End: 1159

(NOTE: CLASSIFICATION OF SOILS BASED ON THE UNITED SOILS CLASSIFICATION SYSTEM)

BORING LOG

BORING NO.: SB-3
 PROJECT CODE: _____
 CADD FILE: _____
 PROJECT: 22-2351
 LOCATION: AH'S CLEANERS
PINE CREEK RD, WA

TOTAL DEPTH: 20'
 SURFACE ELEVATION: _____
 DRILLING METHOD: DIRECT PUSH
 DRILLED BY: LACEY
 LOGGED BY: D. DUKINOO
 DATE COMPLETED: 12/15/02

DEPTH (feet)	SAMPLE IDENTIFICATION AND RESULTS	PIG HEAD SPACE	STANDARD PENETRATION (n)	H ₂ O LEVEL	LITHOLOGIC DESCRIPTION	LITHOLOGY	DEPTH (feet)	BOREHOLE ABANDONMENT
0					15.5" concrete floor		0	
0-5		φ			Silty SAND - grayish-brown med. grained sand; moderately well sorted, slightly moist, med. dense, no odor.	SM	5	
5-10		φ					10	
10-15		φ			Sandy SILT - gray, well sorted, fine-med. grained sand, slightly moist, med. dense, no odor.	ML	15	
15-20	SB-3-20	φ					20	
20-25					End of Boring Depth = 20' No groundwater encountered		25	
25-30							30	
30-35							35	
35-40							40	

LEAD

NOTES: Start: 1250
End: 1335



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-7-0 to 4	0.4		42	0		<p>Concrete</p> <p>BROWN SAND (SP), dry to moist, fine, few fines, rare orange mottling</p> <p>@ 1 foot: crushed rock, then gray, moist, trace coarse gravel, trace root organics, lensate silt clumps, no orange mottling</p> <p>@ 2 feet: brown, fine to medium sand, carbonized organics, rare orange mottling</p>
	SB-7-4 to 8	0.8		36	5		<p>GRAY AND BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace subrounded gravel</p>
	SB-7-13	0.2		48	10		<p>LIGHT BROWN SAND (SP), moist to wet, fine, few fines, orange-brown staining, abundant wood organics in upper 3 inches, increased moisture content at bottom, laminated bedding</p>
		0.1		48	15		<p>BROWN SILTY SAND (SM), moist to wet, medium dense, fine, little fines</p>
		0.1		48	20		<p>LIGHT BROWN SILTY SAND (SM), moist, dense to very dense, fine to medium, little fines, trace fine gravel, abundant red-orange mottling, 1/4 to 1/2-inch layer of orange staining (TILL-LIKE)</p> <p>@ 10.8 feet: gray, moist to wet, fine to medium sand, little fines, sand and fines content varies in 2 to 4-inch zones, sand percentage decreases and fines percentage increases with depth</p> <p>@ 12 feet: trace coarse subrounded gravel, 6-inch wet layer</p>
							<p>Bottom of boring @ 16 feet (refusal)</p> <p>Temporary Well: 3/4" Sch. 40 PVC screen from 10-15 feet bgs with #2/12 Monterey sand annular fill from 9.5-15 feet bgs</p> <p>Water Sample: SB-7-12 at 1530</p> <p>Boring abandoned with hydrated bentonite chips</p>

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 16 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/12/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Soil Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-8-0.5	0.4			0		Concrete
					42		BROWN SAND (SP), moist, fine, few fines, orange mottling, 2-inch layer with trace fine gravel
							@ 2 feet: gray, silt clumps with rare orange staining, carbonized wood organics
		SB-8-5	0.7			5	BROWN SILTY SAND (SM), moist, fine, little fines, abundant brown-orange staining, 2-inch gray layer
						36	DARK BROWN SAND (SP), moist, fine to coarse, few fines, trace coarse subrounded gravel, rare carbonized wood
							@ 6.5 feet: gray, trace fines
							@ 6.8 feet: brown, fine sand, abundant orange staining, laminated bedding
							GRAY SILT (ML), moist to wet, few fine to coarse sand, abundant orange mottling
		SB-8-10	0.5			36	BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, trace coarse subrounded gravel
						10	@ 9.5 feet: wet
						@ 10 feet: blue-gray, moist, abundant large dark red-orange mottling at boundary with above layer	
						@ 10.5 feet: ovoid silt clumps	
						Bottom of boring @ 11 feet (refusal)	
						Temporary Well: 3/4" Sch. 40 PVC screen from 6-11 feet bgs with #2/12 Monterey sand annular fill from 5.5-11 feet bgs	
						Water Sample: SB-8-9 at 1410	
						Boring abandoned with hydrated bentonite chips	
					15		
					20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Notes:

Total Boring Depth: 11 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/12/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
Concrete	SB-9-0.5				0		Concrete
					26		BROWN SAND (SP), moist, fine, few fines, trace fine to coarse subrounded to rounded gravel, occasional platy silt clumps, abundant orange to brown staining, laminated bedding, increasing percentage of gravel at the bottom
	SB-9-5	0.3			5		@ 4.5 feet: fine to coarse sand, few gravel @ 5 feet: gray to dark gray, few to little fine to coarse gravel, few to little fines @ 5.6 feet: gray-brown, few gravel, trace wood organics
					42		
Bentonite		0.2					GRAY SILTY SAND (SM), moist, fine, some fines, abundant orange staining @ 7.6 feet: little fines @ 8.5 feet: brown, wet, fine to medium sand
	SB-9-9	0.2			48		@ 9.5 feet: blue-gray, moist, dark gray silt clumps, increasing dark gray with depth
					10		
		0.2					
					24		
		0.1					
					15		Bottom of boring @ 14 feet (refusal) Boring abandoned with hydrated bentonite chips
					20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 14 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/12/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description	
	SB-10-0.5	2.3		18	0		Concrete	
	SB-10-3	1.5					BROWN SAND (SP), moist, fine, few fines, trace fine to coarse subrounded to rounded gravel @ 1 foot: higher percentage of fines @ 1.3 feet: gray	
		1.3		36			@ 3 feet: brown, fine to medium sand, few to little fines, occasional red-orange staining	
	SB-10-10	1.5		5			GRAY SILTY SAND (SM), moist, fine to medium, little fines, trace gravel, silt clumps @ 4.2 feet: brown	
		1.2					@ 6 feet: gray, fine sand	
		1.3		36			@ 8 feet: wet	
		0.5		10			@ 10 feet: gray-brown, loose, fine to medium sand, some fines, wood and root organics	
		0.3		42			@ 12 feet: gray to dark gray, moist, medium dense to dense, little fines	
							Bottom of boring @ 14 feet	
						15		Temporary Well: 3/4" Sch. 40 PVC screen from 9-14 feet bgs with #2/12 Monterey sand annular fill from 8.5-14 feet bgs Water Sample: SB-10-W at 1410 Boring abandoned with hydrated bentonite chips
						20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: ContinuousDirect-Push

Total Boring Depth: 14 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/25/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Soil Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
Concrete	SB-11-0.5	453			0		Concrete
	SB-11-2 SB-11-2D	952		38			BROWN SAND (SP), moist, fine, few fines, trace fine to coarse subrounded to rounded gravel
		723					GRAY SAND (SP), moist, fine, few to little fines, trace fine gravel, rare red staining, occasional platy silt clumps, 2-inch layer of silty sand
		229					@ 4 feet: few fines
		517			5		
		132					@ 6.2 feet: brown, medium sand @ 6.6 feet: 2-inch layer of dark brown sandy silt, fine sand, abundant root organics @ 6.8 feet: light brown, trace fines, no gravel
Bentonite	SB-11-9	79.4					@ 8 feet: gray, trace fines, no gravel
		59.1		48			ORANGE-GRAY MOTTLED SANDY SILT (ML), some fine sand, trace fine gravel
		30.9					BROWN SILTY SAND (SM), moist, fine to coarse, little fines, trace gravel, @ 9.4 feet: 2-inch wet layer
		5.6					BROWN SAND (SP), moist, fine, trace gravel
		36.9					GRAY SILTY SAND (SM), moist, fine, some fines, trace fine to coarse gravel, 1 to 2-inch wet zones @ 14 feet: dark gray
					15		Bottom of boring @ 15 feet (refusal) Temporary Well: 3/4" Sch. 40 PVC screen from 10-15 feet bgs with #2/12 Monterey sand annular fill from 9.5-15 feet bgs Water Sample: SB-11-W at 1400 Boring abandoned with hydrated bentonite chips
					20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Notes:

Total Boring Depth: 15 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/25/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Soil Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description	
<p>Concrete</p> <p>Bentonite</p>	SB-12-0.5	4.0			0		Concrete	
		4.5					BROWN SAND (SP), moist, fine, trace fines	
		8.8		42			BROWN SILTY SAND (SM), moist, fine, little fines, trace fine to coarse subrounded to rounded gravel, wood organics @ 1.8 feet: gray, occasional platy silt clumps	
	SB-12-3						BROWN SAND WITH GRAVEL (SP), moist, fine to medium, little fine to coarse subrounded to rounded gravel, few fines @ 4 feet: gray, trace gravel, interbeds of little silt	
		5.3			5		@ 5.5 feet: moist to wet	
				24				
		3.6					GRAY SILTY SAND (SM), moist to wet, loose to dense, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, rare root organics @ 9 feet: wet	
	SB-12-9							
		4.1			30	10		
		4.0					@ 12 feet: brown, loose, fine sand	
				24			@ 12.8 feet: gray, medium dense to dense	
		3.0						
						15		Bottom of boring @ 14 feet (refusal) Boring abandoned with hydrated bentonite chips
						20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Notes:

Total Boring Depth: 14 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/25/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (inches)	Depth (Feet)	Symbol	Lithologic Description
Concrete	SB-13-0.5	1.2			0		Concrete
					36		BROWN SILTY SAND (SM), moist, fine, little fines, trace fine to coarse subrounded to rounded gravel, 3-inch layer of brown sand @ 1 foot: gray @ 2.4 feet: pulverized rock
	SB-11-3	0.0			5		@ 6.2 feet: 2-inch blue-gray silt
		2.1			30		BROWN SANDY SILT (ML), moist to wet, loose to very loose, some fine to medium sand, root organics
Bentonite		1.2			48		GRAY SILTY SAND (SM), moist to wet, loose to dense, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, rare root organics
	SB-13-9	1.3			10		
		1.1			30		GRAY SILTY SAND (SM), moist, fine, some fines, trace fine to coarse gravel, 1 to 2-inch wet zones
		0.0			15		Bottom of boring @ 15 feet (refusal) Temporary Well: 3/4" Sch. 40 PVC screen from 10-15 feet bgs with #2/12 Monterey sand annular fill from 9.5-15 feet bgs Water Sample: SB-13-W at 1520 Boring abandoned with hydrated bentonite chips
		0.5			20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 15 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 6/25/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-17-0.5	6.1			0		Concrete
							<p>BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, orange staining, silt clumps, rare wood organics</p> <p>@ 1.4 feet: gray</p> <p>@ 2.7 feet: brown, orange mottling</p>
	SB-17-3	8.1			36		
							<p>@ 5.5 feet: 4-inches brown medium sand layer</p> <p>@ 5.8 feet: gray silty sand, orange staining, 1/4 to 1/2-inch wood organics</p>
	SB-17-6	7.5			5		
							<p>GRAY-BLUE SILTY SAND (SM), moist to wet, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, rare wood organics</p> <p>@ 9.8 feet: denser</p> <p>@ 10.2 feet: orange stained layer, moist</p>
	SB-17-9	2.7			30		
							<p>Bottom of boring @ 13 feet (refusal) Boring abandoned with hydrated bentonite chips</p>
							<p>15</p> <p>20</p>

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 13 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 7/9/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-15-0.5	3.5			0		Concrete
					48		BROWN SAND (SP), moist, fine to medium, few fines
	SB-15-3	11.3					BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, orange staining @ 1.5 feet: gray, silt clumps, trace carbonized organics @ 2.8 feet: 2-inch dark gray silt layer
	SB-15-6	57.1			42		BROWN SILTY SAND (SM), moist, fine, little fines, trace fine to coarse subrounded to rounded gravel
					30		GRAY SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, platy silt clumps, trace root organics
	SB-15-10.5	228			10		@ 9.7 feet: dark gray, abundant orange staining @ 10 feet: light gray, no staining
	SB-15-10.5D						
					36		
					15		@ 14.1 feet: wet, loose
					20		Bottom of boring @ 15.5 feet (refusal) Temporary Well: 3/4" Sch. 40 PVC screen from 10.5-15.5 feet bgs with #2/12 Monterey sand annular fill from 10-15.5 feet bgs Water Sample: SB-15-W at 1400 Boring abandoned with hydrated bentonite chips

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 15.5 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 7/9/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-16-0.5	1.7			0		Concrete
							BROWN SAND (SP), moist, fine to medium, few fines
			4.7		48		BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, orange staining
	SB-16-3	4.8					@ 1.5 feet: gray, silt clumps @ 2.8 feet: 2-inch dark brown silt layer
			5.2		5		BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, abundant orange-red staining
	SB-16-6	5.1		48			
			11.8		30		DARK GRAY SAND (SP), moist, fine to medium, few fines
	SB-16-9	15			10		@ 9 feet: 2 to 3-inch rounded gravel
			9.8		36		GRAY SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel
			10.5		15		@ 12 feet: 2 to 4-inch layers with increased fine gravel content @ 13.5 feet: moist to wet @ 14 feet: denser, lower moisture content
					15		Bottom of boring @ 15 feet (refusal) Boring abandoned with hydrated bentonite chips
					20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 15 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 7/9/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
<p>Concrete</p> <p>Bentonite</p>	SB-17-0.5	18.2			0		Concrete
							BROWN SAND (SP), moist, fine to medium, few fines
	SB-17-3	14.3			48		BROWN SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, orange staining, silt clumps, rare wood organics
							@ 5.5 feet: dark red staining, frequent root organics
	SB-17-6	13.1			5		BROWN SAND (SP), moist, medium, few fine to coarse gravel, trace fines
							@ 6.3 feet: fine to coarse sand, few fines
							@ 9 feet: fine sand, orange-brown staining, carbonized wood
	SB-17-9	13.0			42		GRAY SILTY SAND (SM), moist, fine to medium, little fines, trace fine to coarse subrounded to rounded gravel, occasional orange staining
							@ 9.6 feet: wet
							@ 11.2 feet: no staining, fine sand
					10		Bottom of boring @ 14 feet (refusal)
					15		Temporary Well: 3/4" Sch. 40 PVC screen from 9-14 feet bgs with #2/12 Monterey sand annular fill from 8.5-14 feet bgs Water Sample: SB-17-W at 1445 Boring abandoned with hydrated bentonite chips
					20		

Project: Bethel Junction Phase II
 Project Number: 1246.030.02
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Continuous Direct-Push

Total Boring Depth: 14 feet
 Diameter of Boring: 2.5 inches
 Date Drilled: 7/9/15
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe Direct-Push

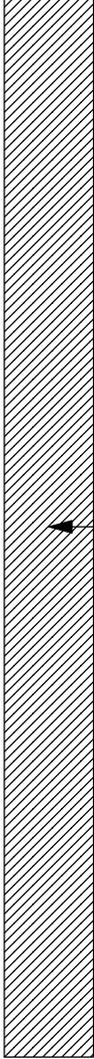


Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
	SB-18-3	3.2		30	0		Concrete (4 inches) BROWN SAND (SP), moist, medium (FILL) BROWN SAND (SP), moist, fine, few fines, occasional red-orange staining, grain size and percentage of fines vary over 4- to 6-inch layers
	SB-18-6	3.9		5	48		GRAY AND BROWN SAND (SP), moist, fine to medium, few fines, occasional orange staining, frequent horizons with few to little gravel (SB-18-5 to 8 was collected for grain size analysis)
	SB-18-9	4.4		10	36		GRAY SAND (SP), moist, medium, few subrounded gravel up to 0.5-inch diameter, few fines, clast supported BROWN SANDY SILT (ML), moist, little fine to medium sand, wood organics BROWN AND GRAY SAND (SP), moist to wet, very dense, fine, few fines, horizon of denser sand with lower moisture content 6 inches thick
		2.7			15		Bottom of boring at 11 feet (refusal). Boring abandoned with hydrated bentonite to 3.5 feet bgs. Total Vapor Probe Depth: 3.5 feet. Probe Screen: 3.0 to 3.5 feet. Probe Tubing: 0.0 to 3.0 feet Filter Pack: 3.0 to 3.5 feet (10x20 Colorado silica sand). Probe Seal: 1.0 to 3.0 feet (hydrated bentonite). Surface Seal: 0.0 to 1.0 feet (concrete).

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 11 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/17/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description	
 <p>Bentonite</p>	SB-19-3	1.7			0		Concrete (2.5 inches)	
								BROWN SAND (SP), moist, medium (FILL)
		2.4		40				BROWN SAND (SP), moist, fine, few fines, occasional horizons up to 3 inches thick with abundant red mottling, grain size and percentage of fines vary over 4- to 6-inch layers
		2.4						BROWN SAND (SP), moist, medium, few gravel, few fines, horizon of brown silty sand 4 inches thick, horizon of fine to medium sand 2 inches thick, frequent horizons with some gravel, occasional orange staining, rare carbonized organics
		5.0		5				(SB-19-5 to 8 collected for grain size analysis)
		5.3		48				GRAY SAND (SP), moist, medium, few fines, trace subrounded gravel up to 0.5-inch diameter, horizon 3 inches thick with brown staining around grains, clast supported
		4.6						at 9 feet: few gravel
		2.9		34	10			BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, few gravel up to 2-inch diameter, matrix supported
		2.6		36				GRAY SILTY SAND (SM), moist, very dense, fine, little fines, trace coarse gravel
		1.2		15				Bottom of boring at 15 feet bgs. Boring abandoned with hydrated bentonite.
					20			

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 15 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/17/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (inches)	Depth (Feet)	Symbol	Lithologic Description
	SB-20-3	5.6		34	0		Concrete (4 inches) BROWN SAND (SP), moist, medium (FILL) BROWN SAND (SP), moist, fine, few fines, occasional red-brown staining lensate clay inclusions up to 0.25-inches diameter, frequent horizons of silty sand
	SB-20-6	1.8		32	5		GRAY AND BROWN SAND (SP), moist, fine, few fines, orange staining around clasts of fines, brown and gray coloration vary along partings, rare wood organics (SB-20-4 to 8 collected for grain size analysis) Bottom of boring at 7 feet (refusal). Boring abandoned with hydrated bentonite to 3.5 feet bgs. Total Vapor Probe Depth: 3.5 feet. Probe Screen: 3.0 to 3.5 feet. Probe Tubing: 0.0 to 3.0 feet Filter Pack: 3.0 to 3.5 feet (10x20 Colorado silica sand). Probe Seal: 1.0 to 3.0 feet (hydrated bentonite). Surface Seal: 0.0 to 1.0 feet (concrete).
		2.8			10		
		4.0			15		
					20		

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 7 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/17/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe

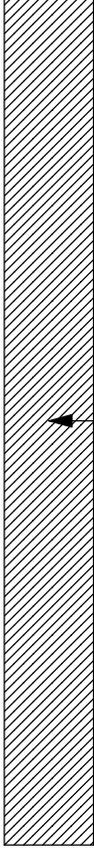


Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description		
<p>Concrete</p> <p>PTFE Tubing</p> <p>Bentonite</p> <p>10x20 Silica Sand</p> <p>Vapor Probe</p> <p>Bentonite</p>	SB-21-3	2.3			0	Concrete (6 inches)			
								BROWN SAND (SP), moist, medium (FILL)	
								BROWN SAND (SP), moist, fine, few fines, occasional orange staining, variation in grain size over 4- to 6-inch horizons	
				1.4					
				2.4			5		DARK BROWN SAND (SP), moist, fine to medium, few subrounded to rounded gravel up to 0.5-inch diameter, few fines, frequent horizons of silty sand, carbonized organics
				2.4					(SB-21-5 to 8 collected for grain size analysis) at 6 feet: pulverized rock
				1.8					GRAY SAND (SP), moist, medium, few fines, trace subrounded gravel up to 0.75-inch diameter
				2.1					at 8.5 feet: horizon of dark red-brown sand 4 inches thick
							10		BROWN SANDY SILT (ML), moist, some fine to medium sand
				2.1					BROWN AND GRAY SAND (SP), moist to wet, fine to medium, few fines, abundant orange staining
									GRAY SAND (SP), moist, very dense, fine sand, few fines, abundant orange staining
				1.8					
							34		BROWN SILTY SAND (SM), moist, fine to medium, little fines, few subrounded gravel up to 1-inch diameter
				1.4					GRAY SILTY SAND (SM), moist, very dense, fine to medium, little fines, few subrounded gravel up to 0.5-inch diameter
							15		Bottom of boring at 15 feet (refusal). Boring abandoned with hydrated bentonite to 3.5 feet bgs.
							Total Vapor Probe Depth: 3.5 feet. Probe Screen: 3.0 to 3.5 feet. Probe Tubing: 0.0 to 3.0 feet Filter Pack: 3.0 to 3.5 feet (10x20 Colorado silica sand). Probe Seal: 1.0 to 3.0 feet (hydrated bentonite). Surface Seal: 0.0 to 1.0 feet (Concrete).		
					20				

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 15 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/17/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (inches)	Depth (Feet)	Symbol	Lithologic Description	
	SB-22-3	18.3			0		Concrete (6 inches)	
		23.5			28		BROWN SAND (SP), moist, medium, (FILL) BROWN SAND (SP), moist, fine, occasional orange staining, grain size varies	
	SB-22-6	10.3			5		DARK BROWN SAND (SP), moist, fine to medium, few fines, rare wood organics (SB-22-5 to 8 collected for grain size analysis)	
	13.5		48					
	SB-22-9.5	8.4			10		GRAY SAND (SP), moist, medium, trace subrounded to rounded gravel up to 0.5-inch diameter, trace fines, matrix supported	
	13.7							
	14.3		32					
	2.9		10				BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, few subrounded gravel to 0.5-inch diameter	
						15		
					20			

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 12 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/18/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe

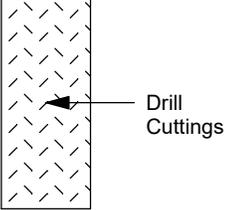
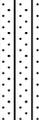


Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description	
	SB-23-3	10.8			0		Concrete (6 inches)	
								BROWN SAND (SP), moist, medium (FILL)
								BROWN SILTY SAND (SM), moist, fine, little to some fines, fine subrounded gravel up to 0.25-inch diameter
						5		at 5 feet: gray (SB-23-5 to 8 collected for grain size analysis)
			16.6					BROWN SAND (SP), moist, fine to medium, few fines, rare carbonized organics, rare rootlets
			10.9					GRAY SAND (SP), moist, medium, few fines, trace subrounded gravel up to 0.25-inch diameter, horizon of brown sand 4 inches thick, matrix supported
			13.4					
			10.6			10		GRAY SILTY SAND (SM), moist to wet, fine, little fines
			12.1					
			6.1					DARK GRAY SAND (SP), moist, very dense, medium to coarse, few fines, trace subrounded to rounded gravel up to 0.5-inch diameter
	9.2					at 14 feet: fine		
					15		Bottom of boring at 14.5 feet bgs. Temporary well screen installed from 9.5 to 14.5 feet. Collected SB-23-071816 at 1000. Temporary well screen removed and boring abandoned with hydrated bentonite to 3.5 feet bgs. Total Vapor Probe Depth: 3.5 feet. Probe Screen: 3.0 to 3.5 feet. Probe Tubing: 0.0 to 3.0 feet Filter Pack: 3.0 to 3.5 feet (10x20 Colorado silica sand). Probe Seal: 1.0 to 3.0 feet (hydrated bentonite). Surface Seal: 0.0 to 1.0 feet (Concrete).	
					20			

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Direct Push

Total Boring Depth: 14.5 feet
 Diameter of Boring: 2.25 inches
 Date Drilled: 7/18/16
 Drilled By: ESN Northwest
 Drill Method: Limited Access Geoprobe

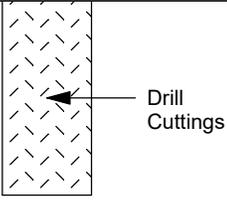


Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
	SB-24-3	0.6			0		Concrete (5 inches)
		1.3		36			BROWN SAND (SP), moist, medium (FILL)
		4.2					BROWN SILTY SAND (SM), moist, fine to medium, little fines, few subrounded gravel up to 1.5-inch diameter
					5 10 15 20		Bottom of boring at 3 feet bgs. Boring abandoned with drill cuttings.

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Hand Auger

Total Boring Depth: 3 feet
 Diameter of Boring: 4 inches
 Date Drilled: 9/18/16
 Drilled By: ESN Northwest
 Drill Method: Hand Auger

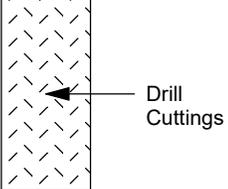


Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
	SB-25-3	0.8			0		Concrete (4 inches)
		3.1		33			BROWN SAND (SP), moist, medium (FILL)
		5.1					BROWN SILTY SAND (SM), moist, fine to medium, little fines, few subrounded gravel up to 2.5-inch diameter
							Bottom of boring at 2.75 feet bgs. Boring abandoned with drill cuttings.

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Hand Auger

Total Boring Depth: 2.75 feet
 Diameter of Boring: 4 inches
 Date Drilled: 9/18/16
 Drilled By: ESN Northwest
 Drill Method: Hand Auger



Completion Details	Sample ID	PID (ppm)	Sample Interval	Recovery (Inches)	Depth (Feet)	Symbol	Lithologic Description
	SB-26-3	0.4	-	-	0		Concrete (4 inches)
		3.2	-	34	-		BROWN SAND (SP), moist, medium (FILL)
		4.1	-	-	-		BROWN SILTY SAND (SM), moist, fine to medium, little fines, few subrounded gravel up to 2-inch diameter
						2.75	

Project: Bethel Junction
 Project Number: 1246.030.03
 Site Location: Port Orchard, WA
 Logged By: C. DeBoer
 Sample Method: Hand Auger

Total Boring Depth: 2.75 feet
 Diameter of Boring: 4 inches
 Date Drilled: 9/18/16
 Drilled By: ESN Northwest
 Drill Method: Hand Auger

APPENDIX C

LABORATORY REPORTS AND DATA VALIDATION MEMORANDA



3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

PES Environmental, Inc.

Kelly Rankich

1215 Fourth Avenue, Suite 1350

Seattle, WA 98161

RE: Bethel Junction Phase II

Lab ID: 1506161

June 16, 2015

Attention Kelly Rankich:

Fremont Analytical, Inc. received 11 sample(s) on 6/12/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260

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 "Chelsea Ward".

Chelsea Ward
Project Manager



Date: 06/16/2015

CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II
Lab Order: 1506161

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1506161-001	SB-7-0 to 4	06/12/2015 10:20 AM	06/12/2015 6:58 PM
1506161-002	SB-7-4 to 8	06/12/2015 10:25 AM	06/12/2015 6:58 PM
1506161-003	SB-7-13	06/12/2015 3:35 PM	06/12/2015 6:58 PM
1506161-004	SB-9-0.5	06/12/2015 3:45 PM	06/12/2015 6:58 PM
1506161-005	SB-9-5	06/12/2015 3:50 PM	06/12/2015 6:58 PM
1506161-006	SB-9-9	06/12/2015 3:55 PM	06/12/2015 6:58 PM
1506161-007	SB-8-0.5	06/12/2015 4:00 PM	06/12/2015 6:58 PM
1506161-008	SB-8-5	06/12/2015 4:05 PM	06/12/2015 6:58 PM
1506161-009	SB-8-10	06/12/2015 4:10 PM	06/12/2015 6:58 PM
1506161-010	SB-8-10D	06/12/2015 4:20 PM	06/12/2015 6:58 PM
1506161-011	Trip Blank		06/12/2015 6:58 PM

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

CLIENT: PES Environmental, Inc.**Project:** Bethel Junction Phase II

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 10:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1506161-001

Matrix: Soil

Client Sample ID: SB-7-0 to 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260						
					Batch ID: 11034	Analyst: AK
Dichlorodifluoromethane (CFC-12)	ND	0.0666		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Chloromethane	ND	0.0666		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Vinyl chloride	ND	0.00222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Bromomethane	ND	0.0999		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Chloroethane	ND	0.0666		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1-Dichloroethene	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Methylene chloride	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
trans-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1-Dichloroethane	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
2,2-Dichloropropane	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
cis-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Chloroform	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Carbon tetrachloride	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2-Dichloroethane (EDC)	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Benzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Trichloroethene (TCE)	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2-Dichloropropane	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Bromodichloromethane	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Dibromomethane	ND	0.0444		mg/Kg-dry	1	6/15/2015 12:45:00 PM
cis-1,3-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Toluene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
trans-1,3-Dichloropropylene	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1,2-Trichloroethane	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,3-Dichloropropane	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Tetrachloroethene (PCE)	0.0893	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Dibromochloromethane	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2-Dibromoethane (EDB)	ND	0.00555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Chlorobenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Ethylbenzene	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
m,p-Xylene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
o-Xylene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Styrene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Isopropylbenzene	ND	0.0888		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Bromoform	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 10:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1506161-001

Matrix: Soil

Client Sample ID: SB-7-0 to 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
n-Propylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Bromobenzene	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,3,5-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
2-Chlorotoluene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
4-Chlorotoluene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
tert-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2,3-Trichloropropane	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2,4-Trichlorobenzene	ND	0.0555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
sec-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
4-Isopropyltoluene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,3-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,4-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
n-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2-Dibromo-3-chloropropane	ND	0.555		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2,4-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Hexachlorobutadiene	ND	0.111		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Naphthalene	ND	0.0333		mg/Kg-dry	1	6/15/2015 12:45:00 PM
1,2,3-Trichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/15/2015 12:45:00 PM
Surr: Dibromofluoromethane	102	63.7-129		%REC	1	6/15/2015 12:45:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	6/15/2015 12:45:00 PM
Surr: 1-Bromo-4-fluorobenzene	96.6	63.1-141		%REC	1	6/15/2015 12:45:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	9.54			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 10:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1506161-002

Matrix: Soil

Client Sample ID: SB-7-4 to 8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0687		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Chloromethane	ND	0.0687		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Vinyl chloride	ND	0.00229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Bromomethane	ND	0.103		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Chloroethane	ND	0.0687		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1-Dichloroethene	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Methylene chloride	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
trans-1,2-Dichloroethene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1-Dichloroethane	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
2,2-Dichloropropane	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
cis-1,2-Dichloroethene	0.0458	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Chloroform	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1-Dichloropropene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Carbon tetrachloride	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2-Dichloroethane (EDC)	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Benzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Trichloroethene (TCE)	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2-Dichloropropane	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Bromodichloromethane	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Dibromomethane	ND	0.0458		mg/Kg-dry	1	6/15/2015 1:14:00 PM
cis-1,3-Dichloropropene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Toluene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
trans-1,3-Dichloropropylene	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1,2-Trichloroethane	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,3-Dichloropropane	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Tetrachloroethene (PCE)	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Dibromochloromethane	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2-Dibromoethane (EDB)	ND	0.00573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Chlorobenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Ethylbenzene	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
m,p-Xylene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
o-Xylene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Styrene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Isopropylbenzene	ND	0.0916		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Bromoform	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 10:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1506161-002

Matrix: Soil

Client Sample ID: SB-7-4 to 8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
n-Propylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Bromobenzene	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,3,5-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
2-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
4-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
tert-Butylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2,3-Trichloropropane	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2,4-Trichlorobenzene	ND	0.0573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,3-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,4-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
n-Butylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2-Dibromo-3-chloropropane	ND	0.573		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2,4-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Hexachlorobutadiene	ND	0.115		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Naphthalene	ND	0.0344		mg/Kg-dry	1	6/15/2015 1:14:00 PM
1,2,3-Trichlorobenzene	ND	0.0229		mg/Kg-dry	1	6/15/2015 1:14:00 PM
Surr: Dibromofluoromethane	96.7	63.7-129		%REC	1	6/15/2015 1:14:00 PM
Surr: Toluene-d8	95.0	64.3-131		%REC	1	6/15/2015 1:14:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%REC	1	6/15/2015 1:14:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	12.0			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:35:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-003

Matrix: Soil

Client Sample ID: SB-7-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0597		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Chloromethane	ND	0.0597		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Vinyl chloride	ND	0.00199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Bromomethane	ND	0.0896		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Chloroethane	ND	0.0597		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1-Dichloroethene	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Methylene chloride	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
trans-1,2-Dichloroethene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1-Dichloroethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
2,2-Dichloropropane	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
cis-1,2-Dichloroethene	0.0279	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Chloroform	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Carbon tetrachloride	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2-Dichloroethane (EDC)	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Benzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Trichloroethene (TCE)	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2-Dichloropropane	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Bromodichloromethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Dibromomethane	ND	0.0398		mg/Kg-dry	1	6/15/2015 1:43:00 PM
cis-1,3-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Toluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
trans-1,3-Dichloropropylene	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1,2-Trichloroethane	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,3-Dichloropropane	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Tetrachloroethene (PCE)	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Dibromochloromethane	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2-Dibromoethane (EDB)	ND	0.00498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Chlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Ethylbenzene	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
m,p-Xylene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
o-Xylene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Styrene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Isopropylbenzene	ND	0.0796		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Bromoform	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:35:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-003

Matrix: Soil

Client Sample ID: SB-7-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
n-Propylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Bromobenzene	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,3,5-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
2-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
4-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
tert-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2,3-Trichloropropane	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2,4-Trichlorobenzene	ND	0.0498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
sec-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
4-Isopropyltoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,3-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,4-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
n-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2-Dibromo-3-chloropropane	ND	0.498		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2,4-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Hexachlorobutadiene	ND	0.0996		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Naphthalene	ND	0.0299		mg/Kg-dry	1	6/15/2015 1:43:00 PM
1,2,3-Trichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 1:43:00 PM
Surr: Dibromofluoromethane	97.1	63.7-129		%REC	1	6/15/2015 1:43:00 PM
Surr: Toluene-d8	95.1	64.3-131		%REC	1	6/15/2015 1:43:00 PM
Surr: 1-Bromo-4-fluorobenzene	95.0	63.1-141		%REC	1	6/15/2015 1:43:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	14.3			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-004

Matrix: Soil

Client Sample ID: SB-9-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0752		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Chloromethane	ND	0.0752		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Vinyl chloride	ND	0.00251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Bromomethane	ND	0.113		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Chloroethane	ND	0.0752		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1-Dichloroethene	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Methylene chloride	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
trans-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1-Dichloroethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
2,2-Dichloropropane	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
cis-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Chloroform	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1-Dichloropropene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Carbon tetrachloride	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2-Dichloroethane (EDC)	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Benzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Trichloroethene (TCE)	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2-Dichloropropane	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Bromodichloromethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Dibromomethane	ND	0.0501		mg/Kg-dry	1	6/15/2015 2:12:00 PM
cis-1,3-Dichloropropene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Toluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
trans-1,3-Dichloropropylene	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1,2-Trichloroethane	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,3-Dichloropropane	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Tetrachloroethene (PCE)	0.0432	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Dibromochloromethane	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2-Dibromoethane (EDB)	ND	0.00627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Chlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Ethylbenzene	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
m,p-Xylene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
o-Xylene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Styrene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Isopropylbenzene	ND	0.100		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Bromoform	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-004

Matrix: Soil

Client Sample ID: SB-9-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
n-Propylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Bromobenzene	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,3,5-Trimethylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
2-Chlorotoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
4-Chlorotoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
tert-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2,3-Trichloropropane	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2,4-Trichlorobenzene	ND	0.0627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
sec-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
4-Isopropyltoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,3-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,4-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
n-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2-Dibromo-3-chloropropane	ND	0.627		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2,4-Trimethylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Hexachlorobutadiene	ND	0.125		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Naphthalene	ND	0.0376		mg/Kg-dry	1	6/15/2015 2:12:00 PM
1,2,3-Trichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 2:12:00 PM
Surr: Dibromofluoromethane	99.0	63.7-129		%REC	1	6/15/2015 2:12:00 PM
Surr: Toluene-d8	95.2	64.3-131		%REC	1	6/15/2015 2:12:00 PM
Surr: 1-Bromo-4-fluorobenzene	94.8	63.1-141		%REC	1	6/15/2015 2:12:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	11.0			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:50:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-005

Matrix: Soil

Client Sample ID: SB-9-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0596		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Chloromethane	ND	0.0596		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Vinyl chloride	ND	0.00199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Bromomethane	ND	0.0893		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Chloroethane	ND	0.0596		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1-Dichloroethene	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Methylene chloride	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
trans-1,2-Dichloroethene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1-Dichloroethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
2,2-Dichloropropane	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
cis-1,2-Dichloroethene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Chloroform	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Carbon tetrachloride	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2-Dichloroethane (EDC)	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Benzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Trichloroethene (TCE)	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2-Dichloropropane	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Bromodichloromethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Dibromomethane	ND	0.0397		mg/Kg-dry	1	6/15/2015 2:41:00 PM
cis-1,3-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Toluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
trans-1,3-Dichloropropylene	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1,2-Trichloroethane	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,3-Dichloropropane	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Tetrachloroethene (PCE)	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Dibromochloromethane	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2-Dibromoethane (EDB)	ND	0.00496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Chlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Ethylbenzene	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
m,p-Xylene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
o-Xylene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Styrene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Isopropylbenzene	ND	0.0794		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Bromoform	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:50:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-005

Matrix: Soil

Client Sample ID: SB-9-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
n-Propylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Bromobenzene	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,3,5-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
2-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
4-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
tert-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2,3-Trichloropropane	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2,4-Trichlorobenzene	ND	0.0496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
sec-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
4-Isopropyltoluene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,3-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,4-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
n-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2-Dibromo-3-chloropropane	ND	0.496		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2,4-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Hexachlorobutadiene	ND	0.0993		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Naphthalene	ND	0.0298		mg/Kg-dry	1	6/15/2015 2:41:00 PM
1,2,3-Trichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/15/2015 2:41:00 PM
Surr: Dibromofluoromethane	98.1	63.7-129		%REC	1	6/15/2015 2:41:00 PM
Surr: Toluene-d8	94.9	64.3-131		%REC	1	6/15/2015 2:41:00 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	63.1-141		%REC	1	6/15/2015 2:41:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	11.9			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:55:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-006

Matrix: Soil

Client Sample ID: SB-9-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0640		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Chloromethane	ND	0.0640		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Vinyl chloride	ND	0.00213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Bromomethane	ND	0.0959		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Chloroethane	ND	0.0640		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1-Dichloroethene	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Methylene chloride	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
trans-1,2-Dichloroethene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1-Dichloroethane	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
2,2-Dichloropropane	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
cis-1,2-Dichloroethene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Chloroform	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1-Dichloropropene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Carbon tetrachloride	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2-Dichloroethane (EDC)	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Benzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Trichloroethene (TCE)	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2-Dichloropropane	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Bromodichloromethane	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Dibromomethane	ND	0.0426		mg/Kg-dry	1	6/15/2015 3:10:00 PM
cis-1,3-Dichloropropene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Toluene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
trans-1,3-Dichloropropylene	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1,2-Trichloroethane	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,3-Dichloropropane	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Tetrachloroethene (PCE)	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Dibromochloromethane	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2-Dibromoethane (EDB)	ND	0.00533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Chlorobenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Ethylbenzene	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
m,p-Xylene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
o-Xylene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Styrene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Isopropylbenzene	ND	0.0853		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Bromoform	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:55:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-006

Matrix: Soil

Client Sample ID: SB-9-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
n-Propylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Bromobenzene	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,3,5-Trimethylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
2-Chlorotoluene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
4-Chlorotoluene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
tert-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2,3-Trichloropropane	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2,4-Trichlorobenzene	ND	0.0533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
sec-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
4-Isopropyltoluene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,3-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,4-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
n-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2-Dibromo-3-chloropropane	ND	0.533		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2,4-Trimethylbenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Hexachlorobutadiene	ND	0.107		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Naphthalene	ND	0.0320		mg/Kg-dry	1	6/15/2015 3:10:00 PM
1,2,3-Trichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/15/2015 3:10:00 PM
Surr: Dibromofluoromethane	97.2	63.7-129		%REC	1	6/15/2015 3:10:00 PM
Surr: Toluene-d8	95.2	64.3-131		%REC	1	6/15/2015 3:10:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	6/15/2015 3:10:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	12.0			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-007

Matrix: Soil

Client Sample ID: SB-8-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0816		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Chloromethane	ND	0.0816		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Vinyl chloride	ND	0.00272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Bromomethane	ND	0.122		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Chloroethane	ND	0.0816		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1-Dichloroethene	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Methylene chloride	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
trans-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1-Dichloroethane	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
2,2-Dichloropropane	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
cis-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Chloroform	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1-Dichloropropene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Carbon tetrachloride	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2-Dichloroethane (EDC)	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Benzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Trichloroethene (TCE)	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2-Dichloropropane	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Bromodichloromethane	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Dibromomethane	ND	0.0544		mg/Kg-dry	1	6/15/2015 3:39:00 PM
cis-1,3-Dichloropropene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Toluene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
trans-1,3-Dichloropropylene	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1,2-Trichloroethane	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,3-Dichloropropane	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Tetrachloroethene (PCE)	0.0489	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Dibromochloromethane	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2-Dibromoethane (EDB)	ND	0.00680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Chlorobenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Ethylbenzene	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
m,p-Xylene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
o-Xylene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Styrene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Isopropylbenzene	ND	0.109		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Bromoform	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-007

Matrix: Soil

Client Sample ID: SB-8-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
n-Propylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Bromobenzene	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,3,5-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
2-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
4-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
tert-Butylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2,3-Trichloropropane	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2,4-Trichlorobenzene	ND	0.0680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
sec-Butylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
4-Isopropyltoluene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,3-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,4-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
n-Butylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2-Dibromo-3-chloropropane	ND	0.680		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2,4-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Hexachlorobutadiene	ND	0.136		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Naphthalene	ND	0.0408		mg/Kg-dry	1	6/15/2015 3:39:00 PM
1,2,3-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	6/15/2015 3:39:00 PM
Surr: Dibromofluoromethane	95.3	63.7-129		%REC	1	6/15/2015 3:39:00 PM
Surr: Toluene-d8	93.4	64.3-131		%REC	1	6/15/2015 3:39:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.9	63.1-141		%REC	1	6/15/2015 3:39:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	6.66			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:05:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-008

Matrix: Soil

Client Sample ID: SB-8-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0729		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Chloromethane	ND	0.0729		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Vinyl chloride	ND	0.00243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Bromomethane	ND	0.109		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Chloroethane	ND	0.0729		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1-Dichloroethene	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Methylene chloride	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
2,2-Dichloropropane	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
cis-1,2-Dichloroethene	0.296	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Chloroform	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1-Dichloropropene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Carbon tetrachloride	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2-Dichloroethane (EDC)	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Benzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Dibromomethane	ND	0.0486		mg/Kg-dry	1	6/15/2015 4:08:00 PM
cis-1,3-Dichloropropene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Toluene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
trans-1,3-Dichloropropylene	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1,2-Trichloroethane	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,3-Dichloropropane	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Tetrachloroethene (PCE)	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Dibromochloromethane	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2-Dibromoethane (EDB)	ND	0.00607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Chlorobenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Ethylbenzene	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
m,p-Xylene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
o-Xylene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Styrene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Isopropylbenzene	ND	0.0972		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Bromoform	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:05:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-008

Matrix: Soil

Client Sample ID: SB-8-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
n-Propylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Bromobenzene	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,3,5-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
2-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
4-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
tert-Butylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2,3-Trichloropropane	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2,4-Trichlorobenzene	ND	0.0607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
sec-Butylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
4-Isopropyltoluene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
n-Butylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2-Dibromo-3-chloropropane	ND	0.607		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Hexachlorobutadiene	ND	0.121		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Naphthalene	ND	0.0364		mg/Kg-dry	1	6/15/2015 4:08:00 PM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	6/15/2015 4:08:00 PM
Surr: Dibromofluoromethane	95.1	63.7-129		%REC	1	6/15/2015 4:08:00 PM
Surr: Toluene-d8	94.0	64.3-131		%REC	1	6/15/2015 4:08:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	6/15/2015 4:08:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	4.93			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:10:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-009

Matrix: Soil

Client Sample ID: SB-8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.0754		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Chloromethane	ND	0.0754		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Vinyl chloride	ND	0.00251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Bromomethane	ND	0.113		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Chloroethane	ND	0.0754		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1-Dichloroethene	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Methylene chloride	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
trans-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1-Dichloroethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
2,2-Dichloropropane	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
cis-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Chloroform	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1-Dichloropropene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Carbon tetrachloride	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2-Dichloroethane (EDC)	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Benzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Trichloroethene (TCE)	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2-Dichloropropane	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Bromodichloromethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Dibromomethane	ND	0.0503		mg/Kg-dry	1	6/15/2015 4:38:00 PM
cis-1,3-Dichloropropene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Toluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
trans-1,3-Dichloropropylene	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1,2-Trichloroethane	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,3-Dichloropropane	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Tetrachloroethene (PCE)	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Dibromochloromethane	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2-Dibromoethane (EDB)	ND	0.00628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Chlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Ethylbenzene	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
m,p-Xylene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
o-Xylene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Styrene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Isopropylbenzene	ND	0.101		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Bromoform	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:10:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-009

Matrix: Soil

Client Sample ID: SB-8-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
n-Propylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Bromobenzene	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,3,5-Trimethylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
2-Chlorotoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
4-Chlorotoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
tert-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2,3-Trichloropropane	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2,4-Trichlorobenzene	ND	0.0628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
sec-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
4-Isopropyltoluene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,3-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,4-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
n-Butylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2-Dibromo-3-chloropropane	ND	0.628		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2,4-Trimethylbenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Hexachlorobutadiene	ND	0.126		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Naphthalene	ND	0.0377		mg/Kg-dry	1	6/15/2015 4:38:00 PM
1,2,3-Trichlorobenzene	ND	0.0251		mg/Kg-dry	1	6/15/2015 4:38:00 PM
Surr: Dibromofluoromethane	94.4	63.7-129		%REC	1	6/15/2015 4:38:00 PM
Surr: Toluene-d8	91.8	64.3-131		%REC	1	6/15/2015 4:38:00 PM
Surr: 1-Bromo-4-fluorobenzene	102	63.1-141		%REC	1	6/15/2015 4:38:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	12.0			wt%	1	6/15/2015 10:06:39 AM
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Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:20:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-010

Matrix: Soil

Client Sample ID: SB-8-10D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	0.101		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Chloromethane	ND	0.101		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Vinyl chloride	ND	0.00336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Bromomethane	ND	0.151		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Chloroethane	ND	0.101		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1-Dichloroethene	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Methylene chloride	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
trans-1,2-Dichloroethene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1-Dichloroethane	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
2,2-Dichloropropane	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
cis-1,2-Dichloroethene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Chloroform	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1-Dichloropropene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Carbon tetrachloride	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2-Dichloroethane (EDC)	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Benzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Trichloroethene (TCE)	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2-Dichloropropane	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Bromodichloromethane	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Dibromomethane	ND	0.0673		mg/Kg-dry	1	6/15/2015 5:07:00 PM
cis-1,3-Dichloropropene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Toluene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
trans-1,3-Dichloropropylene	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1,2-Trichloroethane	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,3-Dichloropropane	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Tetrachloroethene (PCE)	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Dibromochloromethane	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2-Dibromoethane (EDB)	ND	0.00841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Chlorobenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Ethylbenzene	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
m,p-Xylene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
o-Xylene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Styrene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Isopropylbenzene	ND	0.135		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Bromoform	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM



Analytical Report

WO#: 1506161

Date Reported: 6/16/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 4:20:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506161-010

Matrix: Soil

Client Sample ID: SB-8-10D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11034

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
n-Propylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Bromobenzene	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,3,5-Trimethylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
2-Chlorotoluene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
4-Chlorotoluene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
tert-Butylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2,3-Trichloropropane	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2,4-Trichlorobenzene	ND	0.0841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
sec-Butylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
4-Isopropyltoluene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,3-Dichlorobenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,4-Dichlorobenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
n-Butylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2-Dichlorobenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2-Dibromo-3-chloropropane	ND	0.841		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2,4-Trimethylbenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Hexachlorobutadiene	ND	0.168		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Naphthalene	ND	0.0505		mg/Kg-dry	1	6/15/2015 5:07:00 PM
1,2,3-Trichlorobenzene	ND	0.0336		mg/Kg-dry	1	6/15/2015 5:07:00 PM
Surr: Dibromofluoromethane	97.0	63.7-129		%REC	1	6/15/2015 5:07:00 PM
Surr: Toluene-d8	91.6	64.3-131		%REC	1	6/15/2015 5:07:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	6/15/2015 5:07:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R22943

Analyst: CG

Percent Moisture	13.6			wt%	1	6/15/2015 10:06:39 AM
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Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-11034	SampType:	LCS	Units:	mg/Kg	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	LCSS	Batch ID:	11034	Analysis Date:	6/15/2015	SeqNo:	435251				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.811	0.0600	1.000	0	81.1	37.2	139				
Chloromethane	0.834	0.0600	1.000	0	83.4	38.8	132				
Vinyl chloride	0.755	0.00200	1.000	0	75.4	56.1	130				
Bromomethane	0.753	0.0900	1.000	0	75.2	41.3	148				
Trichlorofluoromethane (CFC-11)	0.738	0.0500	1.000	0	73.9	42.9	147				
Chloroethane	0.706	0.0600	1.000	0	70.6	37.1	144				
1,1-Dichloroethene	0.780	0.0500	1.000	0	78.0	49.7	142				
Methylene chloride	0.830	0.0200	1.000	0	83.0	46.3	140				
trans-1,2-Dichloroethene	0.808	0.0200	1.000	0	80.8	68	130				
Methyl tert-butyl ether (MTBE)	0.966	0.0500	1.000	0	96.6	59.1	138				
1,1-Dichloroethane	0.890	0.0200	1.000	0	89.0	65.5	132				
2,2-Dichloropropane	0.864	0.0500	1.000	0	86.4	28.1	149				
cis-1,2-Dichloroethene	0.918	0.0200	1.000	0	91.8	71.3	135				
Chloroform	0.837	0.0200	1.000	0	83.7	67.5	129				
1,1,1-Trichloroethane (TCA)	0.862	0.0200	1.000	0	86.2	69	132				
1,1-Dichloropropene	0.844	0.0200	1.000	0	84.4	72.7	131				
Carbon tetrachloride	0.925	0.0200	1.000	0	92.5	63.4	137				
1,2-Dichloroethane (EDC)	1.01	0.0300	1.000	0	101	61.9	136				
Benzene	0.880	0.0200	1.000	0	88.0	64.3	133				
Trichloroethene (TCE)	0.879	0.0200	1.000	0	87.9	65.5	137				
1,2-Dichloropropane	0.828	0.0200	1.000	0	82.8	63.2	142				
Bromodichloromethane	0.915	0.0200	1.000	0	91.5	73.2	131				
Dibromomethane	0.880	0.0400	1.000	0	88.0	70	130				
cis-1,3-Dichloropropene	0.913	0.0200	1.000	0	91.3	59.1	143				
Toluene	0.865	0.0200	1.000	0	86.5	67.3	138				
trans-1,3-Dichloropropylene	0.986	0.0300	1.000	0	98.6	49.2	149				
1,1,2-Trichloroethane	0.920	0.0300	1.000	0	92.0	74.5	129				
1,3-Dichloropropane	0.957	0.0500	1.000	0	95.7	70	130				
Tetrachloroethene (PCE)	0.889	0.0200	1.000	0	88.9	52.7	150				
Dibromochloromethane	1.05	0.0300	1.000	0	105	70.6	144				
1,2-Dibromoethane (EDB)	0.961	0.00500	1.000	0	96.1	70	130				



Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-11034	SampType:	LCS	Units:	mg/Kg	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	LCSS	Batch ID:	11034	Analysis Date:	6/15/2015	SeqNo:	435251				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.976	0.0200	1.000	0	97.6	76.1	123				
1,1,1,2-Tetrachloroethane	0.956	0.0300	1.000	0	95.6	74.8	131				
Ethylbenzene	0.912	0.0300	1.000	0	91.2	74	129				
m,p-Xylene	1.98	0.0200	2.000	0	98.8	79.8	128				
o-Xylene	1.02	0.0200	1.000	0	102	72.7	124				
Styrene	1.01	0.0200	1.000	0	101	76.8	130				
Isopropylbenzene	0.940	0.0800	1.000	0	94.0	70	130				
Bromoform	0.976	0.0200	1.000	0	97.6	67	154				
1,1,2,2-Tetrachloroethane	1.07	0.0200	1.000	0	107	60	130				
n-Propylbenzene	0.924	0.0200	1.000	0	92.4	74.8	125				
Bromobenzene	1.07	0.0300	1.000	0	107	49.2	144				
1,3,5-Trimethylbenzene	0.923	0.0200	1.000	0	92.3	74.6	123				
2-Chlorotoluene	0.924	0.0200	1.000	0	92.4	76.7	129				
4-Chlorotoluene	0.853	0.0200	1.000	0	85.3	77.5	125				
tert-Butylbenzene	0.940	0.0200	1.000	0	94.0	66.2	130				
1,2,3-Trichloropropane	1.04	0.0200	1.000	0	104	67.9	136				
1,2,4-Trichlorobenzene	1.19	0.0500	1.000	0	119	65.6	137				
sec-Butylbenzene	0.980	0.0200	1.000	0	98.0	75.6	133				
4-Isopropyltoluene	0.865	0.0200	1.000	0	86.5	76.8	131				
1,3-Dichlorobenzene	0.939	0.0200	1.000	0	93.9	72.8	128				
1,4-Dichlorobenzene	0.980	0.0200	1.000	0	98.0	72.6	126				
n-Butylbenzene	0.832	0.0200	1.000	0	83.2	65.3	136				
1,2-Dichlorobenzene	0.966	0.0200	1.000	0	96.6	72.8	126				
1,2-Dibromo-3-chloropropane	1.10	0.500	1.000	0	110	61.2	139				
1,2,4-Trimethylbenzene	0.911	0.0200	1.000	0	91.1	77.5	129				
Hexachlorobutadiene	0.972	0.100	1.000	0	97.2	42	151				
Naphthalene	1.15	0.0300	1.000	0	115	62.3	134				
1,2,3-Trichlorobenzene	1.33	0.0200	1.000	0	133	62.1	140				
Surr: Dibromofluoromethane	1.18		1.250		94.7	63.7	129				
Surr: Toluene-d8	1.15		1.250		92.2	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.0	63.1	141				



Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-11034	SampType: LCS	Units: mg/Kg	Prep Date: 6/15/2015	RunNo: 22966							
Client ID: LCSS	Batch ID: 11034		Analysis Date: 6/15/2015	SeqNo: 435251							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID 1506161-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/15/2015	RunNo: 22966							
Client ID: SB-7-0 to 4	Batch ID: 11034		Analysis Date: 6/15/2015	SeqNo: 435344							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0666						0		30	
Chloromethane	ND	0.0666						0		30	
Vinyl chloride	ND	0.00222						0		30	
Bromomethane	ND	0.0999						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0555						0		30	
Chloroethane	ND	0.0666						0		30	
1,1-Dichloroethene	ND	0.0555						0		30	
Methylene chloride	ND	0.0222						0		30	
trans-1,2-Dichloroethene	ND	0.0222						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0555						0		30	
1,1-Dichloroethane	ND	0.0222						0		30	
2,2-Dichloropropane	ND	0.0555						0		30	
cis-1,2-Dichloroethene	ND	0.0222						0		30	
Chloroform	ND	0.0222						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0222						0		30	
1,1-Dichloropropene	ND	0.0222						0		30	
Carbon tetrachloride	ND	0.0222						0		30	
1,2-Dichloroethane (EDC)	ND	0.0333						0		30	
Benzene	ND	0.0222						0		30	
Trichloroethene (TCE)	ND	0.0222						0		30	
1,2-Dichloropropane	ND	0.0222						0		30	
Bromodichloromethane	ND	0.0222						0		30	
Dibromomethane	ND	0.0444						0		30	
cis-1,3-Dichloropropene	ND	0.0222						0		30	
Toluene	ND	0.0222						0		30	
trans-1,3-Dichloropropylene	ND	0.0333						0		30	



Date: 6/16/2015

Work Order: 1506161
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1506161-001BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	SB-7-0 to 4	Batch ID:	11034			Analysis Date:	6/15/2015	SeqNo:	435344		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,2-Trichloroethane	ND	0.0333						0		30	
1,3-Dichloropropane	ND	0.0555						0		30	
Tetrachloroethene (PCE)	0.0888	0.0222						0.08934	0.623	30	
Dibromochloromethane	ND	0.0333						0		30	
1,2-Dibromoethane (EDB)	ND	0.00555						0		30	
Chlorobenzene	ND	0.0222						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0333						0		30	
Ethylbenzene	ND	0.0333						0		30	
m,p-Xylene	ND	0.0222						0		30	
o-Xylene	ND	0.0222						0		30	
Styrene	ND	0.0222						0		30	
Isopropylbenzene	ND	0.0888						0		30	
Bromoform	ND	0.0222						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0222						0		30	
n-Propylbenzene	ND	0.0222						0		30	
Bromobenzene	ND	0.0333						0		30	
1,3,5-Trimethylbenzene	ND	0.0222						0		30	
2-Chlorotoluene	ND	0.0222						0		30	
4-Chlorotoluene	ND	0.0222						0		30	
tert-Butylbenzene	ND	0.0222						0		30	
1,2,3-Trichloropropane	ND	0.0222						0		30	
1,2,4-Trichlorobenzene	ND	0.0555						0		30	
sec-Butylbenzene	ND	0.0222						0		30	
4-Isopropyltoluene	ND	0.0222						0		30	
1,3-Dichlorobenzene	ND	0.0222						0		30	
1,4-Dichlorobenzene	ND	0.0222						0		30	
n-Butylbenzene	ND	0.0222						0		30	
1,2-Dichlorobenzene	ND	0.0222						0		30	
1,2-Dibromo-3-chloropropane	ND	0.555						0		30	
1,2,4-Trimethylbenzene	ND	0.0222						0		30	
Hexachlorobutadiene	ND	0.111						0		30	

Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1506161-001BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	SB-7-0 to 4	Batch ID:	11034			Analysis Date:	6/15/2015	SeqNo:	435344		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.0333						0		30	
1,2,3-Trichlorobenzene	ND	0.0222						0		30	
Surr: Dibromofluoromethane	1.34		1.387		96.5	63.7	129		0		
Surr: Toluene-d8	1.20		1.387		86.8	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.30		1.387		93.6	63.1	141		0		

Sample ID	1506161-002BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	SB-7-4 to 8	Batch ID:	11034			Analysis Date:	6/15/2015	SeqNo:	435345		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.09	0.0687	1.145	0	95.5	43.5	121				
Chloromethane	0.987	0.0687	1.145	0	86.1	45	130				
Vinyl chloride	0.956	0.00229	1.145	0	83.4	51.2	146				
Bromomethane	0.750	0.103	1.145	0	65.5	21.3	120				
Trichlorofluoromethane (CFC-11)	1.14	0.0573	1.145	0	99.9	35	131				
Chloroethane	0.829	0.0687	1.145	0	72.3	43.8	117				
1,1-Dichloroethene	1.20	0.0573	1.145	0	105	61.9	141				
Methylene chloride	1.06	0.0229	1.145	0	92.5	54.7	142				
trans-1,2-Dichloroethene	1.11	0.0229	1.145	0	96.5	52	136				
Methyl tert-butyl ether (MTBE)	1.34	0.0573	1.145	0	117	54.4	132				
1,1-Dichloroethane	1.23	0.0229	1.145	0	107	51.8	141				
2,2-Dichloropropane	1.14	0.0573	1.145	0	99.2	36	123				
cis-1,2-Dichloroethene	1.28	0.0229	1.145	0.04582	108	58.6	136				
Chloroform	1.14	0.0229	1.145	0	99.6	53.2	129				
1,1,1-Trichloroethane (TCA)	1.18	0.0229	1.145	0	103	58.3	145				
1,1-Dichloropropene	1.14	0.0229	1.145	0	99.1	55.1	138				
Carbon tetrachloride	1.29	0.0229	1.145	0	113	53.3	144				
1,2-Dichloroethane (EDC)	1.26	0.0344	1.145	0	110	51.3	139				
Benzene	1.17	0.0229	1.145	0	102	63.5	133				
Trichloroethene (TCE)	1.25	0.0229	1.145	0	109	68.6	132				
1,2-Dichloropropane	1.12	0.0229	1.145	0	97.5	59	136				



Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1506161-002BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/15/2015	RunNo: 22966							
Client ID: SB-7-4 to 8	Batch ID: 11034		Analysis Date: 6/15/2015	SeqNo: 435345							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	1.20	0.0229	1.145	0	105	50.7	141				
Dibromomethane	1.16	0.0458	1.145	0	101	50.6	137				
cis-1,3-Dichloropropene	1.27	0.0229	1.145	0	111	50.4	138				
Toluene	1.15	0.0229	1.145	0	100	63.4	132				
trans-1,3-Dichloropropylene	1.29	0.0344	1.145	0	112	44.1	147				
1,1,2-Trichloroethane	1.14	0.0344	1.145	0	99.3	51.6	137				
1,3-Dichloropropane	1.24	0.0573	1.145	0	108	53.1	134				
Tetrachloroethene (PCE)	1.33	0.0229	1.145	0	116	35.6	158				
Dibromochloromethane	1.40	0.0344	1.145	0	122	55.3	140				
1,2-Dibromoethane (EDB)	1.26	0.00573	1.145	0	110	50.4	136				
Chlorobenzene	1.27	0.0229	1.145	0	111	60	133				
1,1,1,2-Tetrachloroethane	1.23	0.0344	1.145	0	107	53.1	142				
Ethylbenzene	1.24	0.0344	1.145	0	108	54.5	134				
m,p-Xylene	2.72	0.0229	2.291	0	119	53.1	132				
o-Xylene	1.34	0.0229	1.145	0	117	53.3	139				
Styrene	1.36	0.0229	1.145	0	119	51.1	132				
Isopropylbenzene	1.29	0.0916	1.145	0	112	58.9	138				
Bromoform	1.43	0.0229	1.145	0	125	57.9	130				
1,1,1,2,2-Tetrachloroethane	1.44	0.0229	1.145	0	125	51.9	131				
n-Propylbenzene	1.26	0.0229	1.145	0	110	53.6	140				
Bromobenzene	1.45	0.0344	1.145	0	126	54.2	140				
1,3,5-Trimethylbenzene	1.27	0.0229	1.145	0	111	51.8	136				
2-Chlorotoluene	1.26	0.0229	1.145	0	110	51.6	136				
4-Chlorotoluene	1.26	0.0229	1.145	0	110	50.1	139				
tert-Butylbenzene	1.25	0.0229	1.145	0	109	50.5	135				
1,2,3-Trichloropropane	1.43	0.0229	1.145	0	124	50.5	131				
1,2,4-Trichlorobenzene	1.58	0.0573	1.145	0	138	50.8	130				S
sec-Butylbenzene	1.37	0.0229	1.145	0	120	52.6	141				
4-Isopropyltoluene	1.26	0.0229	1.145	0	110	52.9	134				
1,3-Dichlorobenzene	1.28	0.0229	1.145	0	111	52.6	131				
1,4-Dichlorobenzene	1.27	0.0229	1.145	0	111	52.9	129				

Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1506161-002BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	SB-7-4 to 8	Batch ID:	11034			Analysis Date:	6/15/2015	SeqNo:	435345		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Butylbenzene	1.24	0.0229	1.145	0	109	52.6	130				
1,2-Dichlorobenzene	1.25	0.0229	1.145	0	109	55.8	129				
1,2-Dibromo-3-chloropropane	1.37	0.573	1.145	0	120	40.5	131				
1,2,4-Trimethylbenzene	1.27	0.0229	1.145	0	111	50.6	137				
Hexachlorobutadiene	1.55	0.115	1.145	0	135	40.6	158				
Naphthalene	1.60	0.0344	1.145	0	140	52.3	124				S
1,2,3-Trichlorobenzene	1.85	0.0229	1.145	0	161	54.4	124				S
Surr: Dibromofluoromethane	1.34		1.432		93.8	63.7	129				
Surr: Toluene-d8	1.34		1.432		93.6	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.39		1.432		97.3	63.1	141				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Sample ID	MB-11034	SampType:	MBLK	Units:	mg/Kg	Prep Date:	6/15/2015	RunNo:	22966		
Client ID:	MBLKS	Batch ID:	11034			Analysis Date:	6/15/2015	SeqNo:	435348		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0600									
Chloromethane	ND	0.0600									
Vinyl chloride	ND	0.00200									
Bromomethane	ND	0.0900									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.0600									
1,1-Dichloroethene	ND	0.0500									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
2,2-Dichloropropane	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0200									



Work Order: 1506161
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-11034	SampType: MBLK	Units: mg/Kg	Prep Date: 6/15/2015	RunNo: 22966							
Client ID: MBLKS	Batch ID: 11034		Analysis Date: 6/15/2015	SeqNo: 435348							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane (EDC)	ND	0.0300									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0400									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0300									
1,1,2-Trichloroethane	ND	0.0300									
1,3-Dichloropropane	ND	0.0500									
Tetrachloroethene (PCE)	ND	0.0200									
Dibromochloromethane	ND	0.0300									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0300									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Styrene	ND	0.0200									
Isopropylbenzene	ND	0.0800									
Bromoform	ND	0.0200									
1,1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0200									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0200									
2-Chlorotoluene	ND	0.0200									
4-Chlorotoluene	ND	0.0200									
tert-Butylbenzene	ND	0.0200									



Date: 6/16/2015

Work Order: 1506161
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-11034	SampType: MBLK	Units: mg/Kg	Prep Date: 6/15/2015	RunNo: 22966							
Client ID: MBLKS	Batch ID: 11034		Analysis Date: 6/15/2015	SeqNo: 435348							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,3-Trichloropropane	ND	0.0200									
1,2,4-Trichlorobenzene	ND	0.0500									
sec-Butylbenzene	ND	0.0200									
4-Isopropyltoluene	ND	0.0200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0300									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.15		1.250		92.3	63.7	129				
Surr: Toluene-d8	1.10		1.250		88.3	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.4	63.1	141				

Client Name: **PES**
 Logged by: **Clare Griggs**

Work Order Number: **1506161**
 Date Received: **6/12/2015 6:58:00 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
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items 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 there 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:	<input type="text" value="Chris DeBoer"/>	Date	<input type="text" value="6/15/2015"/>
By Whom:	<input type="text" value="Clare Griggs"/>	Via:	<input checked="" type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text" value="Water trip blank for soil samples."/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	0.6
Sample	2.1



3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

PES Environmental, Inc.

Kelly Rankich

1215 Fourth Avenue, Suite 1350

Seattle, WA 98161

RE: Bethel Junction Phase II

Lab ID: 1506162

June 24, 2015

Attention Kelly Rankich:

Fremont Analytical, Inc. received 2 sample(s) on 6/12/2015 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260

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 "Chelsea Ward".

Chelsea Ward
Project Manager



Date: 06/24/2015

CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II
Lab Order: 1506162

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1506162-001	SB-7-12	06/12/2015 3:30 PM	06/12/2015 7:00 PM
1506162-002	SB-8-9	06/12/2015 2:10 PM	06/12/2015 7:00 PM

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

CLIENT: PES Environmental, Inc.

Project: Bethel Junction Phase II

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1506162

Date Reported: 6/24/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506162-001

Matrix: Groundwater

Client Sample ID: SB-7-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: R23164	Analyst: BC
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Chloromethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Vinyl chloride	ND	0.200		µg/L	1	6/24/2015 10:37:00 AM
Bromomethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Chloroethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Methylene chloride	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	6/24/2015 10:37:00 AM
cis-1,2-Dichloroethene	6.67	1.00		µg/L	1	6/24/2015 10:37:00 AM
Chloroform	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Benzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	6/24/2015 10:37:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Dibromomethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Toluene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	6/24/2015 10:37:00 AM
Chlorobenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Ethylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
m,p-Xylene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
o-Xylene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Styrene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Bromoform	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM



Analytical Report

WO#: 1506162

Date Reported: 6/24/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 3:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506162-001

Matrix: Groundwater

Client Sample ID: SB-7-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23164 Analyst: BC

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Bromobenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	6/24/2015 10:37:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	6/24/2015 10:37:00 AM
Naphthalene	ND	1.00		µg/L	1	6/24/2015 10:37:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	6/24/2015 10:37:00 AM
Surr: Dibromofluoromethane	98.2	77.4-147		%REC	1	6/24/2015 10:37:00 AM
Surr: Toluene-d8	99.0	40.1-139		%REC	1	6/24/2015 10:37:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	64.2-128		%REC	1	6/24/2015 10:37:00 AM



Analytical Report

WO#: 1506162

Date Reported: 6/24/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 2:10:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506162-002

Matrix: Groundwater

Client Sample ID: SB-8-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: R23164	Analyst: BC
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Chloromethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Vinyl chloride	ND	0.200		µg/L	1	6/24/2015 11:05:00 AM
Bromomethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Chloroethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Methylene chloride	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	6/24/2015 11:05:00 AM
cis-1,2-Dichloroethene	13.1	1.00		µg/L	1	6/24/2015 11:05:00 AM
Chloroform	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Benzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	6/24/2015 11:05:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Dibromomethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Toluene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	6/24/2015 11:05:00 AM
Chlorobenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Ethylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
m,p-Xylene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
o-Xylene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Styrene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Bromoform	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM



Analytical Report

WO#: 1506162

Date Reported: 6/24/2015

Client: PES Environmental, Inc.

Collection Date: 6/12/2015 2:10:00 PM

Project: Bethel Junction Phase II

Lab ID: 1506162-002

Matrix: Groundwater

Client Sample ID: SB-8-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23164 Analyst: BC

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Bromobenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	6/24/2015 11:05:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	6/24/2015 11:05:00 AM
Naphthalene	ND	1.00		µg/L	1	6/24/2015 11:05:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	6/24/2015 11:05:00 AM
Surr: Dibromofluoromethane	99.0	77.4-147		%REC	1	6/24/2015 11:05:00 AM
Surr: Toluene-d8	99.4	40.1-139		%REC	1	6/24/2015 11:05:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.8	64.2-128		%REC	1	6/24/2015 11:05:00 AM



Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-R23164	SampType:	LCS	Units:	µg/L	Prep Date:	6/24/2015	RunNo:	23164		
Client ID:	LCSW	Batch ID:	R23164	Analysis Date:	6/24/2015	SeqNo:	438793				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.0	1.00	20.00	0	75.0	43	136				
Chloromethane	16.8	1.00	20.00	0	83.8	43.9	139				
Vinyl chloride	18.8	0.200	20.00	0	94.2	53.6	139				
Bromomethane	24.1	1.00	20.00	0	120	42.5	152				
Trichlorofluoromethane (CFC-11)	18.7	1.00	20.00	0	93.6	63.7	133				
Chloroethane	19.0	1.00	20.00	0	94.8	53	141				
1,1-Dichloroethene	19.1	1.00	20.00	0	95.5	65.6	136				
Methylene chloride	20.3	1.00	20.00	0	101	67.1	131				
trans-1,2-Dichloroethene	18.3	1.00	20.00	0	91.4	71.7	129				
Methyl tert-butyl ether (MTBE)	19.4	1.00	20.00	0	97.2	67.7	131				
1,1-Dichloroethane	18.4	1.00	20.00	0	92.2	67.9	134				
2,2-Dichloropropane	17.0	2.00	20.00	0	84.8	33.7	152				
cis-1,2-Dichloroethene	18.7	1.00	20.00	0	93.6	71.1	130				
Chloroform	18.1	1.00	20.00	0	90.4	66.3	131				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	96.8	71	131				
1,1-Dichloropropene	17.7	1.00	20.00	0	88.6	74.5	126				
Carbon tetrachloride	17.8	1.00	20.00	0	88.8	66.2	134				
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0	94.1	70	129				
Benzene	19.5	1.00	20.00	0	97.4	69.3	132				
Trichloroethene (TCE)	20.3	0.500	20.00	0	101	65.2	136				
1,2-Dichloropropane	19.3	1.00	20.00	0	96.7	70.5	130				
Bromodichloromethane	18.5	1.00	20.00	0	92.3	67.2	137				
Dibromomethane	19.0	1.00	20.00	0	94.9	75.5	126				
cis-1,3-Dichloropropene	18.4	1.00	20.00	0	91.8	62.6	137				
Toluene	19.2	1.00	20.00	0	95.9	61.3	145				
trans-1,3-Dichloropropene	20.2	1.00	20.00	0	101	58.5	142				
1,1,2-Trichloroethane	18.7	1.00	20.00	0	93.6	71.7	131				
1,3-Dichloropropane	20.0	1.00	20.00	0	100	73.5	127				
Tetrachloroethene (PCE)	18.8	1.00	20.00	0	94.0	47.5	147				
Dibromochloromethane	19.4	1.00	20.00	0	96.9	67.2	134				
1,2-Dibromoethane (EDB)	19.3	0.0600	20.00	0	96.7	73.6	125				



Date: 6/24/2015

Work Order: 1506162
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-R23164	SampType:	LCS	Units:	µg/L	Prep Date:	6/24/2015	RunNo:	23164		
Client ID:	LCSW	Batch ID:	R23164	Analysis Date:	6/24/2015	SeqNo:	438793				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.5	1.00	20.00	0	102	73.9	126				
1,1,1,2-Tetrachloroethane	17.8	1.00	20.00	0	89.0	76.8	124				
Ethylbenzene	19.2	1.00	20.00	0	96.2	72	130				
m,p-Xylene	38.9	1.00	40.00	0	97.3	70.3	134				
o-Xylene	19.3	1.00	20.00	0	96.7	72.1	131				
Styrene	20.2	1.00	20.00	0	101	64.3	140				
Isopropylbenzene	20.3	1.00	20.00	0	101	73.9	128				
Bromoform	20.7	1.00	20.00	0	104	63.8	135				
1,1,2,2-Tetrachloroethane	17.5	1.00	20.00	0	87.6	62.9	132				
n-Propylbenzene	19.4	1.00	20.00	0	96.9	74.5	127				
Bromobenzene	20.0	1.00	20.00	0	99.8	71	131				
1,3,5-Trimethylbenzene	19.3	1.00	20.00	0	96.5	73.1	128				
2-Chlorotoluene	19.4	1.00	20.00	0	96.9	70.8	130				
4-Chlorotoluene	19.5	1.00	20.00	0	97.6	70.1	131				
tert-Butylbenzene	19.7	1.00	20.00	0	98.6	68.2	131				
1,2,3-Trichloropropane	21.5	1.00	20.00	0	108	67.7	131				
1,2,4-Trichlorobenzene	23.1	2.00	20.00	0	115	67.6	129				
sec-Butylbenzene	20.3	1.00	20.00	0	101	72	129				
4-Isopropyltoluene	19.7	1.00	20.00	0	98.6	69.2	130				
1,3-Dichlorobenzene	20.2	1.00	20.00	0	101	72.4	129				
1,4-Dichlorobenzene	20.0	1.00	20.00	0	99.8	70.6	128				
n-Butylbenzene	19.8	1.00	20.00	0	98.8	73.8	127				
1,2-Dichlorobenzene	19.9	1.00	20.00	0	99.7	74.2	129				
1,2-Dibromo-3-chloropropane	21.4	1.00	20.00	0	107	63.1	136				
1,2,4-Trimethylbenzene	18.3	1.00	20.00	0	91.7	73.4	127				
Hexachlorobutadiene	23.0	4.00	20.00	0	115	58.6	138				
Naphthalene	22.8	1.00	20.00	0	114	45.2	144				
1,2,3-Trichlorobenzene	24.1	4.00	20.00	0	120	50.2	139				
Surr: Dibromofluoromethane	25.0		25.00		99.8	77.4	147				
Surr: Toluene-d8	24.3		25.00		97.1	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.5		25.00		102	64.2	128				



Date: 6/24/2015

Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-R23164	SampType: LCS	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164							
Client ID: LCSW	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438793							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID MB-R23164	SampType: MBLK	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164							
Client ID: MBLKW	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438794							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	1.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									



Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-R23164	SampType: MBLK	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164
Client ID: MBLKW	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438794

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									

Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-R23164	SampType: MBLK	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164							
Client ID: MBLKW	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438794							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.1		25.00		100	77.4	147				
Surr: Toluene-d8	24.4		25.00		97.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.4		25.00		97.5	64.2	128				

Sample ID 1506194-001EDUP	SampType: DUP	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164							
Client ID: BATCH	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438863							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	13.6	1.00						11.26	19.1	30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	7.79	1.00						7.020	10.4	30	
Trichloroethene (TCE)	4.95	0.500						4.460	10.4	30	
1,2-Dichloropropane	ND	1.00						0		30	



Work Order: 1506162
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1506194-001EDUP	SampType:	DUP	Units:	µg/L	Prep Date:	6/24/2015	RunNo:	23164		
Client ID:	BATCH	Batch ID:	R23164	Analysis Date:	6/24/2015	SeqNo:	438863				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	175	1.00						157.2	10.5	30	E
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	26.6	1.00						24.29	8.89	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	128	1.00						122.4	4.53	30	E
m,p-Xylene	1,520	1.00						1,428	5.98	30	E
o-Xylene	969	1.00						918.7	5.30	30	E
Styrene	ND	1.00						0		30	
Isopropylbenzene	33.8	1.00						30.60	10.0	30	
Bromoform	ND	1.00						0		30	
1,1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	55.7	1.00						51.00	8.79	30	E
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	318	1.00						300.1	5.70	30	E
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	1.27	1.00						1.270	0	30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	6.78	1.00						5.800	15.6	30	
4-Isopropyltoluene	9.06	1.00						8.020	12.2	30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	

Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1506194-001EDUP	SampType:	DUP	Units:	µg/L	Prep Date:	6/24/2015	RunNo:	23164		
Client ID:	BATCH	Batch ID:	R23164	Analysis Date:	6/24/2015	SeqNo:	438863				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Butylbenzene	30.0	1.00						26.49	12.3	30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	572	1.00						551.2	3.76	30	E
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	436	1.00						372.2	15.7	30	E
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.9		25.00		99.5	77.4	147		0		
Surr: Toluene-d8	27.1		25.00		109	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	27.1		25.00		108	64.2	128		0		

Sample ID	1506219-026BMS	SampType:	MS	Units:	µg/L	Prep Date:	6/24/2015	RunNo:	23164		
Client ID:	BATCH	Batch ID:	R23164	Analysis Date:	6/24/2015	SeqNo:	438883				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.0	1.00	20.00	0	74.8	33.3	122				
Chloromethane	18.1	1.00	20.00	0	90.4	48.2	145				
Vinyl chloride	19.6	0.200	20.00	0	97.8	58.1	158				
Bromomethane	20.8	1.00	20.00	0	104	31.5	135				
Trichlorofluoromethane (CFC-11)	19.6	1.00	20.00	0	97.9	54.7	138				
Chloroethane	18.8	1.00	20.00	0	94.3	49.9	143				
1,1-Dichloroethene	20.3	1.00	20.00	0	102	63	141				
Methylene chloride	19.9	1.00	20.00	0	99.3	61.6	135				
trans-1,2-Dichloroethene	18.9	1.00	20.00	0	94.3	63.5	138				
Methyl tert-butyl ether (MTBE)	18.7	1.00	20.00	0	93.6	60.9	132				
1,1-Dichloroethane	19.8	1.00	20.00	0	99.2	67.8	136				
2,2-Dichloropropane	11.5	2.00	20.00	0	57.4	31.5	121				
cis-1,2-Dichloroethene	19.5	1.00	20.00	0	97.6	67.1	123				
Chloroform	18.0	1.00	20.00	0	89.8	66.7	136				
1,1,1-Trichloroethane (TCA)	19.0	1.00	20.00	0	95.1	64.2	146				
1,1-Dichloropropene	17.9	1.00	20.00	0	89.7	73.8	136				



Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506219-026BMS	SampType: MS	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164							
Client ID: BATCH	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438883							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	15.6	1.00	20.00	0	78.1	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.5	63.4	137				
Benzene	19.9	1.00	20.00	0	99.5	65.4	138				
Trichloroethene (TCE)	19.8	0.500	20.00	0	98.8	60.4	134				
1,2-Dichloropropane	19.8	1.00	20.00	0	98.8	62.6	138				
Bromodichloromethane	17.6	1.00	20.00	0	88.2	59.4	139				
Dibromomethane	18.6	1.00	20.00	0	92.8	63.6	139				
cis-1,3-Dichloropropene	17.1	1.00	20.00	0	85.4	63.8	132				
Toluene	19.2	1.00	20.00	0.2200	95.1	64	139				
trans-1,3-Dichloropropene	18.0	1.00	20.00	0	89.8	57.7	125				
1,1,2-Trichloroethane	18.8	1.00	20.00	0	94.3	59.4	127				
1,3-Dichloropropane	19.6	1.00	20.00	0	98.2	64.3	135				
Tetrachloroethene (PCE)	19.6	1.00	20.00	0	98.1	50.3	133				
Dibromochloromethane	17.8	1.00	20.00	0	89.0	61.6	139				
1,2-Dibromoethane (EDB)	19.1	0.0600	20.00	0	95.6	63.2	134				
Chlorobenzene	20.8	1.00	20.00	0	104	65.8	134				
1,1,1,2-Tetrachloroethane	17.5	1.00	20.00	0	87.7	65.4	135				
Ethylbenzene	20.0	1.00	20.00	0.2500	98.5	64.5	136				
m,p-Xylene	40.2	1.00	40.00	0.7800	98.4	63.3	135				
o-Xylene	19.9	1.00	20.00	0.3400	97.6	65.4	134				
Styrene	19.3	1.00	20.00	0	96.4	59.1	134				
Isopropylbenzene	20.4	1.00	20.00	0	102	56	147				
Bromoform	18.1	1.00	20.00	0.3600	88.7	57.7	139				
1,1,1,2,2-Tetrachloroethane	18.4	1.00	20.00	0	92.2	59.8	146				
n-Propylbenzene	19.7	1.00	20.00	0.1700	97.8	57.6	142				
Bromobenzene	19.8	1.00	20.00	0	99.2	63.6	130				
1,3,5-Trimethylbenzene	19.0	1.00	20.00	0.3600	93.2	59.9	136				
2-Chlorotoluene	19.7	1.00	20.00	0.1700	97.8	61.7	134				
4-Chlorotoluene	19.8	1.00	20.00	0	98.8	58.4	134				
tert-Butylbenzene	19.1	1.00	20.00	0	95.7	66.8	141				
1,2,3-Trichloropropane	18.9	1.00	20.00	0	94.5	62.4	129				

Work Order: 1506162
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1506219-026BMS	SampType: MS	Units: µg/L	Prep Date: 6/24/2015	RunNo: 23164
Client ID: BATCH	Batch ID: R23164		Analysis Date: 6/24/2015	SeqNo: 438883

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	20.0	2.00	20.00	0	100	50.9	133				
sec-Butylbenzene	19.9	1.00	20.00	0	99.6	56	146				
4-Isopropyltoluene	19.7	1.00	20.00	0.1100	98.1	56.4	136				
1,3-Dichlorobenzene	19.4	1.00	20.00	0	97.0	58.2	128				
1,4-Dichlorobenzene	19.0	1.00	20.00	0	95.0	60.1	123				
n-Butylbenzene	18.0	1.00	20.00	0.1700	89.4	54.6	135				
1,2-Dichlorobenzene	19.3	1.00	20.00	0	96.4	65.4	133				
1,2-Dibromo-3-chloropropane	19.7	1.00	20.00	0	98.6	51.8	142				
1,2,4-Trimethylbenzene	18.5	1.00	20.00	1.660	84.3	63.7	132				
Hexachlorobutadiene	18.2	4.00	20.00	0	91.2	58.1	130				
Naphthalene	20.5	1.00	20.00	5.040	77.4	54.5	132				
1,2,3-Trichlorobenzene	17.8	4.00	20.00	0.1900	88.2	57	131				
Surr: Dibromofluoromethane	24.3		25.00		97.3	77.4	147				
Surr: Toluene-d8	24.1		25.00		96.2	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128				

Client Name: **PES**
 Logged by: **Clare Griggs**

Work Order Number: **1506162**
 Date Received: **6/12/2015 7:00:00 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
 4. Shipping container/cooler in good condition? Yes No
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes No Not Required
 6. Was an attempt made to cool the samples? Yes No NA
 7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	0.6
Sample	2.1

MEMORANDUM

TO: Project File **DATE:** August 26, 2015
FROM: Jessie Compeau **PROJECT:** 1246.030.02.002
SUBJECT: Bethel Junction, Soil and Groundwater Sample Data Review – June 12, 2015
Sampling Event
Fremont Lab Packages 1506161 and 1506162

Ten (10) soil samples (including a field duplicate), two (2) groundwater samples, and a trip blank sample were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on June 12, 2015. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Project samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C. The results were reported in Fremont Lab Packages 1506161 and 1506162.

The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols with the following discussion:

PES Environmental submitted a trip blank along with the soil samples (Fremont Lab Package 1506161) and later cancelled the request for analysis (PES Environmental, Inc). No action was taken other than to note this.

Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of 0.6 degrees Centigrade (°C). Samples in the cooler were recorded at a temperature of 2.1°C within the recommended preservation temperature range of 4.0°C ± 2.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (soils and preserved water) from the data of sample collection. All holding time criteria were met.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. The case narrative did not indicate any issues with calibration; therefore no qualifications were warranted.

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blanks for soils and waters were included with the analytical batch per method requirement. The target analytes were not detected in the method blank for soil or water at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

Trip Blank Results

USEPA Method 8260C (VOCs):

A trip blank associated with the soil samples was collected but not analyzed per client request.

Field, Rinsate, or Equipment Blank Results

USEPA Method 8260C (VOCs):

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

Laboratory duplicate analyses was performed on soil sample SB-7- 0 to 4. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

A laboratory duplicate was performed on an unrelated water sample within the analytical batch. This particular sample had multiple elevated targets which were qualified (E) by Fremont to indicate that values exceeded quantitation range. No action was taken other than to note that the primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Soil field duplicate samples SB-8-10 and SB-8-10D were collected and submitted for VOC analysis. VOC results are comparable and RPDs for all analytes are less than 30% RPD. Field duplicate data are acceptable.

A water field duplicate sample was not collected. Refer to the laboratory duplicate result for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the soil and water samples, laboratory duplicates, laboratory control samples, matrix spikes, and the method blanks were within the laboratory surrogate control limits for all of the analyses.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

A matrix spike (MS) analysis was performed on soil sample SB-7- 4 to 8. Matrix spike analysis was performed on an unrelated water sample within the analytical batch. One MS is required for each sample event (maximum of 20 samples in a group); therefore, the MS analysis meets this required frequency. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria with the following discussion:

Soil matrix spike recoveries for 1,2,4-trichlorobenzene, naphthalene, and 1,2,3-trichlorobenzene were high and above Fremont laboratory control limit criteria. No action was taken since these compounds were not detected in the associated samples.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

Laboratory control samples (LCSs) for soil and water were analyzed by USEPA Method 8260C method for each VOC analysis group. The frequency of analysis of LCSs was appropriate. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for soils and water. No data qualifications were warranted.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. The reported MRLs are considered appropriate for this project. No data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999)

No data were qualified. All data are judged to be acceptable for their intended use.



3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

PES Environmental, Inc.

Kelly Rankich
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Interior

Lab ID: 1506311

September 08, 2015

Attention Kelly Rankich:

Fremont Analytical, Inc. received 23 sample(s) on 6/26/2015 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0

Mercury by EPA Method 7471

Sample Moisture (Percent Moisture)

Total Metals by EPA Method 6020

Volatile Organic Compounds by EPA Method 8260

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 "Chelsea Ward".

Chelsea Ward
Project Manager



Date: 09/08/2015

CLIENT: PES Environmental, Inc.
Project: Bethel Interior
Lab Order: 1506311

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1506311-001	SB-11-0.5	06/25/2015 9:25 AM	06/26/2015 8:00 AM
1506311-002	SB-11-2	06/25/2015 9:30 AM	06/26/2015 8:00 AM
1506311-003	SB-11-2D	06/25/2015 9:50 AM	06/26/2015 8:00 AM
1506311-004	SB-11-9	06/25/2015 9:35 AM	06/26/2015 8:00 AM
1506311-005	SB-11-15	06/25/2015 9:40 AM	06/26/2015 8:00 AM
1506311-006	SB-10-0.5	06/25/2015 10:20 AM	06/26/2015 8:00 AM
1506311-007	SB-10-3	06/25/2015 10:25 AM	06/26/2015 8:00 AM
1506311-008	SB-10-10	06/25/2015 10:40 AM	06/26/2015 8:00 AM
1506311-009	SB-10-13	06/25/2015 10:45 AM	06/26/2015 8:00 AM
1506311-010	SB-12-0.5	06/25/2015 11:35 AM	06/26/2015 8:00 AM
1506311-011	SB-12-3	06/25/2015 11:40 AM	06/26/2015 8:00 AM
1506311-012	SB-12-9	06/25/2015 11:45 AM	06/26/2015 8:00 AM
1506311-013	SB-12-14	06/25/2015 11:50 AM	06/26/2015 8:00 AM
1506311-014	SB-13-0.5	06/25/2015 1:20 PM	06/26/2015 8:00 AM
1506311-015	SB-13-3	06/25/2015 1:25 PM	06/26/2015 8:00 AM
1506311-016	SB-13-9	06/25/2015 1:30 PM	06/26/2015 8:00 AM
1506311-017	SB-13-15	06/25/2015 1:35 PM	06/26/2015 8:00 AM
1506311-018	Trip Blank	06/23/2015 12:42 PM	06/26/2015 8:00 AM
1506311-019	Trip Blank	06/23/2015 12:45 PM	06/26/2015 8:00 AM
1506311-020	SB-11-W	06/25/2015 2:00 PM	06/26/2015 8:00 AM
1506311-021	SB-10-W	06/25/2015 2:10 PM	06/26/2015 8:00 AM
1506311-022	SB-13-W	06/25/2015 3:20 PM	06/26/2015 8:00 AM
1506311-023	DRUM-1	06/25/2015 3:40 PM	06/26/2015 8:00 AM

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

CLIENT: PES Environmental, Inc.

Project: Bethel Interior

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:25:00 AM

Project: Bethel Interior

Lab ID: 1506311-001

Matrix: Soil

Client Sample ID: SB-11-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0599		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Chloromethane	ND	0.0599		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Vinyl chloride	ND	0.00200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Bromomethane	ND	0.0899		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Chloroethane	ND	0.0599		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1-Dichloroethene	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Methylene chloride	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
2,2-Dichloropropane	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Chloroform	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Benzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Trichloroethene (TCE)	0.0230	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Bromodichloromethane	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Dibromomethane	ND	0.0400		mg/Kg-dry	1	6/29/2015 8:34:00 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Toluene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
trans-1,3-Dichloropropylene	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,3-Dichloropropane	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Tetrachloroethene (PCE)	0.656	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2-Dibromoethane (EDB)	ND	0.00499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
m,p-Xylene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
o-Xylene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Styrene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Isopropylbenzene	ND	0.0799		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Bromoform	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:25:00 AM

Project: Bethel Interior

Lab ID: 1506311-001

Matrix: Soil

Client Sample ID: SB-11-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
n-Propylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Bromobenzene	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2,4-Trichlorobenzene	ND	0.0499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
sec-Butylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
4-Isopropyltoluene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2-Dibromo-3-chloropropane	ND	0.499		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Hexachlorobutadiene	ND	0.0999		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Naphthalene	ND	0.0300		mg/Kg-dry	1	6/29/2015 8:34:00 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	6/29/2015 8:34:00 PM
Surr: Dibromofluoromethane	89.3	63.7-129		%REC	1	6/29/2015 8:34:00 PM
Surr: Toluene-d8	100	64.3-131		%REC	1	6/29/2015 8:34:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	6/29/2015 8:34:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	7.43			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:30:00 AM

Project: Bethel Interior

Lab ID: 1506311-002

Matrix: Soil

Client Sample ID: SB-11-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloromethane	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Vinyl chloride	ND	0.00234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromomethane	ND	0.105		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloroethane	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloroethene	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Methylene chloride	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
trans-1,2-Dichloroethene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloroethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
2,2-Dichloropropane	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
cis-1,2-Dichloroethene	0.113	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloroform	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloropropene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Carbon tetrachloride	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichloroethane (EDC)	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Benzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Trichloroethene (TCE)	0.660	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichloropropane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromodichloromethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Dibromomethane	ND	0.0469		mg/Kg-dry	1	6/29/2015 9:03:00 PM
cis-1,3-Dichloropropene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Toluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
trans-1,3-Dichloropropylene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,2-Trichloroethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3-Dichloropropane	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Tetrachloroethene (PCE)	0.179	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Dibromochloromethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dibromoethane (EDB)	ND	0.00586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Ethylbenzene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
m,p-Xylene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
o-Xylene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Styrene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Isopropylbenzene	ND	0.0938		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromoform	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:30:00 AM

Project: Bethel Interior

Lab ID: 1506311-002

Matrix: Soil

Client Sample ID: SB-11-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
n-Propylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromobenzene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3,5-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
2-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
4-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
tert-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,3-Trichloropropane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,4-Trichlorobenzene	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
sec-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
4-Isopropyltoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,4-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
n-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dibromo-3-chloropropane	ND	0.586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,4-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Hexachlorobutadiene	ND	0.117		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Naphthalene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,3-Trichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Surr: Dibromofluoromethane	83.8	63.7-129		%REC	1	6/29/2015 9:03:00 PM
Surr: Toluene-d8	95.5	64.3-131		%REC	1	6/29/2015 9:03:00 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	63.1-141		%REC	1	6/29/2015 9:03:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	12.3			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:50:00 AM

Project: Bethel Interior

Lab ID: 1506311-003

Matrix: Soil

Client Sample ID: SB-11-2D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloromethane	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Vinyl chloride	ND	0.00255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromomethane	ND	0.115		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloroethane	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloroethene	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Methylene chloride	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
trans-1,2-Dichloroethene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloroethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
2,2-Dichloropropane	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
cis-1,2-Dichloroethene	0.0802	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloroform	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloropropene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Carbon tetrachloride	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichloroethane (EDC)	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Benzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Trichloroethene (TCE)	0.551	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichloropropane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromodichloromethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Dibromomethane	ND	0.0509		mg/Kg-dry	1	6/29/2015 9:32:00 PM
cis-1,3-Dichloropropene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Toluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
trans-1,3-Dichloropropylene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,2-Trichloroethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3-Dichloropropane	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Tetrachloroethene (PCE)	0.313	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Dibromochloromethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dibromoethane (EDB)	ND	0.00637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Ethylbenzene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
m,p-Xylene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
o-Xylene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Styrene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Isopropylbenzene	ND	0.102		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromoform	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:50:00 AM

Project: Bethel Interior

Lab ID: 1506311-003

Matrix: Soil

Client Sample ID: SB-11-2D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
n-Propylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromobenzene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3,5-Trimethylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
2-Chlorotoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
4-Chlorotoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
tert-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,3-Trichloropropane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,4-Trichlorobenzene	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
sec-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
4-Isopropyltoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,4-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
n-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dibromo-3-chloropropane	ND	0.637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,4-Trimethylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Hexachlorobutadiene	ND	0.127		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Naphthalene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,3-Trichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Surr: Dibromofluoromethane	88.9	63.7-129		%REC	1	6/29/2015 9:32:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	6/29/2015 9:32:00 PM
Surr: 1-Bromo-4-fluorobenzene	87.0	63.1-141		%REC	1	6/29/2015 9:32:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	9.30			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:35:00 AM

Project: Bethel Interior

Lab ID: 1506311-004

Matrix: Soil

Client Sample ID: SB-11-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0643		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Chloromethane	ND	0.0643		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Vinyl chloride	ND	0.00214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Bromomethane	ND	0.0964		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Chloroethane	ND	0.0643		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1-Dichloroethene	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Methylene chloride	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
trans-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1-Dichloroethane	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
2,2-Dichloropropane	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
cis-1,2-Dichloroethene	0.0252	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Chloroform	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Carbon tetrachloride	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2-Dichloroethane (EDC)	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Benzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Trichloroethene (TCE)	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2-Dichloropropane	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Bromodichloromethane	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Dibromomethane	ND	0.0429		mg/Kg-dry	1	6/29/2015 10:02:00 PM
cis-1,3-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Toluene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
trans-1,3-Dichloropropylene	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1,2-Trichloroethane	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,3-Dichloropropane	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Tetrachloroethene (PCE)	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Dibromochloromethane	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2-Dibromoethane (EDB)	ND	0.00536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Chlorobenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Ethylbenzene	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
m,p-Xylene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
o-Xylene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Styrene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Isopropylbenzene	ND	0.0857		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Bromoform	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:35:00 AM

Project: Bethel Interior

Lab ID: 1506311-004

Matrix: Soil

Client Sample ID: SB-11-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
n-Propylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Bromobenzene	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,3,5-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
2-Chlorotoluene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
4-Chlorotoluene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
tert-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2,3-Trichloropropane	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2,4-Trichlorobenzene	ND	0.0536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
sec-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
4-Isopropyltoluene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,3-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,4-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
n-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2-Dibromo-3-chloropropane	ND	0.536		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2,4-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Hexachlorobutadiene	ND	0.107		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Naphthalene	ND	0.0321		mg/Kg-dry	1	6/29/2015 10:02:00 PM
1,2,3-Trichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/29/2015 10:02:00 PM
Surr: Dibromofluoromethane	82.2	63.7-129		%REC	1	6/29/2015 10:02:00 PM
Surr: Toluene-d8	95.9	64.3-131		%REC	1	6/29/2015 10:02:00 PM
Surr: 1-Bromo-4-fluorobenzene	93.2	63.1-141		%REC	1	6/29/2015 10:02:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	12.5			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:20:00 AM

Project: Bethel Interior

Lab ID: 1506311-006

Matrix: Soil

Client Sample ID: SB-10-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11183	Analyst: EM
Dichlorodifluoromethane (CFC-12)	ND	0.0676		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Chloromethane	ND	0.0676		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Vinyl chloride	ND	0.00225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Bromomethane	ND	0.101		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Chloroethane	ND	0.0676		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1-Dichloroethene	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Methylene chloride	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
trans-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1-Dichloroethane	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
2,2-Dichloropropane	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
cis-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Chloroform	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Carbon tetrachloride	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2-Dichloroethane (EDC)	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Benzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Trichloroethene (TCE)	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2-Dichloropropane	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Bromodichloromethane	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Dibromomethane	ND	0.0450		mg/Kg-dry	1	6/29/2015 11:58:00 PM
cis-1,3-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Toluene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
trans-1,3-Dichloropropylene	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1,2-Trichloroethane	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,3-Dichloropropane	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Tetrachloroethene (PCE)	0.166	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Dibromochloromethane	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2-Dibromoethane (EDB)	ND	0.00563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Chlorobenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Ethylbenzene	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
m,p-Xylene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
o-Xylene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Styrene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Isopropylbenzene	ND	0.0901		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Bromoform	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:20:00 AM

Project: Bethel Interior

Lab ID: 1506311-006

Matrix: Soil

Client Sample ID: SB-10-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
n-Propylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Bromobenzene	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,3,5-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
2-Chlorotoluene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
4-Chlorotoluene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
tert-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2,3-Trichloropropane	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2,4-Trichlorobenzene	ND	0.0563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
sec-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
4-Isopropyltoluene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,3-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,4-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
n-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2-Dibromo-3-chloropropane	ND	0.563		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2,4-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Naphthalene	ND	0.0338		mg/Kg-dry	1	6/29/2015 11:58:00 PM
1,2,3-Trichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/29/2015 11:58:00 PM
Surr: Dibromofluoromethane	85.3	63.7-129		%REC	1	6/29/2015 11:58:00 PM
Surr: Toluene-d8	90.8	64.3-131		%REC	1	6/29/2015 11:58:00 PM
Surr: 1-Bromo-4-fluorobenzene	93.5	63.1-141		%REC	1	6/29/2015 11:58:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	6.80			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:25:00 AM

Project: Bethel Interior

Lab ID: 1506311-007

Matrix: Soil

Client Sample ID: SB-10-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11183	Analyst: EM
Dichlorodifluoromethane (CFC-12)	ND	0.0665		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Chloromethane	ND	0.0665		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Vinyl chloride	ND	0.00222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Bromomethane	ND	0.0998		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Chloroethane	ND	0.0665		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1-Dichloroethene	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Methylene chloride	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
trans-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1-Dichloroethane	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
2,2-Dichloropropane	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
cis-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Chloroform	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Carbon tetrachloride	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2-Dichloroethane (EDC)	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Benzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Trichloroethene (TCE)	0.0222	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2-Dichloropropane	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Bromodichloromethane	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Dibromomethane	ND	0.0444		mg/Kg-dry	1	6/30/2015 12:27:00 AM
cis-1,3-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Toluene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
trans-1,3-Dichloropropylene	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1,2-Trichloroethane	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,3-Dichloropropane	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Tetrachloroethene (PCE)	0.269	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Dibromochloromethane	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2-Dibromoethane (EDB)	ND	0.00554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Chlorobenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Ethylbenzene	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
m,p-Xylene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
o-Xylene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Styrene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Isopropylbenzene	ND	0.0887		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Bromoform	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:25:00 AM

Project: Bethel Interior

Lab ID: 1506311-007

Matrix: Soil

Client Sample ID: SB-10-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
n-Propylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Bromobenzene	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,3,5-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
2-Chlorotoluene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
4-Chlorotoluene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
tert-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2,3-Trichloropropane	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2,4-Trichlorobenzene	ND	0.0554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
sec-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
4-Isopropyltoluene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,3-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,4-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
n-Butylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2-Dibromo-3-chloropropane	ND	0.554		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2,4-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Hexachlorobutadiene	ND	0.111		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Naphthalene	ND	0.0333		mg/Kg-dry	1	6/30/2015 12:27:00 AM
1,2,3-Trichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/30/2015 12:27:00 AM
Surr: Dibromofluoromethane	84.0	63.7-129		%REC	1	6/30/2015 12:27:00 AM
Surr: Toluene-d8	90.3	64.3-131		%REC	1	6/30/2015 12:27:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.1	63.1-141		%REC	1	6/30/2015 12:27:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	6.26			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:40:00 AM

Project: Bethel Interior

Lab ID: 1506311-008

Matrix: Soil

Client Sample ID: SB-10-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11183	Analyst: EM
Dichlorodifluoromethane (CFC-12)	ND	0.0598		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Chloromethane	ND	0.0598		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Vinyl chloride	ND	0.00199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Bromomethane	ND	0.0896		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Chloroethane	ND	0.0598		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1-Dichloroethene	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Methylene chloride	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
trans-1,2-Dichloroethene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1-Dichloroethane	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
2,2-Dichloropropane	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
cis-1,2-Dichloroethene	0.0682	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Chloroform	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Carbon tetrachloride	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2-Dichloroethane (EDC)	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Benzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Trichloroethene (TCE)	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2-Dichloropropane	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Bromodichloromethane	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Dibromomethane	ND	0.0398		mg/Kg-dry	1	6/30/2015 12:56:00 AM
cis-1,3-Dichloropropene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Toluene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
trans-1,3-Dichloropropylene	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1,2-Trichloroethane	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,3-Dichloropropane	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Tetrachloroethene (PCE)	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Dibromochloromethane	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2-Dibromoethane (EDB)	ND	0.00498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Chlorobenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Ethylbenzene	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
m,p-Xylene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
o-Xylene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Styrene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Isopropylbenzene	ND	0.0797		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Bromoform	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 10:40:00 AM

Project: Bethel Interior

Lab ID: 1506311-008

Matrix: Soil

Client Sample ID: SB-10-10

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
n-Propylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Bromobenzene	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,3,5-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
2-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
4-Chlorotoluene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
tert-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2,3-Trichloropropane	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2,4-Trichlorobenzene	ND	0.0498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
sec-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
4-Isopropyltoluene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,3-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,4-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
n-Butylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2-Dichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2-Dibromo-3-chloropropane	ND	0.498		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2,4-Trimethylbenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Hexachlorobutadiene	ND	0.0996		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Naphthalene	ND	0.0299		mg/Kg-dry	1	6/30/2015 12:56:00 AM
1,2,3-Trichlorobenzene	ND	0.0199		mg/Kg-dry	1	6/30/2015 12:56:00 AM
Surr: Dibromofluoromethane	84.1	63.7-129		%REC	1	6/30/2015 12:56:00 AM
Surr: Toluene-d8	98.7	64.3-131		%REC	1	6/30/2015 12:56:00 AM
Surr: 1-Bromo-4-fluorobenzene	83.0	63.1-141		%REC	1	6/30/2015 12:56:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	15.9			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:35:00 AM

Project: Bethel Interior

Lab ID: 1506311-010

Matrix: Soil

Client Sample ID: SB-12-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11183	Analyst: EM
Dichlorodifluoromethane (CFC-12)	ND	0.0746		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Chloromethane	ND	0.0746		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Vinyl chloride	ND	0.00249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Bromomethane	ND	0.112		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Chloroethane	ND	0.0746		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1-Dichloroethene	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Methylene chloride	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
trans-1,2-Dichloroethene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1-Dichloroethane	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
2,2-Dichloropropane	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
cis-1,2-Dichloroethene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Chloroform	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1-Dichloropropene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Carbon tetrachloride	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2-Dichloroethane (EDC)	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Benzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Trichloroethene (TCE)	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2-Dichloropropane	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Bromodichloromethane	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Dibromomethane	ND	0.0498		mg/Kg-dry	1	6/30/2015 1:25:00 AM
cis-1,3-Dichloropropene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Toluene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
trans-1,3-Dichloropropylene	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1,2-Trichloroethane	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,3-Dichloropropane	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Tetrachloroethene (PCE)	0.0995	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Dibromochloromethane	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2-Dibromoethane (EDB)	ND	0.00622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Chlorobenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Ethylbenzene	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
m,p-Xylene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
o-Xylene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Styrene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Isopropylbenzene	ND	0.0995		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Bromoform	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:35:00 AM

Project: Bethel Interior

Lab ID: 1506311-010

Matrix: Soil

Client Sample ID: SB-12-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
n-Propylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Bromobenzene	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,3,5-Trimethylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
2-Chlorotoluene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
4-Chlorotoluene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
tert-Butylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2,3-Trichloropropane	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2,4-Trichlorobenzene	ND	0.0622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
sec-Butylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
4-Isopropyltoluene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,3-Dichlorobenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,4-Dichlorobenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
n-Butylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2-Dichlorobenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2-Dibromo-3-chloropropane	ND	0.622		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2,4-Trimethylbenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Hexachlorobutadiene	ND	0.124		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Naphthalene	ND	0.0373		mg/Kg-dry	1	6/30/2015 1:25:00 AM
1,2,3-Trichlorobenzene	ND	0.0249		mg/Kg-dry	1	6/30/2015 1:25:00 AM
Surr: Dibromofluoromethane	82.8	63.7-129		%REC	1	6/30/2015 1:25:00 AM
Surr: Toluene-d8	105	64.3-131		%REC	1	6/30/2015 1:25:00 AM
Surr: 1-Bromo-4-fluorobenzene	94.7	63.1-141		%REC	1	6/30/2015 1:25:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	8.45			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:40:00 AM

Project: Bethel Interior

Lab ID: 1506311-011

Matrix: Soil

Client Sample ID: SB-12-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0493		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Chloromethane	ND	0.0493		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Vinyl chloride	ND	0.00164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Bromomethane	ND	0.0739		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Chloroethane	ND	0.0493		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1-Dichloroethene	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Methylene chloride	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
trans-1,2-Dichloroethene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1-Dichloroethane	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
2,2-Dichloropropane	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
cis-1,2-Dichloroethene	0.0600	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Chloroform	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1-Dichloropropene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Carbon tetrachloride	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2-Dichloroethane (EDC)	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Benzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Trichloroethene (TCE)	0.225	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2-Dichloropropane	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Bromodichloromethane	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Dibromomethane	ND	0.0329		mg/Kg-dry	1	6/30/2015 1:54:00 AM
cis-1,3-Dichloropropene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Toluene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
trans-1,3-Dichloropropylene	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1,2-Trichloroethane	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,3-Dichloropropane	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Tetrachloroethene (PCE)	0.0986	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Dibromochloromethane	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2-Dibromoethane (EDB)	ND	0.00411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Chlorobenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Ethylbenzene	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
m,p-Xylene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
o-Xylene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Styrene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Isopropylbenzene	ND	0.0657		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Bromoform	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:40:00 AM

Project: Bethel Interior

Lab ID: 1506311-011

Matrix: Soil

Client Sample ID: SB-12-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
n-Propylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Bromobenzene	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,3,5-Trimethylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
2-Chlorotoluene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
4-Chlorotoluene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
tert-Butylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2,3-Trichloropropane	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2,4-Trichlorobenzene	ND	0.0411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
sec-Butylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
4-Isopropyltoluene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,3-Dichlorobenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,4-Dichlorobenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
n-Butylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2-Dichlorobenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2-Dibromo-3-chloropropane	ND	0.411		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2,4-Trimethylbenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Hexachlorobutadiene	ND	0.0821		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Naphthalene	ND	0.0246		mg/Kg-dry	1	6/30/2015 1:54:00 AM
1,2,3-Trichlorobenzene	ND	0.0164		mg/Kg-dry	1	6/30/2015 1:54:00 AM
Surr: Dibromofluoromethane	89.7	63.7-129		%REC	1	6/30/2015 1:54:00 AM
Surr: Toluene-d8	96.7	64.3-131		%REC	1	6/30/2015 1:54:00 AM
Surr: 1-Bromo-4-fluorobenzene	111	63.1-141		%REC	1	6/30/2015 1:54:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	9.87			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:45:00 AM

Project: Bethel Interior

Lab ID: 1506311-012

Matrix: Soil

Client Sample ID: SB-12-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0676		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Chloromethane	ND	0.0676		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Vinyl chloride	ND	0.00225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Bromomethane	ND	0.101		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Chloroethane	ND	0.0676		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1-Dichloroethene	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Methylene chloride	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
trans-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1-Dichloroethane	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
2,2-Dichloropropane	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
cis-1,2-Dichloroethene	0.192	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Chloroform	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Carbon tetrachloride	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2-Dichloroethane (EDC)	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Benzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Trichloroethene (TCE)	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2-Dichloropropane	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Bromodichloromethane	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Dibromomethane	ND	0.0451		mg/Kg-dry	1	6/30/2015 2:23:00 AM
cis-1,3-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Toluene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
trans-1,3-Dichloropropylene	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1,2-Trichloroethane	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,3-Dichloropropane	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Tetrachloroethene (PCE)	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Dibromochloromethane	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2-Dibromoethane (EDB)	ND	0.00564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Chlorobenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Ethylbenzene	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
m,p-Xylene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
o-Xylene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Styrene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Isopropylbenzene	ND	0.0902		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Bromoform	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 11:45:00 AM

Project: Bethel Interior

Lab ID: 1506311-012

Matrix: Soil

Client Sample ID: SB-12-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
n-Propylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Bromobenzene	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,3,5-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
2-Chlorotoluene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
4-Chlorotoluene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
tert-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2,3-Trichloropropane	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2,4-Trichlorobenzene	ND	0.0564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
sec-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
4-Isopropyltoluene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,3-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,4-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
n-Butylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2-Dibromo-3-chloropropane	ND	0.564		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2,4-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Naphthalene	ND	0.0338		mg/Kg-dry	1	6/30/2015 2:23:00 AM
1,2,3-Trichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/30/2015 2:23:00 AM
Surr: Dibromofluoromethane	87.4	63.7-129		%REC	1	6/30/2015 2:23:00 AM
Surr: Toluene-d8	102	64.3-131		%REC	1	6/30/2015 2:23:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	63.1-141		%REC	1	6/30/2015 2:23:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	15.2			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:20:00 PM

Project: Bethel Interior

Lab ID: 1506311-014

Matrix: Soil

Client Sample ID: SB-13-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0638		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Chloromethane	ND	0.0638		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Vinyl chloride	ND	0.00213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Bromomethane	ND	0.0957		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Chloroethane	ND	0.0638		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1-Dichloroethene	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Methylene chloride	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
trans-1,2-Dichloroethene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1-Dichloroethane	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
2,2-Dichloropropane	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
cis-1,2-Dichloroethene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Chloroform	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1-Dichloropropene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Carbon tetrachloride	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2-Dichloroethane (EDC)	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Benzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Trichloroethene (TCE)	0.0213	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2-Dichloropropane	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Bromodichloromethane	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Dibromomethane	ND	0.0425		mg/Kg-dry	1	6/30/2015 2:51:00 AM
cis-1,3-Dichloropropene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Toluene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
trans-1,3-Dichloropropylene	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1,2-Trichloroethane	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,3-Dichloropropane	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Tetrachloroethene (PCE)	0.232	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Dibromochloromethane	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2-Dibromoethane (EDB)	ND	0.00532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Chlorobenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Ethylbenzene	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
m,p-Xylene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
o-Xylene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Styrene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Isopropylbenzene	ND	0.0851		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Bromoform	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:20:00 PM

Project: Bethel Interior

Lab ID: 1506311-014

Matrix: Soil

Client Sample ID: SB-13-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
n-Propylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Bromobenzene	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,3,5-Trimethylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
2-Chlorotoluene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
4-Chlorotoluene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
tert-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2,3-Trichloropropane	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2,4-Trichlorobenzene	ND	0.0532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
sec-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
4-Isopropyltoluene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,3-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,4-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
n-Butylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2-Dichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2-Dibromo-3-chloropropane	ND	0.532		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2,4-Trimethylbenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Hexachlorobutadiene	ND	0.106		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Naphthalene	ND	0.0319		mg/Kg-dry	1	6/30/2015 2:51:00 AM
1,2,3-Trichlorobenzene	ND	0.0213		mg/Kg-dry	1	6/30/2015 2:51:00 AM
Surr: Dibromofluoromethane	86.2	63.7-129		%REC	1	6/30/2015 2:51:00 AM
Surr: Toluene-d8	101	64.3-131		%REC	1	6/30/2015 2:51:00 AM
Surr: 1-Bromo-4-fluorobenzene	85.6	63.1-141		%REC	1	6/30/2015 2:51:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	8.39			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:25:00 PM

Project: Bethel Interior

Lab ID: 1506311-015

Matrix: Soil

Client Sample ID: SB-13-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0614		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Chloromethane	ND	0.0614		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Vinyl chloride	ND	0.00205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Bromomethane	ND	0.0921		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Chloroethane	ND	0.0614		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1-Dichloroethene	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Methylene chloride	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
trans-1,2-Dichloroethene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1-Dichloroethane	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
2,2-Dichloropropane	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
cis-1,2-Dichloroethene	0.119	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Chloroform	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1-Dichloropropene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Carbon tetrachloride	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2-Dichloroethane (EDC)	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Benzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Trichloroethene (TCE)	0.0450	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2-Dichloropropane	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Bromodichloromethane	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Dibromomethane	ND	0.0409		mg/Kg-dry	1	6/30/2015 3:20:00 AM
cis-1,3-Dichloropropene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Toluene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
trans-1,3-Dichloropropylene	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1,2-Trichloroethane	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,3-Dichloropropane	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Tetrachloroethene (PCE)	0.136	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Dibromochloromethane	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2-Dibromoethane (EDB)	ND	0.00512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Chlorobenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Ethylbenzene	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
m,p-Xylene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
o-Xylene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Styrene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Isopropylbenzene	ND	0.0819		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Bromoform	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:25:00 PM

Project: Bethel Interior

Lab ID: 1506311-015

Matrix: Soil

Client Sample ID: SB-13-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
n-Propylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Bromobenzene	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,3,5-Trimethylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
2-Chlorotoluene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
4-Chlorotoluene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
tert-Butylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2,3-Trichloropropane	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2,4-Trichlorobenzene	ND	0.0512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
sec-Butylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
4-Isopropyltoluene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,3-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,4-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
n-Butylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2-Dibromo-3-chloropropane	ND	0.512		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2,4-Trimethylbenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Hexachlorobutadiene	ND	0.102		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Naphthalene	ND	0.0307		mg/Kg-dry	1	6/30/2015 3:20:00 AM
1,2,3-Trichlorobenzene	ND	0.0205		mg/Kg-dry	1	6/30/2015 3:20:00 AM
Surr: Dibromofluoromethane	83.0	63.7-129		%REC	1	6/30/2015 3:20:00 AM
Surr: Toluene-d8	92.2	64.3-131		%REC	1	6/30/2015 3:20:00 AM
Surr: 1-Bromo-4-fluorobenzene	91.2	63.1-141		%REC	1	6/30/2015 3:20:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	8.38			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:30:00 PM

Project: Bethel Interior

Lab ID: 1506311-016

Matrix: Soil

Client Sample ID: SB-13-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0643		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Chloromethane	ND	0.0643		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Vinyl chloride	ND	0.00214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Bromomethane	ND	0.0965		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Chloroethane	ND	0.0643		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1-Dichloroethene	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Methylene chloride	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
trans-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1-Dichloroethane	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
2,2-Dichloropropane	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
cis-1,2-Dichloroethene	0.0263	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Chloroform	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Carbon tetrachloride	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2-Dichloroethane (EDC)	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Benzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Trichloroethene (TCE)	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2-Dichloropropane	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Bromodichloromethane	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Dibromomethane	ND	0.0429		mg/Kg-dry	1	6/30/2015 3:49:00 AM
cis-1,3-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Toluene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
trans-1,3-Dichloropropylene	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1,2-Trichloroethane	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,3-Dichloropropane	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Tetrachloroethene (PCE)	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Dibromochloromethane	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2-Dibromoethane (EDB)	ND	0.00536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Chlorobenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Ethylbenzene	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
m,p-Xylene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
o-Xylene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Styrene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Isopropylbenzene	ND	0.0858		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Bromoform	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 1:30:00 PM

Project: Bethel Interior

Lab ID: 1506311-016

Matrix: Soil

Client Sample ID: SB-13-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
n-Propylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Bromobenzene	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,3,5-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
2-Chlorotoluene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
4-Chlorotoluene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
tert-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2,3-Trichloropropane	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2,4-Trichlorobenzene	ND	0.0536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
sec-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
4-Isopropyltoluene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,3-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,4-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
n-Butylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2-Dibromo-3-chloropropane	ND	0.536		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2,4-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Hexachlorobutadiene	ND	0.107		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Naphthalene	ND	0.0322		mg/Kg-dry	1	6/30/2015 3:49:00 AM
1,2,3-Trichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/30/2015 3:49:00 AM
Surr: Dibromofluoromethane	86.4	63.7-129		%REC	1	6/30/2015 3:49:00 AM
Surr: Toluene-d8	97.7	64.3-131		%REC	1	6/30/2015 3:49:00 AM
Surr: 1-Bromo-4-fluorobenzene	92.6	63.1-141		%REC	1	6/30/2015 3:49:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	16.8			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:42:00 PM

Project: Bethel Interior

Lab ID: 1506311-018

Matrix: Soil

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0600		mg/Kg	1	6/29/2015 6:36:00 PM
Chloromethane	ND	0.0600		mg/Kg	1	6/29/2015 6:36:00 PM
Vinyl chloride	ND	0.00200		mg/Kg	1	6/29/2015 6:36:00 PM
Bromomethane	ND	0.0900		mg/Kg	1	6/29/2015 6:36:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
Chloroethane	ND	0.0600		mg/Kg	1	6/29/2015 6:36:00 PM
1,1-Dichloroethene	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
Methylene chloride	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
2,2-Dichloropropane	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Chloroform	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Carbon tetrachloride	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
Benzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Trichloroethene (TCE)	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Bromodichloromethane	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Dibromomethane	ND	0.0400		mg/Kg	1	6/29/2015 6:36:00 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Toluene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
trans-1,3-Dichloropropylene	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
1,3-Dichloropropane	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Dibromochloromethane	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg	1	6/29/2015 6:36:00 PM
Chlorobenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
Ethylbenzene	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
m,p-Xylene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
o-Xylene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Styrene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Isopropylbenzene	ND	0.0800		mg/Kg	1	6/29/2015 6:36:00 PM
Bromoform	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:42:00 PM

Project: Bethel Interior

Lab ID: 1506311-018

Matrix: Soil

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
n-Propylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Bromobenzene	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
2-Chlorotoluene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
4-Chlorotoluene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
tert-Butylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2,4-Trichlorobenzene	ND	0.0500		mg/Kg	1	6/29/2015 6:36:00 PM
sec-Butylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
4-Isopropyltoluene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
n-Butylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
1,2-Dibromo-3-chloropropane	ND	0.500		mg/Kg	1	6/29/2015 6:36:00 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Hexachlorobutadiene	ND	0.100		mg/Kg	1	6/29/2015 6:36:00 PM
Naphthalene	ND	0.0300		mg/Kg	1	6/29/2015 6:36:00 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg	1	6/29/2015 6:36:00 PM
Surr: Dibromofluoromethane	92.5	63.7-129		%REC	1	6/29/2015 6:36:00 PM
Surr: Toluene-d8	94.5	64.3-131		%REC	1	6/29/2015 6:36:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.5	63.1-141		%REC	1	6/29/2015 6:36:00 PM



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:45:00 PM

Project: Bethel Interior

Lab ID: 1506311-019

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Vinyl chloride	ND	0.200		µg/L	1	7/7/2015 9:02:00 AM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 9:02:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Benzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Toluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 9:02:00 AM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Styrene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:45:00 PM

Project: Bethel Interior

Lab ID: 1506311-019

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 9:02:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 9:02:00 AM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 9:02:00 AM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 9:02:00 AM
Surr: Toluene-d8	131	40.1-139		%REC	1	7/7/2015 9:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	89.5	64.2-128		%REC	1	7/7/2015 9:02:00 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:00:00 PM

Project: Bethel Interior

Lab ID: 1506311-020

Matrix: Groundwater

Client Sample ID: SB-11-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Vinyl chloride	0.706	0.200	Q	µg/L	1	7/7/2015 4:40:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 4:40:00 PM
cis-1,2-Dichloroethene	61.6	10.0	D	µg/L	10	7/8/2015 7:38:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 4:40:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:00:00 PM

Project: Bethel Interior

Lab ID: 1506311-020

Matrix: Groundwater

Client Sample ID: SB-11-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 4:40:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 4:40:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 4:40:00 PM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 4:40:00 PM
Surr: Toluene-d8	93.5	40.1-139		%REC	1	7/7/2015 4:40:00 PM
Surr: 1-Bromo-4-fluorobenzene	106	64.2-128		%REC	1	7/7/2015 4:40:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Ion Chromatography by EPA Method 300.0

Batch ID: R23285 Analyst: KT

Fluoride	0.0168	0.200	JD	mg/L	2	6/29/2015 2:51:00 PM
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NOTES:

Sample diluted due to matrix.



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:10:00 PM

Project: Bethel Interior

Lab ID: 1506311-021

Matrix: Groundwater

Client Sample ID: SB-10-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Vinyl chloride	ND	0.200		µg/L	1	7/7/2015 5:38:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 5:38:00 PM
cis-1,2-Dichloroethene	18.3	1.00		µg/L	1	7/7/2015 5:38:00 PM
Chloroform	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Tetrachloroethene (PCE)	1.52	1.00		µg/L	1	7/7/2015 5:38:00 PM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 5:38:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:10:00 PM

Project: Bethel Interior

Lab ID: 1506311-021

Matrix: Groundwater

Client Sample ID: SB-10-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 5:38:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 5:38:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 5:38:00 PM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 5:38:00 PM
Surr: Toluene-d8	102	40.1-139		%REC	1	7/7/2015 5:38:00 PM
Surr: 1-Bromo-4-fluorobenzene	119	64.2-128		%REC	1	7/7/2015 5:38:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

WO#: 1506311

Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 3:20:00 PM

Project: Bethel Interior

Lab ID: 1506311-022

Matrix: Groundwater

Client Sample ID: SB-13-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Vinyl chloride	0.658	0.200	Q	µg/L	1	7/7/2015 6:07:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 6:07:00 PM
cis-1,2-Dichloroethene	37.3	10.0	D	µg/L	10	7/8/2015 8:06:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 6:07:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 3:20:00 PM

Project: Bethel Interior

Lab ID: 1506311-022

Matrix: Groundwater

Client Sample ID: SB-13-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 6:07:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 6:07:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 6:07:00 PM
Surr: Dibromofluoromethane	103	77.4-147		%REC	1	7/7/2015 6:07:00 PM
Surr: Toluene-d8	101	40.1-139		%REC	1	7/7/2015 6:07:00 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	64.2-128		%REC	1	7/7/2015 6:07:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

WO#: 1506311
Date Reported: 9/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 3:40:00 PM

Project: Bethel Interior

Lab ID: 1506311-023

Matrix: Soil

Client Sample ID: DRUM-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Mercury by EPA Method 7471

Batch ID: 11182 Analyst: MW

Mercury	ND	0.273		mg/Kg-dry	1	7/1/2015 1:59:15 PM
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Total Metals by EPA Method 6020

Batch ID: 11181 Analyst: TN

Arsenic	2.25	0.0813		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Barium	47.6	0.406		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Cadmium	ND	0.163		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Chromium	32.4	0.0813		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Lead	2.66	0.163		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Selenium	0.982	0.406		mg/Kg-dry	1	6/29/2015 4:28:26 PM
Silver	ND	0.0813		mg/Kg-dry	1	6/29/2015 4:28:26 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294 Analyst: CG

Percent Moisture	10.2			wt%	1	6/30/2015 8:19:48 AM
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Date: 9/8/2015

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: MB-R23285	SampType: MBLK	Units: mg/L	Prep Date: 6/29/2015	RunNo: 23285							
Client ID: MBLKW	Batch ID: R23285		Analysis Date: 6/29/2015	SeqNo: 441071							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride ND 0.100

Sample ID: LCS-R23285	SampType: LCS	Units: mg/L	Prep Date: 6/29/2015	RunNo: 23285							
Client ID: LCSW	Batch ID: R23285		Analysis Date: 6/29/2015	SeqNo: 441072							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 2.00 0.100 2.000 0 100 90 110

Sample ID: 1506311-020BDUP	SampType: DUP	Units: mg/L	Prep Date: 6/29/2015	RunNo: 23285							
Client ID: SB-11-W	Batch ID: R23285		Analysis Date: 6/29/2015	SeqNo: 441074							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride ND 0.200 0 20 D

NOTES:
Sample diluted due to matrix.

Sample ID: 1506311-020BMS	SampType: MS	Units: mg/L	Prep Date: 6/29/2015	RunNo: 23285							
Client ID: SB-11-W	Batch ID: R23285		Analysis Date: 6/29/2015	SeqNo: 441075							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 3.98 0.200 4.000 0.01680 99.0 80 120 D

NOTES:
Sample diluted due to matrix.

Sample ID: 1506311-020BMSD	SampType: MSD	Units: mg/L	Prep Date: 6/29/2015	RunNo: 23285							
Client ID: SB-11-W	Batch ID: R23285		Analysis Date: 6/29/2015	SeqNo: 441076							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 3.98 0.200 4.000 0.01680 99.2 80 120 3.978 0.121 20 D

NOTES:
Sample diluted due to matrix.



Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Total Metals by EPA Method 6020

Sample ID: MB-11181	SampType: MBLK	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: MBLKS	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441038								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.100									
Barium	ND	0.500									
Cadmium	ND	0.200									
Chromium	ND	0.100									
Lead	ND	0.200									
Selenium	ND	0.500									
Silver	ND	0.100									

Sample ID: LCS-11181	SampType: LCS	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: LCSS	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441039								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	151	0.100	152.0	0	99.6	70.4	129.6				
Barium	337	0.500	376.0	0	89.5	74.2	125.8				
Cadmium	174	0.200	171.0	0	102	73.7	126.9				
Chromium	164	0.100	152.0	0	108	70.4	129.6				
Lead	214	0.200	237.0	0	90.3	75.1	124.9				
Selenium	195	0.500	229.0	0	85.2	69	131				
Silver	76.9	0.100	79.70	0	96.5	67.3	133				

Sample ID: 1506313-001ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: BATCH	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441041								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	5.27	0.102						4.514	15.4	20	
Barium	73.7	0.512						80.90	9.27	20	
Cadmium	ND	0.205						0.2314	20.0	20	
Chromium	38.6	0.102						33.03	15.7	20	
Lead	159	0.205						98.32	47.0	20	R
Selenium	1.06	0.512						1.331	22.7	20	



Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Total Metals by EPA Method 6020

Sample ID: 1506313-001ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: BATCH	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441041								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.108	0.102						0.1293	17.8	20	

NOTES:
R - High RPD observed. The method is in control as indicated by the laboratory control sample (LCS).

Sample ID: 1506313-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: BATCH	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441043								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	57.1	0.101	50.81	4.514	103	75	125				
Barium	126	0.508	50.81	80.90	89.2	75	125				
Cadmium	2.77	0.203	2.541	0.2314	100	75	125				
Chromium	86.7	0.101	50.81	33.03	106	75	125				
Lead	160	0.203	25.41	98.32	241	75	125				S
Selenium	5.62	0.508	5.081	1.331	84.4	75	125				
Silver	2.39	0.101	2.541	0.1293	88.8	75	125				

NOTES:
S - Outlying spike recovery observed, similar results seen in the MSD indicating a possible matrix effect.

Sample ID: 1506313-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: BATCH	Batch ID: 11181	Analysis Date: 6/29/2015	SeqNo: 441044								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	58.8	0.103	51.61	4.514	105	75	125	57.10	2.85	20	
Barium	130	0.516	51.61	80.90	95.8	75	125	126.2	3.21	20	
Cadmium	2.94	0.207	2.581	0.2314	105	75	125	2.772	5.96	20	
Chromium	93.7	0.103	51.61	33.03	118	75	125	86.75	7.69	20	
Lead	101	0.207	25.81	98.32	10.8	75	125	159.5	44.8	20	RS
Selenium	5.70	0.516	5.161	1.331	84.6	75	125	5.621	1.33	20	
Silver	2.50	0.103	2.581	0.1293	91.9	75	125	2.385	4.72	20	

NOTES:
SR - Outlying spike recovery and high RPD observed, indicating a possible matrix effect. The method is in control as indicated by the LCS.



Date: 9/8/2015

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Total Metals by EPA Method 6020

Sample ID: 1506313-001APDS	SampType: PDS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23283							
Client ID: BATCH	Batch ID: 11181		Analysis Date: 6/29/2015	SeqNo: 441045							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	129	0.207	25.8	98.3	117	80	120				

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Mercury by EPA Method 7471

Sample ID: MB-11182	SampType: MBLK	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23328							
Client ID: MBLKS	Batch ID: 11182		Analysis Date: 7/1/2015	SeqNo: 441764							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.250

Sample ID: LCS-11182	SampType: LCS	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23328							
Client ID: LCSS	Batch ID: 11182		Analysis Date: 7/1/2015	SeqNo: 441765							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.551 0.250 0.5000 0 110 80 120

Sample ID: 1506313-001ADUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23328							
Client ID: BATCH	Batch ID: 11182		Analysis Date: 7/1/2015	SeqNo: 441767							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury ND 0.293 0 20

Sample ID: 1506313-001AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23328							
Client ID: BATCH	Batch ID: 11182		Analysis Date: 7/1/2015	SeqNo: 441768							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.763 0.283 0.5651 0.1345 111 70 130

Sample ID: 1506313-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23328							
Client ID: BATCH	Batch ID: 11182		Analysis Date: 7/1/2015	SeqNo: 441769							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mercury 0.780 0.287 0.5750 0.1345 112 70 130 0.7628 2.18 20



Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-11183	SampType: LCS	Units: mg/Kg				Prep Date: 6/29/2015	RunNo: 23288				
Client ID: LCSS	Batch ID: 11183					Analysis Date: 6/29/2015	SeqNo: 441125				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.64	0.0600	1.000	0	164	37.2	139				S
Chloromethane	1.20	0.0600	1.000	0	120	38.8	132				
Vinyl chloride	1.14	0.00200	1.000	0	114	56.1	130				
Bromomethane	1.04	0.0900	1.000	0	104	41.3	148				
Trichlorofluoromethane (CFC-11)	1.00	0.0500	1.000	0	100	42.9	147				
Chloroethane	0.946	0.0600	1.000	0	94.6	37.1	144				
1,1-Dichloroethene	0.997	0.0500	1.000	0	99.7	49.7	142				
Methylene chloride	0.951	0.0200	1.000	0	95.1	46.3	140				
trans-1,2-Dichloroethene	0.968	0.0200	1.000	0	96.8	68	130				
Methyl tert-butyl ether (MTBE)	0.803	0.0500	1.000	0	80.3	59.1	138				
1,1-Dichloroethane	0.924	0.0200	1.000	0	92.4	65.5	132				
2,2-Dichloropropane	1.13	0.0500	1.000	0	113	28.1	149				
cis-1,2-Dichloroethene	0.937	0.0200	1.000	0	93.7	71.3	135				
Chloroform	0.923	0.0200	1.000	0	92.3	67.5	129				
1,1,1-Trichloroethane (TCA)	0.925	0.0200	1.000	0	92.5	69	132				
1,1-Dichloropropene	0.979	0.0200	1.000	0	97.9	72.7	131				
Carbon tetrachloride	1.06	0.0200	1.000	0	106	63.4	137				
1,2-Dichloroethane (EDC)	0.817	0.0300	1.000	0	81.7	61.9	136				
Benzene	0.958	0.0200	1.000	0	95.8	64.3	133				
Trichloroethene (TCE)	0.920	0.0200	1.000	0	92.0	65.5	137				
1,2-Dichloropropane	0.921	0.0200	1.000	0	92.1	63.2	142				
Bromodichloromethane	0.867	0.0200	1.000	0	86.7	73.2	131				
Dibromomethane	0.875	0.0400	1.000	0	87.5	70	130				
cis-1,3-Dichloropropene	1.01	0.0200	1.000	0	101	59.1	143				
Toluene	0.932	0.0200	1.000	0	93.2	67.3	138				
trans-1,3-Dichloropropylene	0.930	0.0300	1.000	0	93.0	49.2	149				
1,1,2-Trichloroethane	0.901	0.0300	1.000	0	90.1	74.5	129				
1,3-Dichloropropane	0.904	0.0500	1.000	0	90.4	70	130				
Tetrachloroethene (PCE)	1.02	0.0200	1.000	0	102	52.7	150				
Dibromochloromethane	0.856	0.0300	1.000	0	85.6	70.6	144				
1,2-Dibromoethane (EDB)	0.962	0.00500	1.000	0	96.2	70	130				



Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-11183	SampType: LCS	Units: mg/Kg				Prep Date: 6/29/2015	RunNo: 23288				
Client ID: LCSS	Batch ID: 11183					Analysis Date: 6/29/2015	SeqNo: 441125				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.968	0.0200	1.000	0	96.8	76.1	123				
1,1,1,2-Tetrachloroethane	1.03	0.0300	1.000	0	103	74.8	131				
Ethylbenzene	0.953	0.0300	1.000	0	95.3	74	129				
m,p-Xylene	2.00	0.0200	2.000	0	100	79.8	128				
o-Xylene	0.988	0.0200	1.000	0	98.8	72.7	124				
Styrene	1.01	0.0200	1.000	0	101	76.8	130				
Isopropylbenzene	1.02	0.0800	1.000	0	102	70	130				
Bromoform	0.841	0.0200	1.000	0	84.1	67	154				
1,1,1,2,2-Tetrachloroethane	0.965	0.0200	1.000	0	96.5	60	130				
n-Propylbenzene	1.02	0.0200	1.000	0	102	74.8	125				
Bromobenzene	0.992	0.0300	1.000	0	99.2	49.2	144				
1,3,5-Trimethylbenzene	1.02	0.0200	1.000	0	102	74.6	123				
2-Chlorotoluene	1.03	0.0200	1.000	0	103	76.7	129				
4-Chlorotoluene	0.989	0.0200	1.000	0	98.9	77.5	125				
tert-Butylbenzene	1.00	0.0200	1.000	0	100	66.2	130				
1,2,3-Trichloropropane	0.865	0.0200	1.000	0	86.5	67.9	136				
1,2,4-Trichlorobenzene	0.975	0.0500	1.000	0	97.5	65.6	137				
sec-Butylbenzene	1.01	0.0200	1.000	0	101	75.6	133				
4-Isopropyltoluene	1.01	0.0200	1.000	0	101	76.8	131				
1,3-Dichlorobenzene	0.969	0.0200	1.000	0	96.9	72.8	128				
1,4-Dichlorobenzene	0.941	0.0200	1.000	0	94.1	72.6	126				
n-Butylbenzene	0.986	0.0200	1.000	0	98.6	65.3	136				
1,2-Dichlorobenzene	0.900	0.0200	1.000	0	90.0	72.8	126				
1,2-Dibromo-3-chloropropane	0.680	0.500	1.000	0	68.0	61.2	139				
1,2,4-Trimethylbenzene	0.983	0.0200	1.000	0	98.3	77.5	129				
Hexachlorobutadiene	1.13	0.100	1.000	0	113	42	151				
Naphthalene	0.871	0.0300	1.000	0	87.1	62.3	134				
1,2,3-Trichlorobenzene	0.917	0.0200	1.000	0	91.7	62.1	140				
Surr: Dibromofluoromethane	1.25		1.250		99.6	63.7	129				
Surr: Toluene-d8	1.25		1.250		100	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		101	63.1	141				

Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-11183	SampType: LCS	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: LCSS	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441125							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recoveries observed (Dichlorodifluoromethane; high bias). Samples are non-detect for this analyte, no further action required.

Sample ID: MB-11183	SampType: MBLK	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: MBLKS	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441126							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0600									
Chloromethane	ND	0.0600									
Vinyl chloride	ND	0.00200									
Bromomethane	ND	0.0900									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.0600									
1,1-Dichloroethene	ND	0.0500									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
2,2-Dichloropropane	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0200									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane (EDC)	ND	0.0300									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0400									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

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CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-11183	SampType: MBLK	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23288
Client ID: MBLKS	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441126

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0300									
1,1,2-Trichloroethane	ND	0.0300									
1,3-Dichloropropane	ND	0.0500									
Tetrachloroethene (PCE)	ND	0.0200									
Dibromochloromethane	ND	0.0300									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0300									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Styrene	ND	0.0200									
Isopropylbenzene	ND	0.0800									
Bromoform	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0200									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0200									
2-Chlorotoluene	ND	0.0200									
4-Chlorotoluene	ND	0.0200									
tert-Butylbenzene	ND	0.0200									
1,2,3-Trichloropropane	ND	0.0200									
1,2,4-Trichlorobenzene	ND	0.0500									
sec-Butylbenzene	ND	0.0200									
4-Isopropyltoluene	ND	0.0200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									



Date: 9/8/2015

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-11183	SampType: MBLK	Units: mg/Kg	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: MBLKS	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441126							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0300									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.29		1.250		103	63.7	129				
Surr: Toluene-d8	1.33		1.250		106	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.1	63.1	141				

Sample ID: 1506313-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441120							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0653						0		30	
Chloromethane	ND	0.0653						0		30	
Vinyl chloride	ND	0.00218						0		30	
Bromomethane	ND	0.0979						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0544						0		30	
Chloroethane	ND	0.0653						0		30	
1,1-Dichloroethene	ND	0.0544						0		30	
Methylene chloride	ND	0.0218						0		30	
trans-1,2-Dichloroethene	ND	0.0218						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0544						0		30	
1,1-Dichloroethane	ND	0.0218						0		30	
2,2-Dichloropropane	ND	0.0544						0		30	
cis-1,2-Dichloroethene	ND	0.0218						0		30	
Chloroform	ND	0.0218						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0218						0		30	
1,1-Dichloropropene	ND	0.0218						0		30	
Carbon tetrachloride	ND	0.0218						0		30	
1,2-Dichloroethane (EDC)	ND	0.0326						0		30	
Benzene	ND	0.0218						0		30	
Trichloroethene (TCE)	ND	0.0218						0		30	



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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506313-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441120							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.0218						0		30	
Bromodichloromethane	ND	0.0218						0		30	
Dibromomethane	ND	0.0435						0		30	
cis-1,3-Dichloropropene	ND	0.0218						0		30	
Toluene	ND	0.0218						0		30	
trans-1,3-Dichloropropylene	ND	0.0326						0		30	
1,1,2-Trichloroethane	ND	0.0326						0		30	
1,3-Dichloropropane	ND	0.0544						0		30	
Tetrachloroethene (PCE)	ND	0.0218						0		30	
Dibromochloromethane	ND	0.0326						0		30	
1,2-Dibromoethane (EDB)	ND	0.00544						0		30	
Chlorobenzene	ND	0.0218						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0326						0		30	
Ethylbenzene	ND	0.0326						0		30	
m,p-Xylene	ND	0.0218						0		30	
o-Xylene	ND	0.0218						0		30	
Styrene	ND	0.0218						0		30	
Isopropylbenzene	ND	0.0870						0		30	
Bromoform	ND	0.0218						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0218						0		30	
n-Propylbenzene	0.0531	0.0218						0.05083	4.34	30	
Bromobenzene	ND	0.0326						0		30	
1,3,5-Trimethylbenzene	ND	0.0218						0		30	
2-Chlorotoluene	ND	0.0218						0		30	
4-Chlorotoluene	ND	0.0218						0		30	
tert-Butylbenzene	ND	0.0218						0		30	
1,2,3-Trichloropropane	ND	0.0218						0		30	
1,2,4-Trichlorobenzene	ND	0.0544						0		30	
sec-Butylbenzene	ND	0.0218						0		30	
4-Isopropyltoluene	ND	0.0218						0		30	
1,3-Dichlorobenzene	ND	0.0218						0		30	

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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506313-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441120							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	0.0218						0		30	
n-Butylbenzene	0.0779	0.0218						0.07932	1.86	30	
1,2-Dichlorobenzene	ND	0.0218						0		30	
1,2-Dibromo-3-chloropropane	ND	0.544						0		30	
1,2,4-Trimethylbenzene	ND	0.0218						0		30	
Hexachlorobutadiene	ND	0.109						0		30	
Naphthalene	ND	0.0326						0		30	
1,2,3-Trichlorobenzene	ND	0.0218						0		30	
Surr: Dibromofluoromethane	1.28		1.360		94.3	63.7	129		0		
Surr: Toluene-d8	1.39		1.360		102	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.40		1.360		103	63.1	141		0		

Sample ID: 1506313-002BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441122							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	2.67	0.0882	1.471	0	182	43.5	121				S
Chloromethane	2.06	0.0882	1.471	0.02047	139	45	130				S
Vinyl chloride	1.95	0.00294	1.471	0.003831	132	51.2	146				
Bromomethane	2.01	0.132	1.471	0	137	21.3	120				S
Trichlorofluoromethane (CFC-11)	1.65	0.0735	1.471	0	112	35	131				
Chloroethane	1.99	0.0882	1.471	0.01873	134	43.8	117				S
1,1-Dichloroethene	1.86	0.0735	1.471	0	127	61.9	141				
Methylene chloride	1.91	0.0294	1.471	0	130	54.7	142				
trans-1,2-Dichloroethene	1.82	0.0294	1.471	0	124	52	136				
Methyl tert-butyl ether (MTBE)	1.80	0.0735	1.471	0	123	54.4	132				
1,1-Dichloroethane	1.73	0.0294	1.471	0	117	51.8	141				
2,2-Dichloropropane	1.63	0.0735	1.471	0	111	36	123				
cis-1,2-Dichloroethene	1.62	0.0294	1.471	0	110	58.6	136				
Chloroform	1.65	0.0294	1.471	0	112	53.2	129				
1,1,1-Trichloroethane (TCA)	1.60	0.0294	1.471	0	109	58.3	145				

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 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506313-002BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288							
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441122							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1-Dichloropropene	1.64	0.0294	1.471	0	112	55.1	138				
Carbon tetrachloride	1.70	0.0294	1.471	0	116	53.3	144				
1,2-Dichloroethane (EDC)	1.73	0.0441	1.471	0.004854	117	51.3	139				
Benzene	1.75	0.0294	1.471	0	119	63.5	133				
Trichloroethene (TCE)	1.66	0.0294	1.471	0	113	68.6	132				
1,2-Dichloropropane	1.64	0.0294	1.471	0	111	59	136				
Bromodichloromethane	1.42	0.0294	1.471	0	96.8	50.7	141				
Dibromomethane	1.70	0.0588	1.471	0	115	50.6	137				
cis-1,3-Dichloropropene	1.66	0.0294	1.471	0	113	50.4	138				
Toluene	1.50	0.0294	1.471	0	102	63.4	132				
trans-1,3-Dichloropropylene	1.60	0.0441	1.471	0	109	44.1	147				
1,1,2-Trichloroethane	1.74	0.0441	1.471	0	118	51.6	137				
1,3-Dichloropropane	1.70	0.0735	1.471	0	116	53.1	134				
Tetrachloroethene (PCE)	1.60	0.0294	1.471	0	109	35.6	158				
Dibromochloromethane	1.44	0.0441	1.471	0	98.0	55.3	140				
1,2-Dibromoethane (EDB)	1.88	0.00735	1.471	0	128	50.4	136				
Chlorobenzene	1.57	0.0294	1.471	0	107	60	133				
1,1,1,2-Tetrachloroethane	1.66	0.0441	1.471	0	113	53.1	142				
Ethylbenzene	1.56	0.0441	1.471	0	106	54.5	134				
m,p-Xylene	2.99	0.0294	2.942	0	101	53.1	132				
o-Xylene	1.49	0.0294	1.471	0	101	53.3	139				
Styrene	1.57	0.0294	1.471	0	107	51.1	132				
Isopropylbenzene	1.57	0.118	1.471	0	107	58.9	138				
Bromoform	1.44	0.0294	1.471	0	98.2	57.9	130				
1,1,1,2,2-Tetrachloroethane	2.21	0.0294	1.471	0.005648	150	51.9	131				S
n-Propylbenzene	1.66	0.0294	1.471	0	113	53.6	140				
Bromobenzene	1.67	0.0441	1.471	0	114	54.2	140				
1,3,5-Trimethylbenzene	1.68	0.0294	1.471	0	114	51.8	136				
2-Chlorotoluene	1.73	0.0294	1.471	0	118	51.6	136				
4-Chlorotoluene	1.72	0.0294	1.471	0	117	50.1	139				
tert-Butylbenzene	1.65	0.0294	1.471	0	112	50.5	135				

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QC SUMMARY REPORT
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Sample ID: 1506313-002BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 6/29/2015	RunNo: 23288
Client ID: BATCH	Batch ID: 11183		Analysis Date: 6/29/2015	SeqNo: 441122

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	1.91	0.0294	1.471	0	130	50.5	131				
1,2,4-Trichlorobenzene	1.58	0.0735	1.471	0.004618	107	50.8	130				
sec-Butylbenzene	1.68	0.0294	1.471	0	114	52.6	141				
4-Isopropyltoluene	1.70	0.0294	1.471	0	115	52.9	134				
1,3-Dichlorobenzene	1.48	0.0294	1.471	0	100	52.6	131				
1,4-Dichlorobenzene	1.49	0.0294	1.471	0	101	52.9	129				
n-Butylbenzene	1.53	0.0294	1.471	0	104	52.6	130				
1,2-Dichlorobenzene	1.50	0.0294	1.471	0	102	55.8	129				
1,2-Dibromo-3-chloropropane	1.50	0.735	1.471	0	102	40.5	131				
1,2,4-Trimethylbenzene	1.66	0.0294	1.471	0.002265	113	50.6	137				
Hexachlorobutadiene	1.67	0.147	1.471	0	114	40.6	158				
Naphthalene	1.81	0.0441	1.471	0.003751	123	52.3	124				
1,2,3-Trichlorobenzene	1.69	0.0294	1.471	0.006016	114	54.4	124				
Surr: Dibromofluoromethane	1.96		1.838		107	63.7	129				
Surr: Toluene-d8	1.85		1.838		101	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.92		1.838		104	63.1	141				

NOTES:

S - Outlying QC recoveries were associated with this sample. The method is in control as indicated by the LCS.

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: CCV-A-R23397	SampType: CCV	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: CCV	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443201							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane (TCA)	20.5	1.00	20.00	0	103	80	120				
Dibromomethane	16.7	1.00	20.00	0	83.3	80	120				
Surr: Dibromofluoromethane	24.4		25.00		97.7	72.1	122				
Surr: Toluene-d8	22.5		25.00		89.9	62.1	129				
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	63.3	132				

Sample ID: LCS-R23397	SampType: LCS	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: LCSW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.3	1.00	20.00	0	81.7	43	136				
Chloromethane	18.5	1.00	20.00	0	92.6	43.9	139				
Vinyl chloride	17.9	0.200	20.00	0	89.4	53.6	139				
Bromomethane	16.8	1.00	20.00	0	84.1	42.5	152				
Trichlorofluoromethane (CFC-11)	18.3	1.00	20.00	0	91.7	63.7	133				
Chloroethane	17.2	1.00	20.00	0	85.8	53	141				
1,1-Dichloroethene	18.1	1.00	20.00	0	90.5	65.6	136				
Methylene chloride	16.0	1.00	20.00	0	80.1	67.1	131				
trans-1,2-Dichloroethene	17.3	1.00	20.00	0	86.7	71.7	129				
Methyl tert-butyl ether (MTBE)	15.6	1.00	20.00	0	78.0	67.7	131				
1,1-Dichloroethane	16.4	1.00	20.00	0	81.8	67.9	134				
2,2-Dichloropropane	14.8	2.00	20.00	0	74.0	33.7	152				
cis-1,2-Dichloroethene	17.2	1.00	20.00	0	86.1	71.1	130				
Chloroform	16.6	1.00	20.00	0	83.1	66.3	131				
1,1,1-Trichloroethane (TCA)	26.8	1.00	20.00	0	134	71	131				S
1,1-Dichloropropene	17.6	1.00	20.00	0	88.0	74.5	126				
Carbon tetrachloride	17.5	1.00	20.00	0	87.5	66.2	134				
1,2-Dichloroethane (EDC)	14.9	1.00	20.00	0	74.3	70	129				
Benzene	16.1	1.00	20.00	0	80.4	69.3	132				
Trichloroethene (TCE)	16.6	0.500	20.00	0	82.9	65.2	136				
1,2-Dichloropropane	16.8	1.00	20.00	0	84.1	70.5	130				



Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-R23397	SampType: LCS	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: LCSW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	20.7	1.00	20.00	0	103	67.2	137				
Dibromomethane	14.6	1.00	20.00	0	73.1	75.5	126				S
cis-1,3-Dichloropropene	17.9	1.00	20.00	0	89.3	62.6	137				
Toluene	16.5	1.00	20.00	0	82.3	61.3	145				
trans-1,3-Dichloropropene	16.6	1.00	20.00	0	82.9	58.5	142				
1,1,2-Trichloroethane	15.4	1.00	20.00	0	77.1	71.7	131				
1,3-Dichloropropane	16.6	1.00	20.00	0	83.1	73.5	127				
Tetrachloroethene (PCE)	17.1	1.00	20.00	0	85.3	47.5	147				
Dibromochloromethane	16.6	1.00	20.00	0	82.9	67.2	134				
1,2-Dibromoethane (EDB)	16.4	0.0600	20.00	0	81.8	73.6	125				
Chlorobenzene	21.0	1.00	20.00	0	105	73.9	126				
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.5	76.8	124				
Ethylbenzene	21.1	1.00	20.00	0	105	72	130				
m,p-Xylene	42.7	1.00	40.00	0	107	70.3	134				
o-Xylene	20.6	1.00	20.00	0	103	72.1	131				
Styrene	21.5	1.00	20.00	0	108	64.3	140				
Isopropylbenzene	22.2	1.00	20.00	0	111	73.9	128				
Bromoform	17.9	1.00	20.00	0	89.3	63.8	135				
1,1,1,2-Tetrachloroethane	19.1	1.00	20.00	0	95.5	62.9	132				
n-Propylbenzene	21.2	1.00	20.00	0	106	74.5	127				
Bromobenzene	20.3	1.00	20.00	0	102	71	131				
1,3,5-Trimethylbenzene	21.2	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	21.1	1.00	20.00	0	105	70.8	130				
4-Chlorotoluene	21.0	1.00	20.00	0	105	70.1	131				
tert-Butylbenzene	24.0	1.00	20.00	0	120	68.2	131				
1,2,3-Trichloropropane	18.4	1.00	20.00	0	92.1	67.7	131				
1,2,4-Trichlorobenzene	19.7	2.00	20.00	0	98.3	67.6	129				
sec-Butylbenzene	21.6	1.00	20.00	0	108	72	129				
4-Isopropyltoluene	21.6	1.00	20.00	0	108	69.2	130				
1,3-Dichlorobenzene	20.3	1.00	20.00	0	101	72.4	129				
1,4-Dichlorobenzene	19.5	1.00	20.00	0	97.7	70.6	128				

Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-R23397	SampType: LCS	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: LCSW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443204							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Butylbenzene	20.8	1.00	20.00	0	104	73.8	127				
1,2-Dichlorobenzene	19.6	1.00	20.00	0	98.2	74.2	129				
1,2-Dibromo-3-chloropropane	15.7	1.00	20.00	0	78.4	63.1	136				
1,2,4-Trimethylbenzene	21.5	1.00	20.00	0	107	73.4	127				
Hexachlorobutadiene	20.8	4.00	20.00	0	104	58.6	138				
Naphthalene	17.1	1.00	20.00	0	85.3	45.2	144				
1,2,3-Trichlorobenzene	17.5	4.00	20.00	0	87.6	50.2	139				
Surr: Dibromofluoromethane	29.4		25.00		118	77.4	147				
Surr: Toluene-d8	19.5		25.00		78.0	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128				

NOTES:

S - Outlying spike recoveries observed for 1,1,1-Trichloroethane (high bias) and Dibromomethane (low bias). Adequate sensitivity for these analytes is demonstrated by the same source CCV.

Sample ID: MB-R23397	SampType: MBLK	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: MBLKW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443205							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	1.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									



Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R23397	SampType: MBLK	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397
Client ID: MBLKW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443205

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									

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 CLIENT: PES Environmental, Inc.
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QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R23397	SampType: MBLK	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: MBLKW	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443205							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.1		25.00		101	77.4	147				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.4		25.00		89.6	64.2	128				

Sample ID: 1506314-001AMS	SampType: MS	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: BATCH	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443200							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.7	1.00	20.00	0	98.6	33.3	122				
Chloromethane	35.3	1.00	20.00	0	176	48.2	145				S
Vinyl chloride	32.5	0.200	20.00	0	162	58.1	158				S
Bromomethane	27.6	1.00	20.00	0	138	31.5	135				S
Trichlorofluoromethane (CFC-11)	22.6	1.00	20.00	0	113	54.7	138				
Chloroethane	27.8	1.00	20.00	0	139	49.9	143				
1,1-Dichloroethene	25.2	1.00	20.00	0	126	63	141				
Methylene chloride	22.8	1.00	20.00	0	114	61.6	135				
trans-1,2-Dichloroethene	22.1	1.00	20.00	0	111	63.5	138				
Methyl tert-butyl ether (MTBE)	19.5	1.00	20.00	0	97.5	60.9	132				

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506314-001AMS	SampType: MS	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397
Client ID: BATCH	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443200

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	23.9	1.00	20.00	0	119	67.8	136				
2,2-Dichloropropane	2.14	2.00	20.00	0	10.7	31.5	121				S
cis-1,2-Dichloroethene	23.4	1.00	20.00	0	117	67.1	123				
Chloroform	21.7	1.00	20.00	0	108	66.7	136				
1,1,1-Trichloroethane (TCA)	22.4	1.00	20.00	0	112	64.2	146				
1,1-Dichloropropene	22.9	1.00	20.00	0	114	73.8	136				
Carbon tetrachloride	19.0	1.00	20.00	0	95.2	62.7	146				
1,2-Dichloroethane (EDC)	17.7	1.00	20.00	0	88.7	63.4	137				
Benzene	23.9	1.00	20.00	0	119	65.4	138				
Trichloroethene (TCE)	18.9	0.500	20.00	0	94.3	60.4	134				
1,2-Dichloropropane	24.9	1.00	20.00	0	125	62.6	138				
Bromodichloromethane	15.7	1.00	20.00	0	78.6	59.4	139				
Dibromomethane	19.1	1.00	20.00	0	95.4	63.6	139				
cis-1,3-Dichloropropene	13.4	1.00	20.00	0	67.2	63.8	132				
Toluene	19.2	1.00	20.00	0	95.8	64	139				
trans-1,3-Dichloropropene	12.5	1.00	20.00	0	62.5	57.7	125				
1,1,2-Trichloroethane	16.6	1.00	20.00	0	82.8	59.4	127				
1,3-Dichloropropane	17.8	1.00	20.00	0	89.1	64.3	135				
Tetrachloroethene (PCE)	14.9	1.00	20.00	0	74.6	50.3	133				
Dibromochloromethane	14.8	1.00	20.00	0	74.0	61.6	139				
1,2-Dibromoethane (EDB)	16.3	0.0600	20.00	0	81.5	63.2	134				
Chlorobenzene	21.0	1.00	20.00	0	105	65.8	134				
1,1,1,2-Tetrachloroethane	17.8	1.00	20.00	0	89.2	65.4	135				
Ethylbenzene	20.8	1.00	20.00	0	104	64.5	136				
m,p-Xylene	41.0	1.00	40.00	0	102	63.3	135				
o-Xylene	20.2	1.00	20.00	0	101	65.4	134				
Styrene	20.4	1.00	20.00	0	102	59.1	134				
Isopropylbenzene	20.2	1.00	20.00	0	101	56	147				
Bromoform	13.5	1.00	20.00	0	67.5	57.7	139				
1,1,1,2-Tetrachloroethane	20.7	1.00	20.00	0	103	59.8	146				
n-Propylbenzene	19.4	1.00	20.00	0	96.9	57.6	142				



Date: 9/8/2015

Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	18.2	1.00	20.00	0	90.8	63.6	130				
1,3,5-Trimethylbenzene	19.8	1.00	20.00	0	99.0	59.9	136				
2-Chlorotoluene	19.4	1.00	20.00	0	97.2	61.7	134				
4-Chlorotoluene	19.7	1.00	20.00	0	98.5	58.4	134				
tert-Butylbenzene	21.4	1.00	20.00	0	107	66.8	141				
1,2,3-Trichloropropane	15.5	1.00	20.00	0	77.4	62.4	129				
1,2,4-Trichlorobenzene	16.0	2.00	20.00	0	80.0	50.9	133				
sec-Butylbenzene	25.2	1.00	20.00	0	126	56	146				
4-Isopropyltoluene	23.3	1.00	20.00	0	116	56.4	136				
1,3-Dichlorobenzene	19.4	1.00	20.00	0	97.0	58.2	128				
1,4-Dichlorobenzene	18.4	1.00	20.00	0	92.1	60.1	123				
n-Butylbenzene	18.3	1.00	20.00	0	91.4	54.6	135				
1,2-Dichlorobenzene	19.7	1.00	20.00	0	98.5	65.4	133				
1,2-Dibromo-3-chloropropane	13.5	1.00	20.00	0	67.5	51.8	142				
1,2,4-Trimethylbenzene	23.4	1.00	20.00	0	117	63.7	132				
Hexachlorobutadiene	13.5	4.00	20.00	0	67.3	58.1	130				
Naphthalene	17.1	1.00	20.00	0	85.3	54.5	132				
1,2,3-Trichlorobenzene	15.2	4.00	20.00	0	76.1	57	131				
Surr: Dibromofluoromethane	27.0		25.00		108	77.4	147				
Surr: Toluene-d8	22.6		25.00		90.2	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.1		25.00		92.4	64.2	128				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	1.00						0		30	
Vinyl chloride	0.816	0.200						0.7059	14.5	30	Q
Bromomethane	ND	1.00						0		30	



Date: 9/8/2015

Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506311-020ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: SB-11-W	Batch ID: R23397		Analysis Date: 7/7/2015	SeqNo: 443263							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	1.12	1.00						0.9445	17.2	30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	70.0	1.00						59.50	16.3	30	E
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	Q
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	



Date: 9/8/2015

Work Order: 1506311
 CLIENT: PES Environmental, Inc.
 Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1506311-020ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/7/2015	RunNo: 23397							
Client ID: SB-11-W	Batch ID: R23397	Analysis Date: 7/7/2015	SeqNo: 443263								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	1.00						0		30	Q
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	Q
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.2		25.00		101	77.4	147		0		
Surr: Toluene-d8	25.3		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.6	64.2	128		0		

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1506311
CLIENT: PES Environmental, Inc.
Project: Bethel Interior

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: CCV-C-R23397	SampType: CCV	Units: µg/L	Prep Date: 7/8/2015	RunNo: 23397							
Client ID: CCV	Batch ID: R23397		Analysis Date: 7/8/2015	SeqNo: 443424							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

cis-1,2-Dichloroethene	20.1	1.00	20.00	0	100	80	120				
Surr: Dibromofluoromethane	25.8		25.00		103	72.1	122				
Surr: Toluene-d8	24.6		25.00		98.3	62.1	129				
Surr: 1-Bromo-4-fluorobenzene	27.6		25.00		110	63.3	132				

Client Name: PES	Work Order Number: 1506311
Logged by: Clare Griggs	Date Received: 6/26/2015 8:00:00 AM

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
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	Chris DeBoer	Date:	6/29/2015
By Whom:	Clare Griggs	Via:	<input checked="" type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	Did not receive unpreserved volume for fluoride.		
Client Instructions:	Confirmed. Samples 021 & 022 on hold for fluoride.		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.2

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

3600 Fremont Ave N.
Seattle, WA 98103

Tel: 206-352-3790
Fax: 206-352-7178

Date: 6.26.15

Page: 1 of 3

Laboratory Project No (Internal):

Chain of Custody Record

15010311

Client: PE3 Environ mental, Inc.
Address: 1215 4th Ave Suite 1350
City, State, Zip: Seattle WA 98161
Tel: (206) 524-3980 Fax: (206) 524-3985

Project Name: Bethel Interior
Project No: 19th 030.01
Location: Port Orchard, WA
Reports To (PM): K Rankich / B. O'Neal
Email: Krankich@pe3env.com
Collected by: C. DeBeer

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCO)	Diesel/Heavy Oil Range Organics (HRO)	SEMI VOC (EPA 8270)	PAH (EPA 8270 - SW)	PCBs (EPA 8082)	Metals** (6020 / 300.8)	Total (T) Dissolved (D)	Ammonia (NH3)***	EDS (9011)	Comments/Depth
SB-11-0.5	6/25/15	9:25	S	X	X	X	X	X	X	X	X	X	X	X	X	X	HOLD
SB-11-a		9:30	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-11-2D		9:50	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-11-a		9:35	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-11-15		9:40	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-10-0.5		10:20	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-10-3		10:25	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-10-10		10:40	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-10-13		10:45	S	X	X	X	X	X	X	X	X	X	X	X	X	X	
SB-12-0.5		11:35	S	X	X	X	X	X	X	X	X	X	X	X	X	X	

Auto per Chris Decker w/a

*** Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Special Remarks: Turn-around times for samples received after 4:00pm will begin on the following business day.

Received: Chris DeBeer 6/26/15 8:00 Date/Time

Received: Paul DeBeer 6/26/15 8:00 Date/Time

Relinquished: Chris DeBeer 6/26/15 8:00 Date/Time

Relinquished: Paul DeBeer 6/26/15 8:00 Date/Time

TAT -> SameDay* NextDay* 2 Day 3 Day STD

*Please coordinate with the lab in advance



Fremont

ANALYTICAL

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 6.25.15

Laboratory Project No (Internal):
Page: 2 of 3

Chain of Custody Record

Client: PES Environmental, Inc
Address: see page 1
City, State, Zip: _____
Tel: (206) 529-3480
FAX: _____

Project Name: Bethel Interior
Project No: see page 2
Location: _____
Reports To (PM): _____
Email: kvaatikid@pescan.com

*Metric Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	GX/PTX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCO)	Panel/Heavy Oil Range Organics (PO)	SEMI VOL (EPA 8270)	PAH (EPA 8270)	PCB (EPA 8092)	Metals** (6000 / 200 B)	Total (T) Dissolved (D)	Anions (A)***	EDB (8011)	Comments/Depth	
SB-12-3	6.25.15	1140	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-12-4		1145	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-12-14		1150	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-13-0.5		1320	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-13-3		1325	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-13-9		1330	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-13-15		1335	S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
TRIP BLANK			S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
TRIP BLANK			S	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
SB-11-W	6.25.15	1400	GW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									<input checked="" type="checkbox"/>			

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposed by Lab (A line may be annotated with sample ID received after 30 days.)

Relinquished: Quinn Nelson Date/Time: 6/25/15 8:00

Received: [Signature] Date/Time: 06/25/15 8:00

Relinquished: [Signature] Date/Time: 06/25/15 8:00

TAT -> SameDaySM NextDaySM 2 Day 3 Day STD

*Please coordinate with the lab in advance



Fremont

AMT/MTG/LL

Chain of Custody Record

3600 Fremont Ave N. Tel: 206-352-3790
Seattle, WA 98103 Fax: 206-352-7178

Date: 6.26.15

Laboratory Project No (Internal): _____
Page: 3 of 3

Client: PES Environmental Inc.
Address: see pages
City, State, Zip: _____

Project Name: _____
Project No: see page 1
Location: _____
Reports To (PM): _____
Collected by: Bethel [Signature] Intoria

Tel: (206) 521-3150 Fax: _____
Email: Krunkida@pescor.com

*Matrix Codes: A = Air, AD = Aquatics, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Material)	VOC (EPA 8260)	GV/PTX	STX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCDI)	Distill/Heavy Oil Range Organics (DX)	SEM-VOL (EPA 8270)	PAM (EPA 8270-SM)	PCBs (EPA 8082)	Metals** (6020/200.8)	Total [T] / Dissolved [D]	Anions (IC)**	EDB (8033)	Comments/Depth
1 SB-10-W	6:35:15	1410	GW	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												
2 SB-13-W		1530	GW	<input checked="" type="checkbox"/>													
3 DDM-1		1540	S	<input checked="" type="checkbox"/>													
4																	
5																	
6																	
7																	
8																	
9																	
10																	

**Metals Analysis (Circle): MICA-5 RCRA-6 Priority Pollutants TAL As Ag Al As Ba Be Ca Cd Co Cr Cu Fe Hg E Ni Mn Mo Na Ni Pb Sb Se Si Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Dispose by Lab (if not may be assumed, samples are released after approval)
Reinquired Date/Time: _____
Relinquished Date/Time: 6/26/15 8:00

Received: [Signature] Date/Time: 6/26/15 8:00
TAT -> Saturday* NextDay* 2 Day 3 Day STD
*Please coordinate with the lab in advance

MEMORANDUM

TO: Project File **DATE:** August 26, 2015
FROM: Jessie Compeau **PROJECT:** 1246.030.02.002
SUBJECT: Bethel Junction, Soil and Groundwater Sample Data Review – June 25, 2015
Sampling Event
Fremont Lab Package 1506311

Eighteen (18) soil samples (including a field duplicate), three (3) groundwater samples, and two (2) trip blank samples were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on June 25, 2015. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Four soil samples were placed on hold by the client and remaining project samples were analyzed for selected analytical parameters listed as follows: volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C, total metals (arsenic, barium, cadmium, chromium, lead, selenium, and silver) by USEPA Method 6020, total metals (mercury) by USEPA Method 7471, and general chemistry parameter (fluoride) by USEPA 300.0.

The results were reported in Fremont Lab Package 1506311. The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 2004).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols with the following discussion:

Fluoride analysis was requested on groundwater samples SB-10-W and SB-13-W but not performed due to incorrect sample preservation. No action is taken since additional groundwater samples were collected on July 9, 2015 and submitted for fluoride analysis. These results are reported with Fremont Lab Package 1507095.

Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of *2.2 Centigrade (°C) within the recommended preservation temperature range of 4.0°C ± 2.0°C*. Sample temperatures were not recorded. No action is taken as the cooler was received in good condition. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (soils and preserved waters) from the date of sample collection. All holding time criteria were met.

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

The soil sample was prepared and analyzed within the EPA recommended holding period of 28 days for mercury and for remaining metals within 180 days from the date of sample collection. All holding time criteria were met.

General Chemistry Methods:

The sample (groundwater) was prepared and analyzed within the EPA recommended holding time for fluoride within 28 days from the date of sample collection.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. These data were not provided nor requested for this project however Fremont indicated within the laboratory report that initial and/or continuing calibration criteria for VOC groundwater data were not met for dichlorodifluoromethane (CFC-12), vinyl chloride, 2,2-dichloropropane, 1,1,2-trichloroethane, dibromochloromethane, bromoform, and 1,2-dibromo-3-chloropropane. **All associated groundwater sample results (analyzed on July 7, 2015) for CFC-12, 2,2-dichloropropane, 1,1,2-trichloroethane, dibromochloromethane, bromoform, and 1,2-dibromo-3-chloropropane are estimated (UJ) because initial and/or continuing calibration did not meet established EPA criteria. The associated continuing calibration result (analyzed on July 7, 2015) for vinyl chloride was biased high therefore only positive vinyl chloride results in associated samples SB-11-W and SB-13-W are estimated (J) due to potential high bias.** Fremont reissued sample SB-13-W VOC results as the Q qualifier was missing from vinyl chloride. The case narrative did not indicate any other issues with calibration; therefore no other qualifications were warranted.

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blanks (soils and preserved waters) were included with the analytical batch per method requirement. Target analytes were not detected in the method blanks at or above the

method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

Laboratory method blanks were included with the analytical batches per method requirement. The target analytes were not detected in the method blanks at or above the method reporting limit (MRL). No qualifications of the data were made due to the result of the method blank analyses.

General Chemistry Methods:

Laboratory method blank was prepared and analyzed for fluoride. Fluoride was not detected in the method blank at or above the method reporting limit (MRL). No qualifications of the data were made due to the results of the method blank analysis.

Trip Blank Results

USEPA Method 8260C (VOCs):

Trip blanks associated with the soil and water samples were collected and analyzed. Target analytes were not detected in the trip blanks at or above the MRLs. No qualifications of the data were made due to the results of the trip blank analyses.

Field, Rinsate, or Equipment Blank Results

All Analytical Parameters:

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

A laboratory duplicate was performed on an unrelated soil sample within the analytical batch. A laboratory duplicate was performed on water sample SB-11-W. The primary/duplicate relative percent differences (RPDs) for soil and water VOC analysis were within the laboratory control limit of 30%. Duplicate data are acceptable.

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

Laboratory duplicate analysis was performed on an unrelated soil sample within the analytical batch. The primary/duplicate RPDs were within the laboratory control limit of 30% with one exception:

Lead RPD is high due to poor sample homogeneity and outside of Fremont's control limit criteria. No action is taken since the laboratory duplicate was performed on an unrelated sample within the analytical batch. No precision data are available for lead. No action was taken other than to note that sample DRUM-1 was collected from a drum for waste characterization and contents of the drum have since been disposed of.

General Chemistry Methods:

Laboratory duplicate analysis was performed on sample SB-11-W for fluoride. The primary/duplicate RPD was within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Field duplicate soil samples (SB-11-2 and SB-11-2D) were collected and analyzed for VOCs. VOC results are comparable and within 30% RPD with one exception:

VOC compound tetrachloroethene results for field duplicate soil samples SB-11-2 and SB-11-2D are not comparable and results are estimated (J).

A field duplicate water sample was not collected. Refer to laboratory duplicate results for precision data.

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

A field duplicate soil sample was not collected. Refer to laboratory duplicate results for precision data.

General Chemistry Methods:

A field duplicate water sample was not collected. Refer to the laboratory duplicate result for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the samples, laboratory duplicates, laboratory control samples, matrix spikes, and the method blanks were within the laboratory surrogate control limits for all soil and water analyses. No qualifications of the data were warranted.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

A matrix spike (MS) analysis was performed on an unrelated soil sample within the analytical batch. The MS analysis was performed on unrelated water sample within the analytical batch. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria for soil and water samples with the following exceptions:

Soil matrix spike recoveries for dichlorodifluoromethane (CFC-12), chloromethane, bromomethane, chloroethane, and 1,1,2,2-tetrachloroethane were high and above Fremont laboratory control limit criteria. No action was taken since the spike was performed on an unrelated sample within the analytical batch. Refer to laboratory control sample (LCS) results for accuracy data.

Water matrix spike recoveries for chloromethane, vinyl chloride, bromomethane, and 2,2-dichloropropane were outside of Fremont laboratory control limit criteria. No action was

taken since the spike was performed on an unrelated sample within the analytical batch. Refer to LCS results for accuracy data.

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

MS/MSD analyses were performed on an unrelated sample within the analytical batch for metals. The MS/MSD %Rs and RPD for metals were within the laboratory control criteria with the following exception:

Soil MS/MSD and RPD results for lead are outside of Fremont control limit criteria. No action was taken since the spike was performed on an unrelated sample within the analytical batch. Refer to LCS results for accuracy data.

General Chemistry Methods:

MS/MSD analyses were performed on water sample SB-11-W for fluoride. The MS/MSD %Rs and RPD for fluoride were within the laboratory control criteria.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

Laboratory control samples (LCSs) were analyzed along with the analytical batches for water and soil samples. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for water and the soil sample with the following exceptions:

Soil LCS % R for VOC target compound dichlorodifluoromethane (CFC-12) was high at 164% and above Fremont control limit criteria. No action taken for CFC-12 as it was recovered high and not detected in associated samples.

Water LCS % Rs for VOC target compounds 1,1,1-trichloroethane (TCA) and dibromomethane were outside of Fremont control limit criteria. No action was taken for TCA as it was recovered high and not detected in associated samples. Dibromomethane was recovered low at 73% and slightly below Fremont control limit criteria (76 to 130%).
Dibromomethane results for all associated groundwater samples are estimated (UJ).

USEPA 6020 (Total Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver) and USEPA 7471 (Mercury):

LCS samples were analyzed along with analytical batch for metals. The LCS %Rs for metals were within the laboratory control criteria for soils. No data qualifications were warranted.

General Chemistry Methods:

LCS sample was analyzed along with analytical batch for fluoride. The LCS %R for fluoride was within the laboratory control criteria for water. No data qualifications were warranted.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. MRLs on selected samples were raised due to method-required dilutions with the following discussion:

Sample SB-11-W submitted for fluoride analysis was diluted two fold due to matrix interference. **Sample SB-11-W result for fluoride is estimated (J) as the result was reported at 0.0168 mg/L below the elevated MRL (0.200 mg/L).**

The reported MRLs are considered appropriate for this project. No other data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested with the exception of two incorrectly preserved groundwater samples submitted for fluoride analysis. These two groundwater samples were collected at a later date and analyzed for fluoride. Reported MRLs on selected samples were raised due to method-required dilutions. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness for this project is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999)
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 2004).

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Analytical Report

WO#: 1506311
Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:30:00 AM

Project: Bethel Interior

Lab ID: 1506311-002

Matrix: Soil

Client Sample ID: SB-11-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloromethane	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Vinyl chloride	ND	0.00234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromomethane	ND	0.105		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloroethane	ND	0.0703		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloroethene	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Methylene chloride	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
trans-1,2-Dichloroethene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloroethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
2,2-Dichloropropane	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
cis-1,2-Dichloroethene	0.113	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chloroform	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1-Dichloropropene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Carbon tetrachloride	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichloroethane (EDC)	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Benzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Trichloroethene (TCE)	0.660	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichloropropane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromodichloromethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Dibromomethane	ND	0.0469		mg/Kg-dry	1	6/29/2015 9:03:00 PM
cis-1,3-Dichloropropene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Toluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
trans-1,3-Dichloropropylene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,2-Trichloroethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3-Dichloropropane	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Tetrachloroethene (PCE)	0.179	0.0234	J	mg/Kg-dry	1	6/29/2015 9:03:00 PM
Dibromochloromethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dibromoethane (EDB)	ND	0.00586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Chlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Ethylbenzene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
m,p-Xylene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
o-Xylene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Styrene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Isopropylbenzene	ND	0.0938		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromoform	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM

JC
8/28/15



Analytical Report

WO#: 1506311
Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:30:00 AM

Project: Bethel Interior

Lab ID: 1506311-002

Matrix: Soil

Client Sample ID: SB-11-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
n-Propylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Bromobenzene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3,5-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
2-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
4-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
tert-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,3-Trichloropropane	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,4-Trichlorobenzene	ND	0.0586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
sec-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
4-Isopropyltoluene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,3-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,4-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
n-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2-Dibromo-3-chloropropane	ND	0.586		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,4-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Hexachlorobutadiene	ND	0.117		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Naphthalene	ND	0.0352		mg/Kg-dry	1	6/29/2015 9:03:00 PM
1,2,3-Trichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/29/2015 9:03:00 PM
Surr: Dibromofluoromethane	83.8	63.7-129		%REC	1	6/29/2015 9:03:00 PM
Surr: Toluene-d8	95.5	64.3-131		%REC	1	6/29/2015 9:03:00 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	63.1-141		%REC	1	6/29/2015 9:03:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	12.3			wt%	1	6/30/2015 8:19:48 AM
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dc
8/28/15
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Analytical Report

WO#: 1506311

Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:50:00 AM

Project: Bethel Interior

Lab ID: 1506311-003

Matrix: Soil

Client Sample ID: SB-11-2D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloromethane	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Vinyl chloride	ND	0.00255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromomethane	ND	0.115		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloroethane	ND	0.0764		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloroethene	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Methylene chloride	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
trans-1,2-Dichloroethene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloroethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
2,2-Dichloropropane	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
cis-1,2-Dichloroethene	0.0802	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chloroform	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1-Dichloropropene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Carbon tetrachloride	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichloroethane (EDC)	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Benzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Trichloroethene (TCE)	0.551	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichloropropane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromodichloromethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Dibromomethane	ND	0.0509		mg/Kg-dry	1	6/29/2015 9:32:00 PM
cis-1,3-Dichloropropene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Toluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
trans-1,3-Dichloropropylene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,2-Trichloroethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3-Dichloropropane	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Tetrachloroethene (PCE)	0.313	0.0255	J	mg/Kg-dry	1	6/29/2015 9:32:00 PM
Dibromochloromethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dibromoethane (EDB)	ND	0.00637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Chlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Ethylbenzene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
m,p-Xylene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
o-Xylene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Styrene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Isopropylbenzene	ND	0.102		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromoform	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM

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8/28/15



Client: PES Environmental, Inc.

Collection Date: 6/25/2015 9:50:00 AM

Project: Bethel Interior

Lab ID: 1506311-003

Matrix: Soil

Client Sample ID: SB-11-2D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11183

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
n-Propylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Bromobenzene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3,5-Trimethylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
2-Chlorotoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
4-Chlorotoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
tert-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,3-Trichloropropane	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,4-Trichlorobenzene	ND	0.0637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
sec-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
4-Isopropyltoluene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,3-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,4-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
n-Butylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2-Dibromo-3-chloropropane	ND	0.637		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,4-Trimethylbenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Hexachlorobutadiene	ND	0.127		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Naphthalene	ND	0.0382		mg/Kg-dry	1	6/29/2015 9:32:00 PM
1,2,3-Trichlorobenzene	ND	0.0255		mg/Kg-dry	1	6/29/2015 9:32:00 PM
Surr: Dibromofluoromethane	88.9	63.7-129		%REC	1	6/29/2015 9:32:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	6/29/2015 9:32:00 PM
Surr: 1-Bromo-4-fluorobenzene	87.0	63.1-141		%REC	1	6/29/2015 9:32:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23294

Analyst: CG

Percent Moisture	9.30			wt%	1	6/30/2015 8:19:48 AM
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Analytical Report

WO#: 1506311

Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:45:00 PM

Project: Bethel Interior

Lab ID: 1506311-019

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Vinyl chloride	ND X	0.200	X	µg/L	1	7/7/2015 9:02:00 AM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
2,2-Dichloropropane	ND <i>UJ</i>	2.00	Q	µg/L	1	7/7/2015 9:02:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Benzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Dibromomethane	ND <i>UJ</i>	1.00		µg/L	1	7/7/2015 9:02:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Toluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,2-Trichloroethane	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Dibromochloromethane	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 9:02:00 AM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Styrene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromoform	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 9:02:00 AM

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9/19/15*

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Client: PES Environmental, Inc.

Collection Date: 6/23/2015 12:45:00 PM

Project: Bethel Interior

Lab ID: 1506311-019

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 9:02:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00	VJ Q	µg/L	1	7/7/2015 9:02:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 9:02:00 AM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 9:02:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 9:02:00 AM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 9:02:00 AM
Surr: Toluene-d8	131	40.1-139		%REC	1	7/7/2015 9:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	89.5	64.2-128		%REC	1	7/7/2015 9:02:00 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Analytical Report

WO#: 1506311

Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:00:00 PM

Project: Bethel Interior

Lab ID: 1506311-020

Matrix: Groundwater

Client Sample ID: SB-11-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Vinyl chloride	0.706	0.200	Q	µg/L	1	7/7/2015 4:40:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 4:40:00 PM
cis-1,2-Dichloroethene	61.6	10.0	D	µg/L	10	7/8/2015 7:38:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 4:40:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM

JK 8/28/15



Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:00:00 PM

Project: Bethel Interior

Matrix: Groundwater

Lab ID: 1506311-020

Client Sample ID: SB-11-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 4:40:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 4:40:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 4:40:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 4:40:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 4:40:00 PM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 4:40:00 PM
Surr: Toluene-d8	93.5	40.1-139		%REC	1	7/7/2015 4:40:00 PM
Surr: 1-Bromo-4-fluorobenzene	106	64.2-128		%REC	1	7/7/2015 4:40:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Ion Chromatography by EPA Method 300.0

Batch ID: R23285

Analyst: KT

Fluoride	0.0168	J	0.200	JD	mg/L	2	6/29/2015 2:51:00 PM
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NOTES:

Sample diluted due to matrix.

Jc 8/28/15



Analytical Report

WO#: 1506311
Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:10:00 PM

Project: Bethel Interior

Matrix: Groundwater

Lab ID: 1506311-021

Client Sample ID: SB-10-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Vinyl chloride	ND	0.200		µg/L	1	7/7/2015 5:38:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/7/2015 5:38:00 PM
cis-1,2-Dichloroethene	18.3	1.00		µg/L	1	7/7/2015 5:38:00 PM
Chloroform	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Dibromomethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,2-Trichloroethane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Tetrachloroethene (PCE)	1.52	1.00		µg/L	1	7/7/2015 5:38:00 PM
Dibromochloromethane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 5:38:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromoform	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM

JC 8/28/15



Client: PES Environmental, Inc.

Collection Date: 6/25/2015 2:10:00 PM

Project: Bethel Interior

Lab ID: 1506311-021

Matrix: Groundwater

Client Sample ID: SB-10-W

Analyses Result RL Qual Units DF Date Analyzed

Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 5:38:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 5:38:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 5:38:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 5:38:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 5:38:00 PM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/7/2015 5:38:00 PM
Surr: Toluene-d8	102	40.1-139		%REC	1	7/7/2015 5:38:00 PM
Surr: 1-Bromo-4-fluorobenzene	119	64.2-128		%REC	1	7/7/2015 5:38:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

gc 8/28/15



Analytical Report

WO#: 1506311
Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 3:20:00 PM

Project: Bethel Interior

Matrix: Groundwater

Lab ID: 1506311-022

Client Sample ID: SB-13-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
Chloromethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Vinyl chloride	0.658 <i>J</i>	0.200	<i>Q</i>	µg/L	1	7/7/2015 6:07:00 PM
Bromomethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Chloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Methylene chloride	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
2,2-Dichloropropane	ND <i>UJ</i>	2.00	Q	µg/L	1	7/7/2015 6:07:00 PM
cis-1,2-Dichloroethene	37.3	10.0	D	µg/L	10	7/8/2015 8:06:00 AM
Chloroform	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Benzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Dibromomethane	ND <i>UJ</i>	1.00		µg/L	1	7/7/2015 6:07:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Toluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,2-Trichloroethane	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Dibromochloromethane	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/7/2015 6:07:00 PM
Chlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Ethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
m,p-Xylene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
o-Xylene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Styrene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromoform	ND <i>UJ</i>	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM

gc 9/9/15

gc 8/28/15



Analytical Report

WO#: 1506311
Date Reported: 7/8/2015

Client: PES Environmental, Inc.

Collection Date: 6/25/2015 3:20:00 PM

Project: Bethel Interior

Lab ID: 1506311-022

Matrix: Groundwater

Client Sample ID: SB-13-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23397

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Bromobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/7/2015 6:07:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	7/7/2015 6:07:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/7/2015 6:07:00 PM
Naphthalene	ND	1.00		µg/L	1	7/7/2015 6:07:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/7/2015 6:07:00 PM
Surr: Dibromofluoromethane	103	77.4-147		%REC	1	7/7/2015 6:07:00 PM
Surr: Toluene-d8	101	40.1-139		%REC	1	7/7/2015 6:07:00 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	64.2-128		%REC	1	7/7/2015 6:07:00 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

JC
8/28/15



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

PES Environmental, Inc.
Brian O'Neal
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction Phase II
Lab ID: 1507069

July 13, 2015

Attention Brian O'Neal:

Fremont Analytical, Inc. received 5 sample(s) on 7/8/2015 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260

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 "Chelsea Ward".

Chelsea Ward
Project Manager

CC:
Kelly Rankich



Date: 07/13/2015

CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II
Lab Order: 1507069

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1507069-001	Trench-1-1	07/06/2015 12:20 PM	07/08/2015 2:22 PM
1507069-002	Trench-2-4	07/06/2015 12:30 PM	07/08/2015 2:22 PM
1507069-003	Trench-3-1	07/06/2015 5:10 PM	07/08/2015 2:22 PM
1507069-004	Trench-4-4	07/06/2015 5:20 PM	07/08/2015 2:22 PM
1507069-005	Trench-5-4	07/06/2015 5:30 PM	07/08/2015 2:22 PM

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

CLIENT: PES Environmental, Inc.

Project: Bethel Junction Phase II

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1507069

Date Reported: 7/13/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 12:20:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507069-001

Matrix: Soil

Client Sample ID: Trench-1-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11271

Analyst: BC

Vinyl chloride	ND	0.00216		mg/Kg-dry	1	7/10/2015 8:17:00 AM
trans-1,2-Dichloroethene	ND	0.0216		mg/Kg-dry	1	7/10/2015 8:17:00 AM
cis-1,2-Dichloroethene	ND	0.0216		mg/Kg-dry	1	7/10/2015 8:17:00 AM
Trichloroethene (TCE)	ND	0.0216		mg/Kg-dry	1	7/10/2015 8:17:00 AM
Tetrachloroethene (PCE)	ND	0.0216		mg/Kg-dry	1	7/10/2015 8:17:00 AM
Surr: Dibromofluoromethane	86.5	63.7-129		%REC	1	7/10/2015 8:17:00 AM
Surr: Toluene-d8	85.7	64.3-131		%REC	1	7/10/2015 8:17:00 AM
Surr: 1-Bromo-4-fluorobenzene	94.4	63.1-141		%REC	1	7/10/2015 8:17:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23462

Analyst: SL

Percent Moisture	11.9	0.500		wt%	1	7/9/2015 3:20:42 PM
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Analytical Report

WO#: 1507069

Date Reported: 7/13/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 12:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507069-002

Matrix: Soil

Client Sample ID: Trench-2-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11271

Analyst: BC

Vinyl chloride	ND	0.00206		mg/Kg-dry	1	7/10/2015 9:14:00 AM
trans-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	7/10/2015 9:14:00 AM
cis-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	7/10/2015 9:14:00 AM
Trichloroethene (TCE)	ND	0.0206		mg/Kg-dry	1	7/10/2015 9:14:00 AM
Tetrachloroethene (PCE)	ND	0.0206		mg/Kg-dry	1	7/10/2015 9:14:00 AM
Surr: Dibromofluoromethane	85.9	63.7-129		%REC	1	7/10/2015 9:14:00 AM
Surr: Toluene-d8	88.0	64.3-131		%REC	1	7/10/2015 9:14:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.1	63.1-141		%REC	1	7/10/2015 9:14:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23462

Analyst: SL

Percent Moisture	12.1	0.500		wt%	1	7/9/2015 3:20:42 PM
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Analytical Report

WO#: 1507069

Date Reported: 7/13/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 5:10:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507069-003

Matrix: Soil

Client Sample ID: Trench-3-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11271

Analyst: BC

Vinyl chloride	ND	0.00202		mg/Kg-dry	1	7/10/2015 9:43:00 AM
trans-1,2-Dichloroethene	ND	0.0202		mg/Kg-dry	1	7/10/2015 9:43:00 AM
cis-1,2-Dichloroethene	ND	0.0202		mg/Kg-dry	1	7/10/2015 9:43:00 AM
Trichloroethene (TCE)	0.0712	0.0202		mg/Kg-dry	1	7/10/2015 9:43:00 AM
Tetrachloroethene (PCE)	0.147	0.0202		mg/Kg-dry	1	7/10/2015 9:43:00 AM
Surr: Dibromofluoromethane	85.2	63.7-129		%REC	1	7/10/2015 9:43:00 AM
Surr: Toluene-d8	88.3	64.3-131		%REC	1	7/10/2015 9:43:00 AM
Surr: 1-Bromo-4-fluorobenzene	94.4	63.1-141		%REC	1	7/10/2015 9:43:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23462

Analyst: SL

Percent Moisture	8.59	0.500		wt%	1	7/9/2015 3:20:42 PM
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Analytical Report

WO#: 1507069

Date Reported: 7/13/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 5:20:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507069-004

Matrix: Soil

Client Sample ID: Trench-4-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11271

Analyst: BC

Vinyl chloride	ND	0.00216		mg/Kg-dry	1	7/10/2015 10:40:00 AM
trans-1,2-Dichloroethene	ND	0.0216		mg/Kg-dry	1	7/10/2015 10:40:00 AM
cis-1,2-Dichloroethene	0.0598	0.0216		mg/Kg-dry	1	7/10/2015 10:40:00 AM
Trichloroethene (TCE)	0.0345	0.0216		mg/Kg-dry	1	7/10/2015 10:40:00 AM
Tetrachloroethene (PCE)	ND	0.0216		mg/Kg-dry	1	7/10/2015 10:40:00 AM
Surr: Dibromofluoromethane	88.4	63.7-129		%REC	1	7/10/2015 10:40:00 AM
Surr: Toluene-d8	86.8	64.3-131		%REC	1	7/10/2015 10:40:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.5	63.1-141		%REC	1	7/10/2015 10:40:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23462

Analyst: SL

Percent Moisture	15.1	0.500		wt%	1	7/9/2015 3:20:42 PM
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Analytical Report

WO#: 1507069

Date Reported: 7/13/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 5:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507069-005

Matrix: Soil

Client Sample ID: Trench-5-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11271

Analyst: BC

Vinyl chloride	ND	0.00218		mg/Kg-dry	1	7/10/2015 11:08:00 AM
trans-1,2-Dichloroethene	ND	0.0218		mg/Kg-dry	1	7/10/2015 11:08:00 AM
cis-1,2-Dichloroethene	0.300	0.0218		mg/Kg-dry	1	7/10/2015 11:08:00 AM
Trichloroethene (TCE)	0.507	0.0218		mg/Kg-dry	1	7/10/2015 11:08:00 AM
Tetrachloroethene (PCE)	0.131	0.0218		mg/Kg-dry	1	7/10/2015 11:08:00 AM
Surr: Dibromofluoromethane	86.4	63.7-129		%REC	1	7/10/2015 11:08:00 AM
Surr: Toluene-d8	89.7	64.3-131		%REC	1	7/10/2015 11:08:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.0	63.1-141		%REC	1	7/10/2015 11:08:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23462

Analyst: SL

Percent Moisture	14.1	0.500		wt%	1	7/9/2015 3:20:42 PM
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Work Order: 1507069
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507041-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 7/9/2015	RunNo: 23474							
Client ID: BATCH	Batch ID: 11271		Analysis Date: 7/10/2015	SeqNo: 444808							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00292						0		30	
trans-1,2-Dichloroethene	ND	0.0292						0		30	
cis-1,2-Dichloroethene	ND	0.0292						0		30	
Trichloroethene (TCE)	ND	0.0292						0		30	
Tetrachloroethene (PCE)	ND	0.0292						0		30	
Surr: Dibromofluoromethane	1.58		1.825		86.8	63.7	129		0		
Surr: Toluene-d8	1.58		1.825		86.5	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.76		1.825		96.6	63.1	141		0		

Sample ID 1507057-002BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/9/2015	RunNo: 23474							
Client ID: BATCH	Batch ID: 11271		Analysis Date: 7/10/2015	SeqNo: 444812							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.926	0.00229	1.145	0	80.9	51.2	146				
trans-1,2-Dichloroethene	1.21	0.0229	1.145	0	106	52	136				
cis-1,2-Dichloroethene	1.14	0.0229	1.145	0	99.3	58.6	136				
Trichloroethene (TCE)	1.05	0.0229	1.145	0	92.0	68.6	132				
Tetrachloroethene (PCE)	1.07	0.0229	1.145	0	93.3	35.6	158				
Surr: Dibromofluoromethane	1.36		1.432		95.2	63.7	129				
Surr: Toluene-d8	1.24		1.432		86.5	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.45		1.432		101	63.1	141				

Sample ID LCS-11271	SampType: LCS	Units: mg/Kg	Prep Date: 7/9/2015	RunNo: 23474							
Client ID: LCSS	Batch ID: 11271		Analysis Date: 7/9/2015	SeqNo: 444842							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.736	0.00200	1.000	0	73.6	56.1	130				
trans-1,2-Dichloroethene	1.01	0.0200	1.000	0	101	68	130				
cis-1,2-Dichloroethene	0.986	0.0200	1.000	0	98.6	71.3	135				
Trichloroethene (TCE)	0.897	0.0200	1.000	0	89.7	65.5	137				

Work Order: 1507069
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-11271	SampType: LCS	Units: mg/Kg	Prep Date: 7/9/2015	RunNo: 23474							
Client ID: LCSS	Batch ID: 11271		Analysis Date: 7/9/2015	SeqNo: 444842							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Tetrachloroethene (PCE)	0.895	0.0200	1.000	0	89.5	52.7	150				
Surr: Dibromofluoromethane	1.25		1.250		99.9	63.7	129				
Surr: Toluene-d8	1.13		1.250		90.0	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.24		1.250		99.0	63.1	141				

Sample ID MB-11271	SampType: MBLK	Units: mg/Kg	Prep Date: 7/9/2015	RunNo: 23474							
Client ID: MBLKS	Batch ID: 11271		Analysis Date: 7/9/2015	SeqNo: 444844							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	ND	0.00200									
trans-1,2-Dichloroethene	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0200									
Surr: Dibromofluoromethane	1.17		1.250		93.5	63.7	129				
Surr: Toluene-d8	1.11		1.250		88.9	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.16		1.250		92.8	63.1	141				



Sample Log-In Check List

Client Name: PES	Work Order Number: 1507069
Logged by: Erica Silva	Date Received: 7/8/2015 2:22:00 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
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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

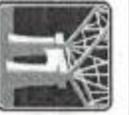
Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	7.5
Sample	2.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N, Seattle, WA 98103

Tel: 206-352-3790 Fax: 206-352-7178

Date: 7-6-15 Laboratory Project No (Internal): 1507069

Client: P&S Environmental Inc.
Address: 1215 4th Ave. Suite 1350
City, State, Zip: Seattle WA 98161
Tel: (206) 539-3980 Fax: (206) 539-3985

Project Name: Bethel Junction Phase II
Project No: 126.03402.001
Location: Port Orchard WA
Reports To (PM): E. O'neal/K. Burkhardt
Email: kranke@pears.com
Collected by: C. Weber

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (GX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (6020 / 200.9)	Total (T) Dissolved (D)	Anions (IC)***	ED8 (8011)	Comments/Depth
1 Trench-1-1	7-6-15	1200	S														
2 Trench-2-4		1230															
3 Trench-3-1		1710															
4 Trench-4-4		1720															
5 Trench-5-4		1730															
6																	
7																	
8																	
9																	
10																	

**Metals Analysis (Circle): MTCX-5 RCRA-8 Priority Pollutants TRL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposal by Lab (A fee may be assessed. Samples are retained after 30 days.)

Reinquinched: Date/Time 7-8-15 1400 Received: Date/Time 07/08/15 14:22

Reinquinched: Date/Time Received: Date/Time

TAI -> SameDay NextDay 2 Day 3 Day STD

*Please coordinate with the lab in advance

Special Remarks: PCE, TCE, cis/trans-DCE,

MEMORANDUM

TO: Project File
DATE: August 26, 2015
FROM: Jessie Compeau
PROJECT: 1246.030.02.002
SUBJECT: Bethel Junction, Soil Sample Data Review – July 6, 2015 Sampling Event
Fremont Lab Packages 1507069

Five (5) soil samples were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on July 6, 2015. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Project samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C. The results were reported in Fremont Lab Package 1507069.

The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols. Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of 7.5 degrees Centigrade (°C). Samples in the cooler were recorded at a temperature of 2.3°C within the recommended preservation temperature range of 4.0°C ± 2.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days from the data of sample collection. All holding time criteria were met.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. The case narrative did not indicate any issues with calibration; therefore no qualifications were warranted.

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blank for soil was included with the analytical batch per method requirement. The target analytes were not detected in the method blank for soil at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

Trip Blank Results

USEPA Method 8260C (VOCs):

A trip blank was not collected.

Field, Rinsate, or Equipment Blank Results

USEPA Method 8260C (VOCs):

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

Laboratory duplicate analyses was performed on an unrelated soil sample within the analytical batch. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Soil field duplicate samples were not collected. Refer to the laboratory duplicate result for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the samples, laboratory duplicates, laboratory control samples, matrix spikes, and the method blanks were within the laboratory surrogate control limits for all of the analyses.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

Matrix spike analysis was performed on an unrelated soil sample within the analytical batch.

One MS is required for each sample event (maximum of 20 samples in a group); therefore, the MS analysis meets this required frequency. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

A laboratory control sample (LCS) sample for soil was analyzed by USEPA Method 8260C method for the VOC analysis group. The frequency of analysis of LCSs was appropriate. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for soil. No data qualifications were warranted.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. The reported MRLs are considered appropriate for this project. No data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999)

No data were qualified. All data are judged to be acceptable for their intended use.



3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

PES Environmental, Inc.

Brian O'Neal

1215 Fourth Avenue, Suite 1350

Seattle, WA 98161

RE: Bethel Junction Phase II

Lab ID: 1507095

July 17, 2015

Attention Brian O'Neal:

Fremont Analytical, Inc. received 26 sample(s) on 7/10/2015 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260

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 "Chelsea Ward".

Chelsea Ward
Project Manager

CC:

Kelly Rankich



Date: 07/17/2015

CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II
Lab Order: 1507095

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1507095-001	SB-16-0.5	07/09/2015 9:10 AM	07/10/2015 8:08 AM
1507095-002	SB-16-3	07/09/2015 9:15 AM	07/10/2015 8:08 AM
1507095-003	SB-16-6	07/09/2015 9:20 AM	07/10/2015 8:08 AM
1507095-004	SB-16-9	07/09/2015 9:25 AM	07/10/2015 8:08 AM
1507095-005	SB-16-15	07/09/2015 9:30 AM	07/10/2015 8:08 AM
1507095-006	SB-15-0.5	07/09/2015 10:05 AM	07/10/2015 8:08 AM
1507095-007	SB-15-3	07/09/2015 10:10 AM	07/10/2015 8:08 AM
1507095-008	SB-15-6	07/09/2015 10:15 AM	07/10/2015 8:08 AM
1507095-009	SB-15-10.5D	07/09/2015 10:20 AM	07/10/2015 8:08 AM
1507095-010	SB-15-10.5	07/09/2015 10:25 AM	07/10/2015 8:08 AM
1507095-011	SB-15-15	07/09/2015 10:30 AM	07/10/2015 8:08 AM
1507095-012	SB-17-0.5	07/09/2015 11:20 AM	07/10/2015 8:08 AM
1507095-013	SB-17-3	07/09/2015 11:25 AM	07/10/2015 8:08 AM
1507095-014	SB-17-6	07/09/2015 11:30 AM	07/10/2015 8:08 AM
1507095-015	SB-17-9	07/09/2015 11:35 AM	07/10/2015 8:08 AM
1507095-016	SB-17-14	07/09/2015 11:40 AM	07/10/2015 8:08 AM
1507095-017	SB-14-0.5	07/09/2015 12:25 PM	07/10/2015 8:08 AM
1507095-018	SB-14-3	07/09/2015 12:30 PM	07/10/2015 8:08 AM
1507095-019	SB-14-6	07/09/2015 12:35 PM	07/10/2015 8:08 AM
1507095-020	SB-14-9	07/09/2015 12:45 PM	07/10/2015 8:08 AM
1507095-021	SB-14-13	07/09/2015 12:45 PM	07/10/2015 8:08 AM
1507095-022	SB-15-W	07/09/2015 2:00 PM	07/10/2015 8:08 AM
1507095-023	SB-17-W	07/09/2015 2:45 PM	07/10/2015 8:08 AM
1507095-024	Drum-W	07/09/2015 4:00 PM	07/10/2015 8:08 AM
1507095-025	Trip Blank	07/06/2015 1:00 PM	07/10/2015 8:08 AM
1507095-026	Trip Blank	07/06/2015 1:45 PM	07/10/2015 8:08 AM

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

CLIENT: PES Environmental, Inc.

Project: Bethel Junction Phase II

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:10:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-001

Matrix: Soil

Client Sample ID: SB-16-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0680		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Chloromethane	ND	0.0680		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Vinyl chloride	ND	0.00227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Bromomethane	ND	0.102		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Chloroethane	ND	0.0680		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1-Dichloroethene	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Methylene chloride	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
trans-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1-Dichloroethane	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
2,2-Dichloropropane	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
cis-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Chloroform	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Carbon tetrachloride	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2-Dichloroethane (EDC)	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Benzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Trichloroethene (TCE)	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2-Dichloropropane	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Bromodichloromethane	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Dibromomethane	ND	0.0453		mg/Kg-dry	1	7/13/2015 6:45:00 PM
cis-1,3-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Toluene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
trans-1,3-Dichloropropylene	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1,2-Trichloroethane	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,3-Dichloropropane	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Tetrachloroethene (PCE)	0.0527	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Dibromochloromethane	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2-Dibromoethane (EDB)	ND	0.00567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Chlorobenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Ethylbenzene	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
m,p-Xylene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
o-Xylene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Styrene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Isopropylbenzene	ND	0.0907		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Bromoform	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:10:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-001

Matrix: Soil

Client Sample ID: SB-16-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
n-Propylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Bromobenzene	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,3,5-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
2-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
4-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
tert-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2,3-Trichloropropane	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2,4-Trichlorobenzene	ND	0.0567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
sec-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
4-Isopropyltoluene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,3-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,4-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
n-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2-Dibromo-3-chloropropane	ND	0.567		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2,4-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Naphthalene	ND	0.0340		mg/Kg-dry	1	7/13/2015 6:45:00 PM
1,2,3-Trichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/13/2015 6:45:00 PM
Surr: Dibromofluoromethane	101	63.7-129		%REC	1	7/13/2015 6:45:00 PM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/13/2015 6:45:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	7/13/2015 6:45:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	5.61	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:15:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-002

Matrix: Soil

Client Sample ID: SB-16-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0631		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Chloromethane	ND	0.0631		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Vinyl chloride	ND	0.00210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Bromomethane	ND	0.0946		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Chloroethane	ND	0.0631		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1-Dichloroethene	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Methylene chloride	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
trans-1,2-Dichloroethene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1-Dichloroethane	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
2,2-Dichloropropane	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
cis-1,2-Dichloroethene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Chloroform	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Carbon tetrachloride	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2-Dichloroethane (EDC)	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Benzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Trichloroethene (TCE)	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2-Dichloropropane	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Bromodichloromethane	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Dibromomethane	ND	0.0421		mg/Kg-dry	1	7/13/2015 7:17:00 PM
cis-1,3-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Toluene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
trans-1,3-Dichloropropylene	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1,2-Trichloroethane	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,3-Dichloropropane	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Tetrachloroethene (PCE)	0.0762	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Dibromochloromethane	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2-Dibromoethane (EDB)	ND	0.00526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Chlorobenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Ethylbenzene	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
m,p-Xylene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
o-Xylene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Styrene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Isopropylbenzene	ND	0.0841		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Bromoform	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:15:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-002

Matrix: Soil

Client Sample ID: SB-16-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
n-Propylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Bromobenzene	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,3,5-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
2-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
4-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
tert-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2,3-Trichloropropane	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2,4-Trichlorobenzene	ND	0.0526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
sec-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
4-Isopropyltoluene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,3-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,4-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
n-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2-Dibromo-3-chloropropane	ND	0.526		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2,4-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Hexachlorobutadiene	ND	0.105		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Naphthalene	ND	0.0315		mg/Kg-dry	1	7/13/2015 7:17:00 PM
1,2,3-Trichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/13/2015 7:17:00 PM
Surr: Dibromofluoromethane	100	63.7-129		%REC	1	7/13/2015 7:17:00 PM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/13/2015 7:17:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	7/13/2015 7:17:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	9.85	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-003

Matrix: Soil

Client Sample ID: SB-16-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0706		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Chloromethane	ND	0.0706		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Vinyl chloride	ND	0.00235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Bromomethane	ND	0.106		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Chloroethane	ND	0.0706		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1-Dichloroethene	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Methylene chloride	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
trans-1,2-Dichloroethene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1-Dichloroethane	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
2,2-Dichloropropane	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
cis-1,2-Dichloroethene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Chloroform	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1-Dichloropropene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Carbon tetrachloride	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2-Dichloroethane (EDC)	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Benzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Trichloroethene (TCE)	0.142	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2-Dichloropropane	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Bromodichloromethane	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Dibromomethane	ND	0.0471		mg/Kg-dry	1	7/13/2015 7:49:00 PM
cis-1,3-Dichloropropene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Toluene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
trans-1,3-Dichloropropylene	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1,2-Trichloroethane	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,3-Dichloropropane	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Tetrachloroethene (PCE)	0.572	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Dibromochloromethane	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2-Dibromoethane (EDB)	ND	0.00588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Chlorobenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Ethylbenzene	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
m,p-Xylene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
o-Xylene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Styrene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Isopropylbenzene	ND	0.0941		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Bromoform	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-003

Matrix: Soil

Client Sample ID: SB-16-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
n-Propylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Bromobenzene	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,3,5-Trimethylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
2-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
4-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
tert-Butylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2,3-Trichloropropane	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2,4-Trichlorobenzene	ND	0.0588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
sec-Butylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
4-Isopropyltoluene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,3-Dichlorobenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,4-Dichlorobenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
n-Butylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2-Dichlorobenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2-Dibromo-3-chloropropane	ND	0.588		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2,4-Trimethylbenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Hexachlorobutadiene	ND	0.118		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Naphthalene	ND	0.0353		mg/Kg-dry	1	7/13/2015 7:49:00 PM
1,2,3-Trichlorobenzene	ND	0.0235		mg/Kg-dry	1	7/13/2015 7:49:00 PM
Surr: Dibromofluoromethane	99.8	63.7-129		%REC	1	7/13/2015 7:49:00 PM
Surr: Toluene-d8	104	64.3-131		%REC	1	7/13/2015 7:49:00 PM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%REC	1	7/13/2015 7:49:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	10.7	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-004

Matrix: Soil

Client Sample ID: SB-16-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0601		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Chloromethane	ND	0.0601		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Vinyl chloride	ND	0.00200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Bromomethane	ND	0.0901		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Chloroethane	ND	0.0601		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1-Dichloroethene	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Methylene chloride	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
2,2-Dichloropropane	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
cis-1,2-Dichloroethene	0.194	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Chloroform	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Benzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Trichloroethene (TCE)	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Bromodichloromethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Dibromomethane	ND	0.0401		mg/Kg-dry	1	7/13/2015 8:21:00 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Toluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
trans-1,3-Dichloropropylene	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,3-Dichloropropane	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2-Dibromoethane (EDB)	ND	0.00501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
m,p-Xylene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
o-Xylene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Styrene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Isopropylbenzene	ND	0.0801		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Bromoform	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 9:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-004

Matrix: Soil

Client Sample ID: SB-16-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
n-Propylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Bromobenzene	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2,4-Trichlorobenzene	ND	0.0501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
sec-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
4-Isopropyltoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2-Dibromo-3-chloropropane	ND	0.501		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Hexachlorobutadiene	ND	0.100		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Naphthalene	ND	0.0300		mg/Kg-dry	1	7/13/2015 8:21:00 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 8:21:00 PM
Surr: Dibromofluoromethane	98.2	63.7-129		%REC	1	7/13/2015 8:21:00 PM
Surr: Toluene-d8	103	64.3-131		%REC	1	7/13/2015 8:21:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	63.1-141		%REC	1	7/13/2015 8:21:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	12.8	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:05:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-006

Matrix: Soil

Client Sample ID: SB-15-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0866		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Chloromethane	ND	0.0866		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Vinyl chloride	ND	0.00289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Bromomethane	ND	0.130		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Chloroethane	ND	0.0866		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1-Dichloroethene	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Methylene chloride	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
trans-1,2-Dichloroethene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1-Dichloroethane	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
2,2-Dichloropropane	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
cis-1,2-Dichloroethene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Chloroform	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1-Dichloropropene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Carbon tetrachloride	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2-Dichloroethane (EDC)	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Benzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Trichloroethene (TCE)	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2-Dichloropropane	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Bromodichloromethane	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Dibromomethane	ND	0.0577		mg/Kg-dry	1	7/13/2015 8:52:00 PM
cis-1,3-Dichloropropene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Toluene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
trans-1,3-Dichloropropylene	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1,2-Trichloroethane	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,3-Dichloropropane	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Tetrachloroethene (PCE)	0.104	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Dibromochloromethane	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2-Dibromoethane (EDB)	ND	0.00721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Chlorobenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Ethylbenzene	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
m,p-Xylene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
o-Xylene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Styrene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Isopropylbenzene	ND	0.115		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Bromoform	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:05:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-006

Matrix: Soil

Client Sample ID: SB-15-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
n-Propylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Bromobenzene	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,3,5-Trimethylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
2-Chlorotoluene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
4-Chlorotoluene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
tert-Butylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2,3-Trichloropropane	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2,4-Trichlorobenzene	ND	0.0721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
sec-Butylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
4-Isopropyltoluene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,3-Dichlorobenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,4-Dichlorobenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
n-Butylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2-Dichlorobenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2-Dibromo-3-chloropropane	ND	0.721		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2,4-Trimethylbenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Hexachlorobutadiene	ND	0.144		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Naphthalene	ND	0.0433		mg/Kg-dry	1	7/13/2015 8:52:00 PM
1,2,3-Trichlorobenzene	ND	0.0289		mg/Kg-dry	1	7/13/2015 8:52:00 PM
Surr: Dibromofluoromethane	97.2	63.7-129		%REC	1	7/13/2015 8:52:00 PM
Surr: Toluene-d8	104	64.3-131		%REC	1	7/13/2015 8:52:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.4	63.1-141		%REC	1	7/13/2015 8:52:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	20.5	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:10:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-007

Matrix: Soil

Client Sample ID: SB-15-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0599		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Chloromethane	ND	0.0599		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Vinyl chloride	ND	0.00200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Bromomethane	ND	0.0899		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Chloroethane	ND	0.0599		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1-Dichloroethene	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Methylene chloride	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
2,2-Dichloropropane	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
cis-1,2-Dichloroethene	0.0584	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Chloroform	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Benzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Trichloroethene (TCE)	0.126	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Bromodichloromethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Dibromomethane	ND	0.0399		mg/Kg-dry	1	7/13/2015 9:24:00 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Toluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
trans-1,3-Dichloropropylene	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,3-Dichloropropane	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Tetrachloroethene (PCE)	0.0464	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2-Dibromoethane (EDB)	ND	0.00499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
m,p-Xylene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
o-Xylene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Styrene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Isopropylbenzene	ND	0.0799		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Bromoform	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:10:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-007

Matrix: Soil

Client Sample ID: SB-15-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
n-Propylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Bromobenzene	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2,4-Trichlorobenzene	ND	0.0499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
sec-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
4-Isopropyltoluene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2-Dibromo-3-chloropropane	ND	0.499		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Hexachlorobutadiene	ND	0.0998		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Naphthalene	ND	0.0300		mg/Kg-dry	1	7/13/2015 9:24:00 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/13/2015 9:24:00 PM
Surr: Dibromofluoromethane	96.4	63.7-129		%REC	1	7/13/2015 9:24:00 PM
Surr: Toluene-d8	103	64.3-131		%REC	1	7/13/2015 9:24:00 PM
Surr: 1-Bromo-4-fluorobenzene	98.6	63.1-141		%REC	1	7/13/2015 9:24:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	9.52	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:15:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-008

Matrix: Soil

Client Sample ID: SB-15-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0690		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Chloromethane	ND	0.0690		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Vinyl chloride	ND	0.00230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Bromomethane	ND	0.103		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Chloroethane	ND	0.0690		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1-Dichloroethene	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Methylene chloride	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
trans-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1-Dichloroethane	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
2,2-Dichloropropane	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
cis-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Chloroform	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1-Dichloropropene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Carbon tetrachloride	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2-Dichloroethane (EDC)	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Benzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Trichloroethene (TCE)	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2-Dichloropropane	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Bromodichloromethane	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Dibromomethane	ND	0.0460		mg/Kg-dry	1	7/13/2015 9:55:00 PM
cis-1,3-Dichloropropene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Toluene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
trans-1,3-Dichloropropylene	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1,2-Trichloroethane	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,3-Dichloropropane	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Tetrachloroethene (PCE)	0.0437	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Dibromochloromethane	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2-Dibromoethane (EDB)	ND	0.00575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Chlorobenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Ethylbenzene	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
m,p-Xylene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
o-Xylene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Styrene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Isopropylbenzene	ND	0.0920		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Bromoform	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:15:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-008

Matrix: Soil

Client Sample ID: SB-15-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
n-Propylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Bromobenzene	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,3,5-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
2-Chlorotoluene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
4-Chlorotoluene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
tert-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2,3-Trichloropropane	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2,4-Trichlorobenzene	ND	0.0575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
sec-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
4-Isopropyltoluene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,3-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,4-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
n-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2-Dibromo-3-chloropropane	ND	0.575		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2,4-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Hexachlorobutadiene	ND	0.115		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Naphthalene	ND	0.0345		mg/Kg-dry	1	7/13/2015 9:55:00 PM
1,2,3-Trichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/13/2015 9:55:00 PM
Surr: Dibromofluoromethane	96.0	63.7-129		%REC	1	7/13/2015 9:55:00 PM
Surr: Toluene-d8	103	64.3-131		%REC	1	7/13/2015 9:55:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%REC	1	7/13/2015 9:55:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	13.0	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-009

Matrix: Soil

Client Sample ID: SB-15-10.5D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11306	Analyst: BC
Dichlorodifluoromethane (CFC-12)	ND	0.0615		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Chloromethane	ND	0.0615		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Vinyl chloride	ND	0.00205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Bromomethane	ND	0.0922		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Chloroethane	ND	0.0615		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1-Dichloroethene	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Methylene chloride	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
trans-1,2-Dichloroethene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1-Dichloroethane	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
2,2-Dichloropropane	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
cis-1,2-Dichloroethene	0.0261	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Chloroform	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1-Dichloropropene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Carbon tetrachloride	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2-Dichloroethane (EDC)	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Benzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Trichloroethene (TCE)	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2-Dichloropropane	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Bromodichloromethane	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Dibromomethane	ND	0.0410		mg/Kg-dry	1	7/13/2015 10:27:00 PM
cis-1,3-Dichloropropene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Toluene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
trans-1,3-Dichloropropylene	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1,2-Trichloroethane	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,3-Dichloropropane	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Tetrachloroethene (PCE)	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Dibromochloromethane	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2-Dibromoethane (EDB)	ND	0.00512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Chlorobenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Ethylbenzene	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
m,p-Xylene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
o-Xylene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Styrene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Isopropylbenzene	ND	0.0820		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Bromoform	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-009

Matrix: Soil

Client Sample ID: SB-15-10.5D

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
n-Propylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Bromobenzene	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,3,5-Trimethylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
2-Chlorotoluene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
4-Chlorotoluene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
tert-Butylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2,3-Trichloropropane	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2,4-Trichlorobenzene	ND	0.0512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
sec-Butylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
4-Isopropyltoluene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,3-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,4-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
n-Butylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2-Dichlorobenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2-Dibromo-3-chloropropane	ND	0.512		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2,4-Trimethylbenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Hexachlorobutadiene	ND	0.102		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Naphthalene	ND	0.0307		mg/Kg-dry	1	7/13/2015 10:27:00 PM
1,2,3-Trichlorobenzene	ND	0.0205		mg/Kg-dry	1	7/13/2015 10:27:00 PM
Surr: Dibromofluoromethane	95.8	63.7-129		%REC	1	7/13/2015 10:27:00 PM
Surr: Toluene-d8	103	64.3-131		%REC	1	7/13/2015 10:27:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	63.1-141		%REC	1	7/13/2015 10:27:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	8.96	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-010

Matrix: Soil

Client Sample ID: SB-15-10.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0590		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Chloromethane	ND	0.0590		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Vinyl chloride	ND	0.00197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Bromomethane	ND	0.0885		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Chloroethane	ND	0.0590		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1-Dichloroethene	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Methylene chloride	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
trans-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1-Dichloroethane	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
2,2-Dichloropropane	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
cis-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Chloroform	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Carbon tetrachloride	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2-Dichloroethane (EDC)	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Benzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Trichloroethene (TCE)	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2-Dichloropropane	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Bromodichloromethane	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Dibromomethane	ND	0.0394		mg/Kg-dry	1	7/13/2015 4:37:00 PM
cis-1,3-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Toluene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
trans-1,3-Dichloropropylene	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1,2-Trichloroethane	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,3-Dichloropropane	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Tetrachloroethene (PCE)	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Dibromochloromethane	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2-Dibromoethane (EDB)	ND	0.00492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Chlorobenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Ethylbenzene	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
m,p-Xylene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
o-Xylene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Styrene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Isopropylbenzene	ND	0.0787		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Bromoform	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 10:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-010

Matrix: Soil

Client Sample ID: SB-15-10.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
n-Propylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Bromobenzene	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,3,5-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
2-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
4-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
tert-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2,3-Trichloropropane	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2,4-Trichlorobenzene	ND	0.0492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
sec-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
4-Isopropyltoluene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,3-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,4-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
n-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2-Dibromo-3-chloropropane	ND	0.492		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2,4-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Hexachlorobutadiene	ND	0.0984		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Naphthalene	ND	0.0295		mg/Kg-dry	1	7/13/2015 4:37:00 PM
1,2,3-Trichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/13/2015 4:37:00 PM
Surr: Dibromofluoromethane	101	63.7-129		%REC	1	7/13/2015 4:37:00 PM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/13/2015 4:37:00 PM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%REC	1	7/13/2015 4:37:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	10.6	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-012

Matrix: Soil

Client Sample ID: SB-17-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260					Batch ID: 11306	Analyst: BC
Dichlorodifluoromethane (CFC-12)	ND	0.0911		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Chloromethane	ND	0.0911		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Vinyl chloride	ND	0.00304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Bromomethane	ND	0.137		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Chloroethane	ND	0.0911		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1-Dichloroethene	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Methylene chloride	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
trans-1,2-Dichloroethene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1-Dichloroethane	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
2,2-Dichloropropane	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
cis-1,2-Dichloroethene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Chloroform	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1-Dichloropropene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Carbon tetrachloride	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2-Dichloroethane (EDC)	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Benzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Trichloroethene (TCE)	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2-Dichloropropane	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Bromodichloromethane	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Dibromomethane	ND	0.0607		mg/Kg-dry	1	7/14/2015 12:32:00 AM
cis-1,3-Dichloropropene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Toluene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
trans-1,3-Dichloropropylene	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1,2-Trichloroethane	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,3-Dichloropropane	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Tetrachloroethene (PCE)	0.0736	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Dibromochloromethane	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2-Dibromoethane (EDB)	ND	0.00759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Chlorobenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Ethylbenzene	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
m,p-Xylene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
o-Xylene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Styrene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Isopropylbenzene	ND	0.121		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Bromoform	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:20:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-012

Matrix: Soil

Client Sample ID: SB-17-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
n-Propylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Bromobenzene	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,3,5-Trimethylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
2-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
4-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
tert-Butylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2,3-Trichloropropane	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2,4-Trichlorobenzene	ND	0.0759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
sec-Butylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
4-Isopropyltoluene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,3-Dichlorobenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,4-Dichlorobenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
n-Butylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2-Dichlorobenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2-Dibromo-3-chloropropane	ND	0.759		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2,4-Trimethylbenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Hexachlorobutadiene	ND	0.152		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Naphthalene	ND	0.0455		mg/Kg-dry	1	7/14/2015 12:32:00 AM
1,2,3-Trichlorobenzene	ND	0.0304		mg/Kg-dry	1	7/14/2015 12:32:00 AM
Surr: Dibromofluoromethane	97.6	63.7-129		%REC	1	7/14/2015 12:32:00 AM
Surr: Toluene-d8	104	64.3-131		%REC	1	7/14/2015 12:32:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.7	63.1-141		%REC	1	7/14/2015 12:32:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	20.6	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-013

Matrix: Soil

Client Sample ID: SB-17-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0690		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Chloromethane	ND	0.0690		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Vinyl chloride	ND	0.00230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Bromomethane	ND	0.103		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Chloroethane	ND	0.0690		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1-Dichloroethene	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Methylene chloride	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
trans-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1-Dichloroethane	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
2,2-Dichloropropane	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
cis-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Chloroform	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1-Dichloropropene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Carbon tetrachloride	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2-Dichloroethane (EDC)	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Benzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Trichloroethene (TCE)	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2-Dichloropropane	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Bromodichloromethane	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Dibromomethane	ND	0.0460		mg/Kg-dry	1	7/14/2015 1:02:00 AM
cis-1,3-Dichloropropene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Toluene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
trans-1,3-Dichloropropylene	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1,2-Trichloroethane	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,3-Dichloropropane	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Tetrachloroethene (PCE)	0.0828	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Dibromochloromethane	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2-Dibromoethane (EDB)	ND	0.00575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Chlorobenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Ethylbenzene	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
m,p-Xylene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
o-Xylene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Styrene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Isopropylbenzene	ND	0.0920		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Bromoform	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:25:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-013

Matrix: Soil

Client Sample ID: SB-17-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
n-Propylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Bromobenzene	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,3,5-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
2-Chlorotoluene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
4-Chlorotoluene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
tert-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2,3-Trichloropropane	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2,4-Trichlorobenzene	ND	0.0575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
sec-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
4-Isopropyltoluene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,3-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,4-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
n-Butylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2-Dibromo-3-chloropropane	ND	0.575		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2,4-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Hexachlorobutadiene	ND	0.115		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Naphthalene	ND	0.0345		mg/Kg-dry	1	7/14/2015 1:02:00 AM
1,2,3-Trichlorobenzene	ND	0.0230		mg/Kg-dry	1	7/14/2015 1:02:00 AM
Surr: Dibromofluoromethane	96.0	63.7-129		%REC	1	7/14/2015 1:02:00 AM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/14/2015 1:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.8	63.1-141		%REC	1	7/14/2015 1:02:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	11.6	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:30:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-014

Matrix: Soil

Client Sample ID: SB-17-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0686		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Chloromethane	ND	0.0686		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Vinyl chloride	ND	0.00229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Bromomethane	ND	0.103		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Chloroethane	ND	0.0686		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1-Dichloroethene	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Methylene chloride	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
trans-1,2-Dichloroethene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1-Dichloroethane	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
2,2-Dichloropropane	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
cis-1,2-Dichloroethene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Chloroform	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Carbon tetrachloride	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2-Dichloroethane (EDC)	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Benzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Trichloroethene (TCE)	0.0469	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2-Dichloropropane	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Bromodichloromethane	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Dibromomethane	ND	0.0457		mg/Kg-dry	1	7/14/2015 1:33:00 AM
cis-1,3-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Toluene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
trans-1,3-Dichloropropylene	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1,2-Trichloroethane	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,3-Dichloropropane	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Tetrachloroethene (PCE)	0.0526	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Dibromochloromethane	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2-Dibromoethane (EDB)	ND	0.00572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Chlorobenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Ethylbenzene	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
m,p-Xylene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
o-Xylene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Styrene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Isopropylbenzene	ND	0.0915		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Bromoform	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:30:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-014

Matrix: Soil

Client Sample ID: SB-17-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
n-Propylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Bromobenzene	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,3,5-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
2-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
4-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
tert-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2,3-Trichloropropane	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2,4-Trichlorobenzene	ND	0.0572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,3-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,4-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
n-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2-Dibromo-3-chloropropane	ND	0.572		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2,4-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Hexachlorobutadiene	ND	0.114		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Naphthalene	ND	0.0343		mg/Kg-dry	1	7/14/2015 1:33:00 AM
1,2,3-Trichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/14/2015 1:33:00 AM
Surr: Dibromofluoromethane	96.8	63.7-129		%REC	1	7/14/2015 1:33:00 AM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/14/2015 1:33:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%REC	1	7/14/2015 1:33:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	18.1	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:35:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-015

Matrix: Soil

Client Sample ID: SB-17-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0629		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Chloromethane	ND	0.0629		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Vinyl chloride	ND	0.00210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Bromomethane	ND	0.0944		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Chloroethane	ND	0.0629		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1-Dichloroethene	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Methylene chloride	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
trans-1,2-Dichloroethene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1-Dichloroethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
2,2-Dichloropropane	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
cis-1,2-Dichloroethene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Chloroform	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Carbon tetrachloride	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2-Dichloroethane (EDC)	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Benzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Trichloroethene (TCE)	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2-Dichloropropane	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Bromodichloromethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Dibromomethane	ND	0.0420		mg/Kg-dry	1	7/14/2015 2:04:00 AM
cis-1,3-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Toluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
trans-1,3-Dichloropropylene	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1,2-Trichloroethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,3-Dichloropropane	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Tetrachloroethene (PCE)	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Dibromochloromethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2-Dibromoethane (EDB)	ND	0.00524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Chlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Ethylbenzene	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
m,p-Xylene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
o-Xylene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Styrene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Isopropylbenzene	ND	0.0839		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Bromoform	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 11:35:00 AM

Project: Bethel Junction Phase II

Lab ID: 1507095-015

Matrix: Soil

Client Sample ID: SB-17-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
n-Propylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Bromobenzene	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,3,5-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
2-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
4-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
tert-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2,3-Trichloropropane	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2,4-Trichlorobenzene	ND	0.0524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
sec-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
4-Isopropyltoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,3-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,4-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
n-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2-Dibromo-3-chloropropane	ND	0.524		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2,4-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Hexachlorobutadiene	ND	0.105		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Naphthalene	ND	0.0315		mg/Kg-dry	1	7/14/2015 2:04:00 AM
1,2,3-Trichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 2:04:00 AM
Surr: Dibromofluoromethane	107	63.7-129		%REC	1	7/14/2015 2:04:00 AM
Surr: Toluene-d8	119	64.3-131		%REC	1	7/14/2015 2:04:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.4	63.1-141		%REC	1	7/14/2015 2:04:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	12.9	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:25:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-017

Matrix: Soil

Client Sample ID: SB-14-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0621		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Chloromethane	ND	0.0621		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Vinyl chloride	ND	0.00207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Bromomethane	ND	0.0932		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Chloroethane	ND	0.0621		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1-Dichloroethene	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Methylene chloride	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
trans-1,2-Dichloroethene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1-Dichloroethane	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
2,2-Dichloropropane	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
cis-1,2-Dichloroethene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Chloroform	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1-Dichloropropene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Carbon tetrachloride	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2-Dichloroethane (EDC)	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Benzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Trichloroethene (TCE)	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2-Dichloropropane	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Bromodichloromethane	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Dibromomethane	ND	0.0414		mg/Kg-dry	1	7/14/2015 2:35:00 AM
cis-1,3-Dichloropropene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Toluene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
trans-1,3-Dichloropropylene	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1,2-Trichloroethane	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,3-Dichloropropane	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Tetrachloroethene (PCE)	0.321	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Dibromochloromethane	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2-Dibromoethane (EDB)	ND	0.00518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Chlorobenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Ethylbenzene	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
m,p-Xylene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
o-Xylene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Styrene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Isopropylbenzene	ND	0.0829		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Bromoform	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:25:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-017

Matrix: Soil

Client Sample ID: SB-14-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
n-Propylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Bromobenzene	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,3,5-Trimethylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
2-Chlorotoluene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
4-Chlorotoluene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
tert-Butylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2,3-Trichloropropane	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2,4-Trichlorobenzene	ND	0.0518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
sec-Butylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
4-Isopropyltoluene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,3-Dichlorobenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,4-Dichlorobenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
n-Butylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2-Dichlorobenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2-Dibromo-3-chloropropane	ND	0.518		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2,4-Trimethylbenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Hexachlorobutadiene	ND	0.104		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Naphthalene	ND	0.0311		mg/Kg-dry	1	7/14/2015 2:35:00 AM
1,2,3-Trichlorobenzene	ND	0.0207		mg/Kg-dry	1	7/14/2015 2:35:00 AM
Surr: Dibromofluoromethane	96.8	63.7-129		%REC	1	7/14/2015 2:35:00 AM
Surr: Toluene-d8	106	64.3-131		%REC	1	7/14/2015 2:35:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	63.1-141		%REC	1	7/14/2015 2:35:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	11.5	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-018

Matrix: Soil

Client Sample ID: SB-14-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0630		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Chloromethane	ND	0.0630		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Vinyl chloride	ND	0.00210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Bromomethane	ND	0.0945		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Chloroethane	ND	0.0630		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1-Dichloroethene	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Methylene chloride	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
trans-1,2-Dichloroethene	0.0268	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1-Dichloroethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
2,2-Dichloropropane	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
cis-1,2-Dichloroethene	0.0856	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Chloroform	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Carbon tetrachloride	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2-Dichloroethane (EDC)	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Benzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Trichloroethene (TCE)	0.173	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2-Dichloropropane	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Bromodichloromethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Dibromomethane	ND	0.0420		mg/Kg-dry	1	7/14/2015 3:06:00 AM
cis-1,3-Dichloropropene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Toluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
trans-1,3-Dichloropropylene	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1,2-Trichloroethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,3-Dichloropropane	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Tetrachloroethene (PCE)	0.0441	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Dibromochloromethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2-Dibromoethane (EDB)	ND	0.00525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Chlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Ethylbenzene	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
m,p-Xylene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
o-Xylene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Styrene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Isopropylbenzene	ND	0.0840		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Bromoform	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:30:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-018

Matrix: Soil

Client Sample ID: SB-14-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
n-Propylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Bromobenzene	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,3,5-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
2-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
4-Chlorotoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
tert-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2,3-Trichloropropane	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2,4-Trichlorobenzene	ND	0.0525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
sec-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
4-Isopropyltoluene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,3-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,4-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
n-Butylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2-Dichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2-Dibromo-3-chloropropane	ND	0.525		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2,4-Trimethylbenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Hexachlorobutadiene	ND	0.105		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Naphthalene	ND	0.0315		mg/Kg-dry	1	7/14/2015 3:06:00 AM
1,2,3-Trichlorobenzene	ND	0.0210		mg/Kg-dry	1	7/14/2015 3:06:00 AM
Surr: Dibromofluoromethane	95.4	63.7-129		%REC	1	7/14/2015 3:06:00 AM
Surr: Toluene-d8	104	64.3-131		%REC	1	7/14/2015 3:06:00 AM
Surr: 1-Bromo-4-fluorobenzene	109	63.1-141		%REC	1	7/14/2015 3:06:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	10.4	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:35:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-019

Matrix: Soil

Client Sample ID: SB-14-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0587		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Chloromethane	ND	0.0587		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Vinyl chloride	ND	0.00196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Bromomethane	ND	0.0880		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Chloroethane	ND	0.0587		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1-Dichloroethene	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Methylene chloride	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
trans-1,2-Dichloroethene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1-Dichloroethane	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
2,2-Dichloropropane	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
cis-1,2-Dichloroethene	0.0851	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Chloroform	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1-Dichloropropene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Carbon tetrachloride	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2-Dichloroethane (EDC)	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Benzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Trichloroethene (TCE)	0.0210	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2-Dichloropropane	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Bromodichloromethane	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Dibromomethane	ND	0.0391		mg/Kg-dry	1	7/14/2015 3:37:00 AM
cis-1,3-Dichloropropene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Toluene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
trans-1,3-Dichloropropylene	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1,2-Trichloroethane	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,3-Dichloropropane	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Tetrachloroethene (PCE)	0.0465	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Dibromochloromethane	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2-Dibromoethane (EDB)	ND	0.00489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Chlorobenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Ethylbenzene	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
m,p-Xylene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
o-Xylene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Styrene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Isopropylbenzene	ND	0.0782		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Bromoform	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:35:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-019

Matrix: Soil

Client Sample ID: SB-14-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
n-Propylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Bromobenzene	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,3,5-Trimethylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
2-Chlorotoluene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
4-Chlorotoluene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
tert-Butylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2,3-Trichloropropane	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2,4-Trichlorobenzene	ND	0.0489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
sec-Butylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
4-Isopropyltoluene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,3-Dichlorobenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,4-Dichlorobenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
n-Butylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2-Dichlorobenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2-Dibromo-3-chloropropane	ND	0.489		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2,4-Trimethylbenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Hexachlorobutadiene	ND	0.0978		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Naphthalene	ND	0.0293		mg/Kg-dry	1	7/14/2015 3:37:00 AM
1,2,3-Trichlorobenzene	ND	0.0196		mg/Kg-dry	1	7/14/2015 3:37:00 AM
Surr: Dibromofluoromethane	95.9	63.7-129		%REC	1	7/14/2015 3:37:00 AM
Surr: Toluene-d8	109	64.3-131		%REC	1	7/14/2015 3:37:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.1	63.1-141		%REC	1	7/14/2015 3:37:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	10.3	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-020

Matrix: Soil

Client Sample ID: SB-14-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0681		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Chloromethane	ND	0.0681		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Vinyl chloride	ND	0.00227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Bromomethane	ND	0.102		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Chloroethane	ND	0.0681		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1-Dichloroethene	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Methylene chloride	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
trans-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1-Dichloroethane	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
2,2-Dichloropropane	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
cis-1,2-Dichloroethene	0.176	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Chloroform	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Carbon tetrachloride	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2-Dichloroethane (EDC)	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Benzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Trichloroethene (TCE)	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2-Dichloropropane	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Bromodichloromethane	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Dibromomethane	ND	0.0454		mg/Kg-dry	1	7/14/2015 4:08:00 AM
cis-1,3-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Toluene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
trans-1,3-Dichloropropylene	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1,2-Trichloroethane	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,3-Dichloropropane	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Tetrachloroethene (PCE)	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Dibromochloromethane	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2-Dibromoethane (EDB)	ND	0.00567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Chlorobenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Ethylbenzene	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
m,p-Xylene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
o-Xylene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Styrene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Isopropylbenzene	ND	0.0907		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Bromoform	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 12:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-020

Matrix: Soil

Client Sample ID: SB-14-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
n-Propylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Bromobenzene	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,3,5-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
2-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
4-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
tert-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2,3-Trichloropropane	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2,4-Trichlorobenzene	ND	0.0567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
sec-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
4-Isopropyltoluene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,3-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,4-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
n-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2-Dibromo-3-chloropropane	ND	0.567		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2,4-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Naphthalene	ND	0.0340		mg/Kg-dry	1	7/14/2015 4:08:00 AM
1,2,3-Trichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/14/2015 4:08:00 AM
Surr: Dibromofluoromethane	105	63.7-129		%REC	1	7/14/2015 4:08:00 AM
Surr: Toluene-d8	118	64.3-131		%REC	1	7/14/2015 4:08:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.6	63.1-141		%REC	1	7/14/2015 4:08:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R23595

Analyst: SB

Percent Moisture	14.0	0.500		wt%	1	7/16/2015 9:53:54 AM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 2:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-022

Matrix: Groundwater

Client Sample ID: SB-15-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Chloromethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Vinyl chloride	ND	0.200		µg/L	1	7/15/2015 5:36:00 AM
Bromomethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Chloroethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Methylene chloride	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	7/15/2015 5:36:00 AM
cis-1,2-Dichloroethene	8.22	1.00		µg/L	1	7/15/2015 5:36:00 AM
Chloroform	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Benzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/15/2015 5:36:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Dibromomethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Toluene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/15/2015 5:36:00 AM
Chlorobenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Ethylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
m,p-Xylene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
o-Xylene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Styrene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Bromoform	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 2:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-022

Matrix: Groundwater

Client Sample ID: SB-15-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Bromobenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/15/2015 5:36:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/15/2015 5:36:00 AM
Naphthalene	ND	1.00		µg/L	1	7/15/2015 5:36:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/15/2015 5:36:00 AM
Surr: Dibromofluoromethane	102	77.4-147		%REC	1	7/15/2015 5:36:00 AM
Surr: Toluene-d8	105	40.1-139		%REC	1	7/15/2015 5:36:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	64.2-128		%REC	1	7/15/2015 5:36:00 AM

Ion Chromatography by EPA Method 300.0

Batch ID: R23515 Analyst: KT

Fluoride	0.126	0.100		mg/L	1	7/10/2015 3:00:00 PM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 2:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-023

Matrix: Groundwater

Client Sample ID: SB-17-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Chloromethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Vinyl chloride	ND	0.200		µg/L	1	7/15/2015 6:32:00 AM
Bromomethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Chloroethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Methylene chloride	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	7/15/2015 6:32:00 AM
cis-1,2-Dichloroethene	10.4	1.00		µg/L	1	7/15/2015 6:32:00 AM
Chloroform	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Benzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/15/2015 6:32:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Dibromomethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Toluene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/15/2015 6:32:00 AM
Chlorobenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Ethylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
m,p-Xylene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
o-Xylene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Styrene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Bromoform	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 2:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-023

Matrix: Groundwater

Client Sample ID: SB-17-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Bromobenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/15/2015 6:32:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/15/2015 6:32:00 AM
Naphthalene	ND	1.00		µg/L	1	7/15/2015 6:32:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/15/2015 6:32:00 AM
Surr: Dibromofluoromethane	99.1	77.4-147		%REC	1	7/15/2015 6:32:00 AM
Surr: Toluene-d8	104	40.1-139		%REC	1	7/15/2015 6:32:00 AM
Surr: 1-Bromo-4-fluorobenzene	94.1	64.2-128		%REC	1	7/15/2015 6:32:00 AM

Ion Chromatography by EPA Method 300.0

Batch ID: R23515 Analyst: KT

Fluoride	ND	0.100		mg/L	1	7/10/2015 3:11:00 PM
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Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 4:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-024

Matrix: Wastewater

Client Sample ID: Drum-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Chloromethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Vinyl chloride	ND	10.0	D	µg/L	50	7/16/2015 7:34:00 AM
Bromomethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Trichlorofluoromethane (CFC-11)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Chloroethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1-Dichloroethene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Methylene chloride	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
trans-1,2-Dichloroethene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Methyl tert-butyl ether (MTBE)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1-Dichloroethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
2,2-Dichloropropane	ND	100	D	µg/L	50	7/16/2015 7:34:00 AM
cis-1,2-Dichloroethene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Chloroform	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1,1-Trichloroethane (TCA)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1-Dichloropropene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Carbon tetrachloride	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2-Dichloroethane (EDC)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Benzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Trichloroethene (TCE)	ND	25.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2-Dichloropropane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Bromodichloromethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Dibromomethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
cis-1,3-Dichloropropene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Toluene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
trans-1,3-Dichloropropene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1,2-Trichloroethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,3-Dichloropropane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Tetrachloroethene (PCE)	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Dibromochloromethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2-Dibromoethane (EDB)	ND	3.00	D	µg/L	50	7/16/2015 7:34:00 AM
Chlorobenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,1,1,2-Tetrachloroethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Ethylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
m,p-Xylene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
o-Xylene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Styrene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Isopropylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Bromoform	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/9/2015 4:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-024

Matrix: Wastewater

Client Sample ID: Drum-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575

Analyst: AK

1,1,2,2-Tetrachloroethane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
n-Propylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Bromobenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,3,5-Trimethylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
2-Chlorotoluene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
4-Chlorotoluene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
tert-Butylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2,3-Trichloropropane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2,4-Trichlorobenzene	ND	100	D	µg/L	50	7/16/2015 7:34:00 AM
sec-Butylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
4-Isopropyltoluene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,3-Dichlorobenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,4-Dichlorobenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
n-Butylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2-Dichlorobenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2-Dibromo-3-chloropropane	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2,4-Trimethylbenzene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
Hexachlorobutadiene	ND	200	D	µg/L	50	7/16/2015 7:34:00 AM
Naphthalene	ND	50.0	D	µg/L	50	7/16/2015 7:34:00 AM
1,2,3-Trichlorobenzene	ND	200	D	µg/L	50	7/16/2015 7:34:00 AM
Surr: Dibromofluoromethane	102	77.4-147	D	%REC	50	7/16/2015 7:34:00 AM
Surr: Toluene-d8	104	40.1-139	D	%REC	50	7/16/2015 7:34:00 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2-128	D	%REC	50	7/16/2015 7:34:00 AM

NOTES:

Sample run at a dilution due to the sample matrix.



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 1:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-025

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Chloromethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Vinyl chloride	ND	0.200		µg/L	1	7/15/2015 3:18:00 AM
Bromomethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Chloroethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Methylene chloride	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	7/15/2015 3:18:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Chloroform	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Benzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/15/2015 3:18:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Dibromomethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Toluene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/15/2015 3:18:00 AM
Chlorobenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Ethylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
m,p-Xylene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
o-Xylene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Styrene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Bromoform	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 1:00:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-025

Matrix: Water

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R23575 Analyst: AK

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Bromobenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/15/2015 3:18:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/15/2015 3:18:00 AM
Naphthalene	ND	1.00		µg/L	1	7/15/2015 3:18:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/15/2015 3:18:00 AM
Surr: Dibromofluoromethane	96.8	77.4-147		%REC	1	7/15/2015 3:18:00 AM
Surr: Toluene-d8	101	40.1-139		%REC	1	7/15/2015 3:18:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	64.2-128		%REC	1	7/15/2015 3:18:00 AM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 1:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-026

Matrix: Soil

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	0.0600		mg/Kg	1	7/13/2015 3:02:00 PM
Chloromethane	ND	0.0600		mg/Kg	1	7/13/2015 3:02:00 PM
Vinyl chloride	ND	0.00200		mg/Kg	1	7/13/2015 3:02:00 PM
Bromomethane	ND	0.0900		mg/Kg	1	7/13/2015 3:02:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
Chloroethane	ND	0.0600		mg/Kg	1	7/13/2015 3:02:00 PM
1,1-Dichloroethene	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
Methylene chloride	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
2,2-Dichloropropane	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Chloroform	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Carbon tetrachloride	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
Benzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Trichloroethene (TCE)	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Bromodichloromethane	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Dibromomethane	ND	0.0400		mg/Kg	1	7/13/2015 3:02:00 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Toluene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
trans-1,3-Dichloropropylene	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
1,3-Dichloropropane	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Dibromochloromethane	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg	1	7/13/2015 3:02:00 PM
Chlorobenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
Ethylbenzene	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
m,p-Xylene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
o-Xylene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Styrene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Isopropylbenzene	ND	0.0800		mg/Kg	1	7/13/2015 3:02:00 PM
Bromoform	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM



Analytical Report

WO#: 1507095

Date Reported: 7/17/2015

Client: PES Environmental, Inc.

Collection Date: 7/6/2015 1:45:00 PM

Project: Bethel Junction Phase II

Lab ID: 1507095-026

Matrix: Soil

Client Sample ID: Trip Blank

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: 11306

Analyst: BC

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
n-Propylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Bromobenzene	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
2-Chlorotoluene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
4-Chlorotoluene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
tert-Butylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2,4-Trichlorobenzene	ND	0.0500		mg/Kg	1	7/13/2015 3:02:00 PM
sec-Butylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
4-Isopropyltoluene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
n-Butylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
1,2-Dibromo-3-chloropropane	ND	0.500		mg/Kg	1	7/13/2015 3:02:00 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Hexachlorobutadiene	ND	0.100		mg/Kg	1	7/13/2015 3:02:00 PM
Naphthalene	ND	0.0300		mg/Kg	1	7/13/2015 3:02:00 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg	1	7/13/2015 3:02:00 PM
Surr: Dibromofluoromethane	103	63.7-129		%REC	1	7/13/2015 3:02:00 PM
Surr: Toluene-d8	105	64.3-131		%REC	1	7/13/2015 3:02:00 PM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%REC	1	7/13/2015 3:02:00 PM



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID MB-R23515	SampType: MBLK	Units: mg/L	Prep Date: 7/10/2015	RunNo: 23515							
Client ID: MBLKW	Batch ID: R23515		Analysis Date: 7/10/2015	SeqNo: 445527							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride ND 0.100

Sample ID LCS-R23515	SampType: LCS	Units: mg/L	Prep Date: 7/10/2015	RunNo: 23515							
Client ID: LCSW	Batch ID: R23515		Analysis Date: 7/10/2015	SeqNo: 445528							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 2.07 0.100 2.000 0 103 90 110

Sample ID 1507087-001BDUP	SampType: DUP	Units: mg/L	Prep Date: 7/10/2015	RunNo: 23515							
Client ID: BATCH	Batch ID: R23515		Analysis Date: 7/10/2015	SeqNo: 445530							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 0.173 0.100 0.2177 22.9 20

Sample ID 1507087-001BMS	SampType: MS	Units: mg/L	Prep Date: 7/10/2015	RunNo: 23515							
Client ID: BATCH	Batch ID: R23515		Analysis Date: 7/10/2015	SeqNo: 445531							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 2.06 0.100 2.000 0.2177 92.0 80 120

Sample ID 1507087-001BMSD	SampType: MSD	Units: mg/L	Prep Date: 7/10/2015	RunNo: 23515							
Client ID: BATCH	Batch ID: R23515		Analysis Date: 7/10/2015	SeqNo: 445532							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride 2.12 0.100 2.000 0.2177 95.0 80 120 2.058 2.80 20



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1507114-001BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	7/13/2015	RunNo:	23529
Client ID:	BATCH	Batch ID:	11306			Analysis Date:	7/13/2015	SeqNo:	445751

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0593						0		30	
Chloromethane	ND	0.0593						0		30	
Vinyl chloride	ND	0.00198						0		30	
Bromomethane	ND	0.0889						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0494						0		30	
Chloroethane	ND	0.0593						0		30	
1,1-Dichloroethene	ND	0.0494						0		30	
Methylene chloride	ND	0.0198						0		30	
trans-1,2-Dichloroethene	ND	0.0198						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0494						0		30	
1,1-Dichloroethane	ND	0.0198						0		30	
2,2-Dichloropropane	ND	0.0494						0		30	
cis-1,2-Dichloroethene	ND	0.0198						0		30	
Chloroform	ND	0.0198						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0198						0		30	
1,1-Dichloropropene	ND	0.0198						0		30	
Carbon tetrachloride	ND	0.0198						0		30	
1,2-Dichloroethane (EDC)	ND	0.0296						0		30	
Benzene	ND	0.0198						0		30	
Trichloroethene (TCE)	ND	0.0198						0		30	
1,2-Dichloropropane	ND	0.0198						0		30	
Bromodichloromethane	ND	0.0198						0		30	
Dibromomethane	ND	0.0395						0		30	
cis-1,3-Dichloropropene	ND	0.0198						0		30	
Toluene	ND	0.0198						0		30	
trans-1,3-Dichloropropylene	ND	0.0296						0		30	
1,1,2-Trichloroethane	ND	0.0296						0		30	
1,3-Dichloropropane	ND	0.0494						0		30	
Tetrachloroethene (PCE)	ND	0.0198						0		30	
Dibromochloromethane	ND	0.0296						0		30	
1,2-Dibromoethane (EDB)	ND	0.00494						0		30	



Date: 7/17/2015

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507114-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: BATCH	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445751							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chlorobenzene	ND	0.0198						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0296						0		30	
Ethylbenzene	ND	0.0296						0		30	
m,p-Xylene	0.0617	0.0198						0.06174	0	30	
o-Xylene	0.0459	0.0198						0.04445	3.28	30	
Styrene	ND	0.0198						0		30	
Isopropylbenzene	ND	0.0790						0		30	
Bromoform	ND	0.0198						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0198						0		30	
n-Propylbenzene	ND	0.0198						0		30	
Bromobenzene	ND	0.0296						0		30	
1,3,5-Trimethylbenzene	ND	0.0198						0		30	
2-Chlorotoluene	ND	0.0198						0		30	
4-Chlorotoluene	ND	0.0198						0		30	
tert-Butylbenzene	ND	0.0198						0		30	
1,2,3-Trichloropropane	ND	0.0198						0		30	
1,2,4-Trichlorobenzene	ND	0.0494						0		30	
sec-Butylbenzene	ND	0.0198						0		30	
4-Isopropyltoluene	ND	0.0198						0		30	
1,3-Dichlorobenzene	ND	0.0198						0		30	
1,4-Dichlorobenzene	ND	0.0198						0		30	
n-Butylbenzene	ND	0.0198						0		30	
1,2-Dichlorobenzene	ND	0.0198						0		30	
1,2-Dibromo-3-chloropropane	ND	0.494						0		30	
1,2,4-Trimethylbenzene	ND	0.0198						0		30	
Hexachlorobutadiene	ND	0.0988						0		30	
Naphthalene	0.0410	0.0296						0.04198	2.38	30	
1,2,3-Trichlorobenzene	ND	0.0198						0		30	
Surr: Dibromofluoromethane	1.24		1.235		100	63.7	129		0		
Surr: Toluene-d8	1.27		1.235		103	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.24		1.235		101	63.1	141		0		



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507114-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: BATCH	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445751							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID LCS-11306	SampType: LCS	Units: mg/Kg	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: LCSS	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445753							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	1.13	0.0600	1.000	0	113	37.2	139				
Chloromethane	1.07	0.0600	1.000	0	107	38.8	132				
Vinyl chloride	0.937	0.00200	1.000	0	93.6	56.1	130				
Bromomethane	0.924	0.0900	1.000	0	92.4	41.3	148				
Trichlorofluoromethane (CFC-11)	0.736	0.0500	1.000	0	73.6	42.9	147				
Chloroethane	0.874	0.0600	1.000	0	87.4	37.1	144				
1,1-Dichloroethene	0.784	0.0500	1.000	0	78.4	49.7	142				
Methylene chloride	0.852	0.0200	1.000	0	85.2	46.3	140				
trans-1,2-Dichloroethene	0.861	0.0200	1.000	0	86.1	68	130				
Methyl tert-butyl ether (MTBE)	0.843	0.0500	1.000	0	84.3	59.1	138				
1,1-Dichloroethane	0.895	0.0200	1.000	0	89.4	65.5	132				
2,2-Dichloropropane	1.01	0.0500	1.000	0	101	28.1	149				
cis-1,2-Dichloroethene	0.905	0.0200	1.000	0	90.5	71.3	135				
Chloroform	0.898	0.0200	1.000	0	89.8	67.5	129				
1,1,1-Trichloroethane (TCA)	0.948	0.0200	1.000	0	94.8	69	132				
1,1-Dichloropropene	0.883	0.0200	1.000	0	88.3	72.7	131				
Carbon tetrachloride	0.956	0.0200	1.000	0	95.6	63.4	137				
1,2-Dichloroethane (EDC)	0.888	0.0300	1.000	0	88.8	61.9	136				
Benzene	0.885	0.0200	1.000	0	88.4	64.3	133				
Trichloroethene (TCE)	0.890	0.0200	1.000	0	89.0	65.5	137				
1,2-Dichloropropane	0.910	0.0200	1.000	0	91.0	63.2	142				
Bromodichloromethane	1.05	0.0200	1.000	0	105	73.2	131				
Dibromomethane	0.942	0.0400	1.000	0	94.2	70	130				
cis-1,3-Dichloropropene	1.06	0.0200	1.000	0	106	59.1	143				
Toluene	0.886	0.0200	1.000	0	88.6	67.3	138				
trans-1,3-Dichloropropylene	1.09	0.0300	1.000	0	109	49.2	149				



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-11306	SampType: LCS	Units: mg/Kg	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: LCSS	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445753							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	0.937	0.0300	1.000	0	93.6	74.5	129				
1,3-Dichloropropane	0.919	0.0500	1.000	0	91.9	70	130				
Tetrachloroethene (PCE)	0.864	0.0200	1.000	0	86.4	52.7	150				
Dibromochloromethane	1.19	0.0300	1.000	0	119	70.6	144				
1,2-Dibromoethane (EDB)	0.996	0.00500	1.000	0	99.6	70	130				
Chlorobenzene	0.864	0.0200	1.000	0	86.4	76.1	123				
1,1,1,2-Tetrachloroethane	1.07	0.0300	1.000	0	107	74.8	131				
Ethylbenzene	0.880	0.0300	1.000	0	88.0	74	129				
m,p-Xylene	1.76	0.0200	2.000	0	88.2	79.8	128				
o-Xylene	0.886	0.0200	1.000	0	88.6	72.7	124				
Styrene	0.911	0.0200	1.000	0	91.1	76.8	130				
Isopropylbenzene	0.886	0.0800	1.000	0	88.6	70	130				
Bromoform	1.08	0.0200	1.000	0	108	67	154				
1,1,1,2,2-Tetrachloroethane	0.966	0.0200	1.000	0	96.6	60	130				
n-Propylbenzene	0.908	0.0200	1.000	0	90.8	74.8	125				
Bromobenzene	0.871	0.0300	1.000	0	87.1	49.2	144				
1,3,5-Trimethylbenzene	0.894	0.0200	1.000	0	89.4	74.6	123				
2-Chlorotoluene	0.881	0.0200	1.000	0	88.1	76.7	129				
4-Chlorotoluene	0.888	0.0200	1.000	0	88.8	77.5	125				
tert-Butylbenzene	0.990	0.0200	1.000	0	99.0	66.2	130				
1,2,3-Trichloropropane	0.950	0.0200	1.000	0	95.0	67.9	136				
1,2,4-Trichlorobenzene	0.904	0.0500	1.000	0	90.4	65.6	137				
sec-Butylbenzene	1.01	0.0200	1.000	0	101	75.6	133				
4-Isopropyltoluene	1.02	0.0200	1.000	0	102	76.8	131				
1,3-Dichlorobenzene	0.839	0.0200	1.000	0	83.9	72.8	128				
1,4-Dichlorobenzene	0.836	0.0200	1.000	0	83.6	72.6	126				
n-Butylbenzene	0.921	0.0200	1.000	0	92.1	65.3	136				
1,2-Dichlorobenzene	0.850	0.0200	1.000	0	85.0	72.8	126				
1,2-Dibromo-3-chloropropane	1.17	0.500	1.000	0	117	61.2	139				
1,2,4-Trimethylbenzene	1.01	0.0200	1.000	0	101	77.5	129				
Hexachlorobutadiene	0.920	0.100	1.000	0	92.0	42	151				

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-11306	SampType:	LCS	Units:	mg/Kg	Prep Date:	7/13/2015	RunNo:	23529		
Client ID:	LCSS	Batch ID:	11306			Analysis Date:	7/13/2015	SeqNo:	445753		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	0.953	0.0300	1.000	0	95.3	62.3	134				
1,2,3-Trichlorobenzene	0.906	0.0200	1.000	0	90.7	62.1	140				
Surr: Dibromofluoromethane	1.32		1.250		106	63.7	129				
Surr: Toluene-d8	1.28		1.250		102	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.25		1.250		99.9	63.1	141				

Sample ID	MB-11306	SampType:	MBLK	Units:	mg/Kg	Prep Date:	7/13/2015	RunNo:	23529		
Client ID:	MBLKS	Batch ID:	11306			Analysis Date:	7/13/2015	SeqNo:	445754		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0600									
Chloromethane	ND	0.0600									
Vinyl chloride	ND	0.00200									
Bromomethane	ND	0.0900									
Trichlorofluoromethane (CFC-11)	ND	0.0500									
Chloroethane	ND	0.0600									
1,1-Dichloroethene	ND	0.0500									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
2,2-Dichloropropane	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0200									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane (EDC)	ND	0.0300									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-11306	SampType: MBLK	Units: mg/Kg	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: MBLKS	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445754							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0400									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0300									
1,1,2-Trichloroethane	ND	0.0300									
1,3-Dichloropropane	ND	0.0500									
Tetrachloroethene (PCE)	ND	0.0200									
Dibromochloromethane	ND	0.0300									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0300									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Styrene	ND	0.0200									
Isopropylbenzene	ND	0.0800									
Bromoform	ND	0.0200									
1,1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0200									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0200									
2-Chlorotoluene	ND	0.0200									
4-Chlorotoluene	ND	0.0200									
tert-Butylbenzene	ND	0.0200									
1,2,3-Trichloropropane	ND	0.0200									
1,2,4-Trichlorobenzene	ND	0.0500									
sec-Butylbenzene	ND	0.0200									
4-Isopropyltoluene	ND	0.0200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-11306	SampType: MBLK	Units: mg/Kg	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: MBLKS	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445754							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0300									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.38		1.250		110	63.7	129				
Surr: Toluene-d8	1.41		1.250		113	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		101	63.1	141				

Sample ID 1507095-010AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: SB-15-10.5	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445806							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	1.17	0.0590	0.9838	0	118	43.5	121				
Chloromethane	1.15	0.0590	0.9838	0	117	45	130				
Vinyl chloride	1.05	0.00197	0.9838	0	107	51.2	146				
Bromomethane	1.02	0.0885	0.9838	0	104	21.3	120				
Trichlorofluoromethane (CFC-11)	0.844	0.0492	0.9838	0	85.8	35	131				
Chloroethane	1.00	0.0590	0.9838	0	102	43.8	117				
1,1-Dichloroethene	0.806	0.0492	0.9838	0	81.9	61.9	141				
Methylene chloride	0.918	0.0197	0.9838	0	93.4	54.7	142				
trans-1,2-Dichloroethene	0.885	0.0197	0.9838	0	90.0	52	136				
Methyl tert-butyl ether (MTBE)	0.983	0.0492	0.9838	0	100	54.4	132				
1,1-Dichloroethane	0.918	0.0197	0.9838	0	93.3	51.8	141				
2,2-Dichloropropane	0.889	0.0492	0.9838	0	90.4	36	123				
cis-1,2-Dichloroethene	0.963	0.0197	0.9838	0	97.9	58.6	136				
Chloroform	0.928	0.0197	0.9838	0	94.4	53.2	129				
1,1,1-Trichloroethane (TCA)	0.962	0.0197	0.9838	0	97.8	58.3	145				
1,1-Dichloropropene	0.918	0.0197	0.9838	0	93.3	55.1	138				



Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1507095-010AMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	7/13/2015	RunNo:	23529		
Client ID:	SB-15-10.5	Batch ID:	11306			Analysis Date:	7/13/2015	SeqNo:	445806		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	0.945	0.0197	0.9838	0	96.1	53.3	144				
1,2-Dichloroethane (EDC)	0.976	0.0295	0.9838	0	99.2	51.3	139				
Benzene	0.926	0.0197	0.9838	0	94.1	63.5	133				
Trichloroethene (TCE)	0.928	0.0197	0.9838	0	94.3	68.6	132				
1,2-Dichloropropane	0.964	0.0197	0.9838	0	98.0	59	136				
Bromodichloromethane	1.10	0.0197	0.9838	0	112	50.7	141				
Dibromomethane	1.07	0.0394	0.9838	0	108	50.6	137				
cis-1,3-Dichloropropene	1.10	0.0197	0.9838	0	112	50.4	138				
Toluene	0.929	0.0197	0.9838	0	94.5	63.4	132				
trans-1,3-Dichloropropylene	1.13	0.0295	0.9838	0	115	44.1	147				
1,1,2-Trichloroethane	1.07	0.0295	0.9838	0	108	51.6	137				
1,3-Dichloropropane	1.03	0.0492	0.9838	0	105	53.1	134				
Tetrachloroethene (PCE)	0.910	0.0197	0.9838	0	92.5	35.6	158				
Dibromochloromethane	1.23	0.0295	0.9838	0	125	55.3	140				
1,2-Dibromoethane (EDB)	1.13	0.00492	0.9838	0	115	50.4	136				
Chlorobenzene	0.895	0.0197	0.9838	0	91.0	60	133				
1,1,1,2-Tetrachloroethane	1.07	0.0295	0.9838	0	109	53.1	142				
Ethylbenzene	0.886	0.0295	0.9838	0	90.1	54.5	134				
m,p-Xylene	1.77	0.0197	1.968	0	90.2	53.1	132				
o-Xylene	0.895	0.0197	0.9838	0	91.0	53.3	139				
Styrene	0.941	0.0197	0.9838	0	95.6	51.1	132				
Isopropylbenzene	0.909	0.0787	0.9838	0	92.4	58.9	138				
Bromoform	1.13	0.0197	0.9838	0	114	57.9	130				
1,1,1,2,2-Tetrachloroethane	1.14	0.0197	0.9838	0	116	51.9	131				
n-Propylbenzene	0.917	0.0197	0.9838	0	93.2	53.6	140				
Bromobenzene	0.925	0.0295	0.9838	0	94.0	54.2	140				
1,3,5-Trimethylbenzene	0.917	0.0197	0.9838	0	93.3	51.8	136				
2-Chlorotoluene	0.901	0.0197	0.9838	0	91.6	51.6	136				
4-Chlorotoluene	0.900	0.0197	0.9838	0	91.5	50.1	139				
tert-Butylbenzene	1.03	0.0197	0.9838	0	105	50.5	135				
1,2,3-Trichloropropane	1.11	0.0197	0.9838	0	113	50.5	131				

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507095-010AMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/13/2015	RunNo: 23529							
Client ID: SB-15-10.5	Batch ID: 11306		Analysis Date: 7/13/2015	SeqNo: 445806							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,4-Trichlorobenzene	0.995	0.0492	0.9838	0	101	50.8	130				
sec-Butylbenzene	1.05	0.0197	0.9838	0	107	52.6	141				
4-Isopropyltoluene	1.06	0.0197	0.9838	0	107	52.9	134				
1,3-Dichlorobenzene	0.862	0.0197	0.9838	0	87.6	52.6	131				
1,4-Dichlorobenzene	0.868	0.0197	0.9838	0	88.2	52.9	129				
n-Butylbenzene	0.944	0.0197	0.9838	0	96.0	52.6	130				
1,2-Dichlorobenzene	0.925	0.0197	0.9838	0	94.0	55.8	129				
1,2-Dibromo-3-chloropropane	1.43	0.492	0.9838	0	145	40.5	131				S
1,2,4-Trimethylbenzene	1.05	0.0197	0.9838	0	106	50.6	137				
Hexachlorobutadiene	0.959	0.0984	0.9838	0	97.5	40.6	158				
Naphthalene	1.12	0.0295	0.9838	0	113	52.3	124				
1,2,3-Trichlorobenzene	1.04	0.0197	0.9838	0	106	54.4	124				
Surr: Dibromofluoromethane	1.32		1.230		108	63.7	129				
Surr: Toluene-d8	1.27		1.230		103	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.230		102	63.1	141				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507095-022ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575
Client ID: SB-15-W	Batch ID: R23575		Analysis Date: 7/15/2015	SeqNo: 446633

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	7.67	1.00						8.220	6.92	30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	



Date: 7/17/2015

Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1507095-022ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	7/15/2015	RunNo:	23575		
Client ID:	SB-15-W	Batch ID:	R23575	Analysis Date:	7/15/2015	SeqNo:	446633				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	1.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.0		25.00		96.1	77.4	147		0		
Surr: Toluene-d8	25.2		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		99.9	64.2	128		0		



Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507095-022ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: SB-15-W	Batch ID: R23575	Analysis Date: 7/15/2015	SeqNo: 446638								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID 1507122-001AMS	SampType: MS	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: BATCH	Batch ID: R23575	Analysis Date: 7/15/2015	SeqNo: 446638								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	13.7	1.00	20.00	0	68.4	33.3	122				
Chloromethane	16.7	1.00	20.00	0	83.7	48.2	145				
Vinyl chloride	16.5	0.200	20.00	0	82.5	58.1	158				
Bromomethane	22.0	1.00	20.00	0	110	31.5	135				
Trichlorofluoromethane (CFC-11)	19.8	1.00	20.00	0	99.2	54.7	138				
Chloroethane	16.6	1.00	20.00	0	83.2	49.9	143				
1,1-Dichloroethene	18.5	1.00	20.00	0	92.3	63	141				
Methylene chloride	15.5	1.00	20.00	0	77.4	61.6	135				
trans-1,2-Dichloroethene	18.0	1.00	20.00	0	90.2	63.5	138				
Methyl tert-butyl ether (MTBE)	12.9	1.00	20.00	0	64.4	60.9	132				
1,1-Dichloroethane	17.7	1.00	20.00	0	88.5	67.8	136				
2,2-Dichloropropane	16.2	2.00	20.00	0	81.0	31.5	121				
cis-1,2-Dichloroethene	15.3	1.00	20.00	0	76.5	67.1	123				
Chloroform	17.1	1.00	20.00	0	85.3	66.7	136				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	97.0	64.2	146				
1,1-Dichloropropene	18.2	1.00	20.00	0	90.9	73.8	136				
Carbon tetrachloride	17.9	1.00	20.00	0	89.7	62.7	146				
1,2-Dichloroethane (EDC)	15.5	1.00	20.00	0	77.6	63.4	137				
Benzene	18.4	1.00	20.00	0	92.2	65.4	138				
Trichloroethene (TCE)	17.9	0.500	20.00	0	89.7	60.4	134				
1,2-Dichloropropane	16.4	1.00	20.00	0	81.8	62.6	138				
Bromodichloromethane	16.6	1.00	20.00	0	83.1	59.4	139				
Dibromomethane	14.3	1.00	20.00	0	71.5	63.6	139				
cis-1,3-Dichloropropene	13.0	1.00	20.00	0	64.9	63.8	132				
Toluene	18.0	1.00	20.00	0	90.2	64	139				
trans-1,3-Dichloropropene	13.0	1.00	20.00	0	64.9	57.7	125				



Date: 7/17/2015

Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507122-001AMS	SampType: MS	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: BATCH	Batch ID: R23575		Analysis Date: 7/15/2015	SeqNo: 446638							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,2-Trichloroethane	15.7	1.00	20.00	0	78.5	59.4	127				
1,3-Dichloropropane	14.1	1.00	20.00	0	70.6	64.3	135				
Tetrachloroethene (PCE)	18.5	1.00	20.00	0	92.6	50.3	133				
Dibromochloromethane	14.6	1.00	20.00	0	73.2	61.6	139				
1,2-Dibromoethane (EDB)	13.9	0.0600	20.00	0	69.4	63.2	134				
Chlorobenzene	17.6	1.00	20.00	0	87.8	65.8	134				
1,1,1,2-Tetrachloroethane	14.8	1.00	20.00	0.2000	72.8	65.4	135				
Ethylbenzene	19.0	1.00	20.00	0	95.2	64.5	136				
m,p-Xylene	39.3	1.00	40.00	0	98.2	63.3	135				
o-Xylene	18.9	1.00	20.00	0	94.6	65.4	134				
Styrene	18.8	1.00	20.00	0	93.8	59.1	134				
Isopropylbenzene	18.7	1.00	20.00	0	93.5	56	147				
Bromoform	13.5	1.00	20.00	0	67.4	57.7	139				
1,1,1,2,2-Tetrachloroethane	14.5	1.00	20.00	0	72.4	59.8	146				
n-Propylbenzene	18.5	1.00	20.00	0	92.7	57.6	142				
Bromobenzene	17.3	1.00	20.00	0	86.7	63.6	130				
1,3,5-Trimethylbenzene	18.9	1.00	20.00	0	94.6	59.9	136				
2-Chlorotoluene	18.4	1.00	20.00	0	91.8	61.7	134				
4-Chlorotoluene	17.6	1.00	20.00	0	88.2	58.4	134				
tert-Butylbenzene	17.8	1.00	20.00	0	89.0	66.8	141				
1,2,3-Trichloropropane	15.0	1.00	20.00	0	74.9	62.4	129				
1,2,4-Trichlorobenzene	11.1	2.00	20.00	0	55.6	50.9	133				
sec-Butylbenzene	18.5	1.00	20.00	0	92.5	56	146				
4-Isopropyltoluene	17.2	1.00	20.00	0	86.2	56.4	136				
1,3-Dichlorobenzene	16.4	1.00	20.00	0	81.9	58.2	128				
1,4-Dichlorobenzene	17.1	1.00	20.00	0	85.6	60.1	123				
n-Butylbenzene	18.3	1.00	20.00	0	91.4	54.6	135				
1,2-Dichlorobenzene	17.1	1.00	20.00	0	85.7	65.4	133				
1,2-Dibromo-3-chloropropane	11.2	1.00	20.00	0	56.2	51.8	142				
1,2,4-Trimethylbenzene	17.7	1.00	20.00	0	88.6	63.7	132				
Hexachlorobutadiene	16.7	4.00	20.00	0	83.4	58.1	130				

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1507122-001AMS	SampType: MS	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: BATCH	Batch ID: R23575		Analysis Date: 7/15/2015	SeqNo: 446638							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	7.13	1.00	20.00	0.2300	34.5	54.5	132				S
1,2,3-Trichlorobenzene	6.93	4.00	20.00	0.1500	33.9	57	131				S
Surr: Dibromofluoromethane	24.4		25.00		97.6	77.4	147				
Surr: Toluene-d8	25.5		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.3	64.2	128				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Sample ID LCS-R23575	SampType: LCS	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: LCSW	Batch ID: R23575		Analysis Date: 7/15/2015	SeqNo: 446652							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.8	1.00	20.00	0	74.0	43	136				
Chloromethane	19.0	1.00	20.00	0	95.1	43.9	139				
Vinyl chloride	18.4	0.200	20.00	0	92.0	53.6	139				
Bromomethane	25.9	1.00	20.00	0	129	42.5	152				
Trichlorofluoromethane (CFC-11)	21.0	1.00	20.00	0	105	63.7	133				
Chloroethane	17.7	1.00	20.00	0	88.3	53	141				
1,1-Dichloroethene	20.3	1.00	20.00	0	102	65.6	136				
Methylene chloride	18.0	1.00	20.00	0	90.2	67.1	131				
trans-1,2-Dichloroethene	19.9	1.00	20.00	0	99.7	71.7	129				
Methyl tert-butyl ether (MTBE)	16.6	1.00	20.00	0	82.8	67.7	131				
1,1-Dichloroethane	19.2	1.00	20.00	0	96.2	67.9	134				
2,2-Dichloropropane	17.3	2.00	20.00	0	86.5	33.7	152				
cis-1,2-Dichloroethene	17.0	1.00	20.00	0	85.2	71.1	130				
Chloroform	18.8	1.00	20.00	0	94.0	66.3	131				
1,1,1-Trichloroethane (TCA)	20.3	1.00	20.00	0	102	71	131				
1,1-Dichloropropene	19.3	1.00	20.00	0	96.4	74.5	126				
Carbon tetrachloride	19.2	1.00	20.00	0	95.8	66.2	134				
1,2-Dichloroethane (EDC)	18.4	1.00	20.00	0	91.9	70	129				
Benzene	19.5	1.00	20.00	0	97.7	69.3	132				
Trichloroethene (TCE)	19.8	0.500	20.00	0	99.2	65.2	136				



Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-R23575	SampType:	LCS	Units:	µg/L	Prep Date:	7/15/2015	RunNo:	23575		
Client ID:	LCSW	Batch ID:	R23575	Analysis Date:	7/15/2015	SeqNo:	446652				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	19.1	1.00	20.00	0	95.4	70.5	130				
Bromodichloromethane	19.2	1.00	20.00	0	96.0	67.2	137				
Dibromomethane	17.7	1.00	20.00	0	88.5	75.5	126				
cis-1,3-Dichloropropene	17.2	1.00	20.00	0	86.2	62.6	137				
Toluene	19.6	1.00	20.00	0	98.1	61.3	145				
trans-1,3-Dichloropropene	17.2	1.00	20.00	0	86.2	58.5	142				
1,1,2-Trichloroethane	19.0	1.00	20.00	0	95.1	71.7	131				
1,3-Dichloropropane	17.3	1.00	20.00	0	86.4	73.5	127				
Tetrachloroethene (PCE)	21.7	1.00	20.00	0	108	47.5	147				
Dibromochloromethane	19.3	1.00	20.00	0	96.3	67.2	134				
1,2-Dibromoethane (EDB)	18.2	0.0600	20.00	0	90.8	73.6	125				
Chlorobenzene	19.7	1.00	20.00	0	98.4	73.9	126				
1,1,1,2-Tetrachloroethane	18.0	1.00	20.00	0	90.0	76.8	124				
Ethylbenzene	20.7	1.00	20.00	0	104	72	130				
m,p-Xylene	42.6	1.00	40.00	0	107	70.3	134				
o-Xylene	20.3	1.00	20.00	0	102	72.1	131				
Styrene	20.8	1.00	20.00	0	104	64.3	140				
Isopropylbenzene	21.1	1.00	20.00	0	106	73.9	128				
Bromoform	17.6	1.00	20.00	0	87.9	63.8	135				
1,1,1,2,2-Tetrachloroethane	18.8	1.00	20.00	0	94.2	62.9	132				
n-Propylbenzene	21.0	1.00	20.00	0	105	74.5	127				
Bromobenzene	19.2	1.00	20.00	0	95.8	71	131				
1,3,5-Trimethylbenzene	20.6	1.00	20.00	0	103	73.1	128				
2-Chlorotoluene	20.2	1.00	20.00	0	101	70.8	130				
4-Chlorotoluene	19.7	1.00	20.00	0	98.4	70.1	131				
tert-Butylbenzene	20.6	1.00	20.00	0	103	68.2	131				
1,2,3-Trichloropropane	20.2	1.00	20.00	0	101	67.7	131				
1,2,4-Trichlorobenzene	21.1	2.00	20.00	0	105	67.6	129				
sec-Butylbenzene	21.4	1.00	20.00	0	107	72	129				
4-Isopropyltoluene	20.4	1.00	20.00	0	102	69.2	130				
1,3-Dichlorobenzene	19.2	1.00	20.00	0	96.2	72.4	129				

Work Order: 1507095
CLIENT: PES Environmental, Inc.
Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-R23575	SampType: LCS	Units: µg/L				Prep Date: 7/15/2015	RunNo: 23575				
Client ID: LCSW	Batch ID: R23575					Analysis Date: 7/15/2015	SeqNo: 446652				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	70.6	128				
n-Butylbenzene	20.9	1.00	20.00	0	105	73.8	127				
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	74.2	129				
1,2-Dibromo-3-chloropropane	17.5	1.00	20.00	0	87.6	63.1	136				
1,2,4-Trimethylbenzene	20.9	1.00	20.00	0	104	73.4	127				
Hexachlorobutadiene	21.8	4.00	20.00	0	109	58.6	138				
Naphthalene	18.8	1.00	20.00	0	93.8	45.2	144				
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	50.2	139				
Surr: Dibromofluoromethane	24.9		25.00		99.6	77.4	147				
Surr: Toluene-d8	24.8		25.00		99.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.4		25.00		97.8	64.2	128				

Sample ID MB-R23575	SampType: MBLK	Units: µg/L				Prep Date: 7/15/2015	RunNo: 23575				
Client ID: MBLKW	Batch ID: R23575					Analysis Date: 7/15/2015	SeqNo: 446654				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									
Chloromethane	ND	1.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									



Date: 7/17/2015

Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	MB-R23575	SampType:	MBLK	Units:	µg/L	Prep Date:	7/15/2015	RunNo:	23575
Client ID:	MBLKW	Batch ID:	R23575			Analysis Date:	7/15/2015	SeqNo:	446654

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									



Date: 7/17/2015

Work Order: 1507095
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction Phase II

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID MB-R23575	SampType: MBLK	Units: µg/L	Prep Date: 7/15/2015	RunNo: 23575							
Client ID: MBLKW	Batch ID: R23575		Analysis Date: 7/15/2015	SeqNo: 446654							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.3		25.00		97.1	77.4	147				
Surr: Toluene-d8	24.9		25.00		99.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.0		25.00		96.2	64.2	128				

Client Name: PES	Work Order Number: 1507095
Logged by: Erica Silva	Date Received: 7/10/2015 8:08:00 AM

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
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:
 Water sample dates/times taken from bottle labels.

Item Information

Item #	Temp °C
Cooler	1.0
Sample	4.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

ANALYTICAL

Chain of Custody Record

3600 Fremont Ave N, Seattle, WA 98103

Tel: 206-352-3790 Fax: 206-352-7178

Date: 7-10-15

Page: 1 of 3

Laboratory Project No (Internal): 1507095

Client: PES Environmental, Inc
Address: 1215 4th Ave Suite 1350
City, State, Zip: Seattle WA 98161
Tel: (206) 529-3980 Fax: (206) 529-3985

Project Name: Bellevue Junction Phase II
Project No: 146034.02
Location: Pes Moines, WA
Reports To (PM): B. O'Neal, K. Rankick
Email: Krankick@pesenv.com
Collected by: C. DeBaer

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	OX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270-SM)	PCB (EPA 8052)	Metals** (6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Comments/Depth
1 SB-16-0.5	7-9-15	910	S	X													HOLD
2 SB-16-3		915	S	X													
3 SB-16-6		920	S	X													
4 SB-16-9		925	S	X													
5 SB-16-15		930	S														
6 SB-15-0.5		1015	S	X													
7 SB-15-3		1010	S	X													
8 SB-15-6		1015	S	X													
9 SB-15-10.5 D		1020	S	X													
10 SB-15-10.5		1025	S	X													

**Metals Analyte (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposal by Lab (A fee may be assessed if samples are retained after 30 days)

Relinquished Date/Time: 7/10/15 8:08 Received Date/Time: 07/10/15 8:08
Relinquished by: Chris DeBaer Received by: John DeBaer

Special Remarks: Add analysis per K. Rankick 7/10/15 JSB

TAT -> SameDay* NextDay* 2 Day 3 Day STD
*Please coordinate with the lab in advance



Fremont

Laboratory Project No (Internal):

1507095

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103

Tel: 206-352-3790
Fax: 206-352-7178

Date: 7-10-15

Page: 2 of 3

Client: RES Environmental, Inc.
Address: see page 1
City, State, Zip: _____

Project Name: _____
Project No: see page 1
Location: _____
Reports To (PM): _____
Collected by: Bethel Junction Phasett

Tel: (206) 529-3280

Fax: _____

Email: Krankich@resenv.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, WW = Waste Water, SW = Storm Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (5020 / 200 B)	Total (T) / Dissolved (D)	Anions (IC)***	EDR (801)	Comments/Depth
1 SB-15-15	7/9/15	1030	S	X													Hold
2 SB-17-0.5		1120		X													
3 SB-17-3		1125		X													
4 SB-17-6		1130		X													
5 SB-17-9		1135		X													
6 SB-17-14		1140		X													
7 SB-14-0.5		1205		X													
8 SB-14-3		1230		X													
9 SB-14-6		1235		X													
10 SB-14-9		1245		X													

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants: TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: _____

Relinquished Chris Nelson 7/10/15 8:08 Date/Time

Received [Signature] Date/Time

Relinquished [Signature] Date/Time

Received [Signature] Date/Time

TAT -> SameDay NextDay 2 Day 3 Day STD

*Please coordinate with the lab in advance

MEMORANDUM

TO: Project File **DATE:** August 26, 2015
FROM: Jessie Compeau **PROJECT:** 1246.030.02.002
SUBJECT: Bethel Junction, Soil and Groundwater Sample Data Review – July 9, 2015
Sampling Event
Fremont Lab Package 1507095

Twenty-one (21) soil samples (including a field duplicate), two (2) groundwater samples, one (1) wastewater sample and two (2) trip blank samples were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on July 9, 2015. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Four soil samples were placed on hold by the client and remaining project samples were analyzed for selected analytical parameters as follows: volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C, and a general chemistry parameter (fluoride) by USEPA 300.0.

The results were reported in Fremont Lab Package 1507095. The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 2004).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols. Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of 1.0 Centigrade (°C) and sample temperature at 4.1°C within the recommended preservation temperature range of 4.0°C ± 2.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (soils and preserved waters) from the date of sample collection. All holding time criteria were met.

General Chemistry Methods:

The samples (groundwater) were prepared and analyzed within the EPA recommended holding period for fluoride within 28 days from the date of sample collection.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. These data were not provided nor requested for this project. The case narrative did not indicate any other issues with calibration; therefore no other qualifications were warranted.

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blanks (soils and preserved waters) were included with the analytical batch per method requirement. Target analytes were not detected in the method blanks at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

General Chemistry Methods:

Laboratory method blank was prepared and analyzed for fluoride. The target analytes were not detected in the method blank at or above the method reporting limit (MRL). No qualifications of the data were made due to the results of the method blank analysis.

Trip Blank Results

USEPA Method 8260C (VOCs):

Trip blanks associated with the soil and water samples were collected and analyzed. Target analytes were not detected in the trip blanks at or above the MRLs. No qualifications of the data were made due to the results of the trip blank analyses.

Field, Rinsate, or Equipment Blank Results

All Analytical Parameters:

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

A laboratory duplicate was performed on an unrelated soil sample within the analytical batch. A laboratory duplicate was performed on client water sample SB-15-W. The primary/duplicate

relative percent differences (RPDs) for soil and water VOC analysis were within the laboratory control limit of 30%. Duplicate data are acceptable.

General Chemistry Methods:

Laboratory duplicate analysis was performed on an unrelated sample within the analytical batch for fluoride. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Field duplicate samples (SB-15-10.5 and SB-15-10.5D) were collected and analyzed for VOCs. VOC results are comparable and within 30% RPD.

General Chemistry Methods:

Field duplicates were not collected. Refer to laboratory duplicate results for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the samples, laboratory duplicates, LCSs, matrix spikes and the method blanks were within the laboratory surrogate control limits for all soil and water analyses. No qualifications of the data were warranted.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

A matrix spike (MS) analysis was performed on an unrelated soil samples associated with each analytical batch. The MS analysis was performed on unrelated water sample within the analytical batch. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria for soil and water samples with the following exceptions:

Soil matrix spike recovery for 1,2-Dibromo-3-chloropropane was high and above Fremont laboratory control limits criteria. No action was taken since the spike was performed on an unrelated sample within the analytical batch. Refer to laboratory control sample (LCS) results for accuracy data.

Water matrix spike recoveries for naphthalene and 1,2,3-trichlorobenzene were low and below Fremont laboratory control limit criteria. No action was taken since the spike was performed on an unrelated sample within the analytical batch. Refer to LCS results for accuracy data.

General Chemistry Methods:

MS/MSD analyses were performed on an unrelated sample within the analytical batch. The MS/MSD percent recoveries (%Rs) and RPD for fluoride were within the laboratory control criteria.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

Laboratory control samples (LCS) were analyzed along with the analytical batches for water and soil samples. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for water and the soil sample.

General Chemistry Methods:

LCS sample was analyzed along with analytical batch for fluoride. The LCS %R for fluoride was within the laboratory control criteria for water. No data qualifications were warranted.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. MRLs on one sample (Drum-1) were raised due to method-required dilutions. The reported MRLs are considered appropriate for this project. No data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested. MRLs on selected samples were raised due to method-required dilutions. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999)
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA 2004).

No data were qualified. All data are judged to be acceptable for their intended use.



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Seattle, WA 98103

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PES Environmental, Inc.

Kelly Rankich
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Gerrity Bethel

Lab ID: 1505218

June 02, 2015

Attention Kelly Rankich:

Fremont Analytical, Inc. received 3 sample(s) on 5/26/2015 for the analyses presented in the following report.

Volatile Organic Compounds-EPA Method TO-15 (SIM)

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 "Chelsea Ward", written in a cursive style.

Chelsea Ward
Project Manager



Date: 06/02/2015

CLIENT: PES Environmental, Inc.
Project: Gerrity Bethel
Lab Order: 1505218

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1505218-001	Subslab_Air_052015	05/22/2015 10:45 AM	05/26/2015 10:12 AM
1505218-002	Indoor_Air_052015	05/22/2015 8:00 AM	05/26/2015 10:12 AM
1505218-003	Outdoor_Air_052015	05/22/2015 8:00 AM	05/26/2015 10:12 AM

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

CLIENT: PES Environmental, Inc.

Project: Gerrity Bethel

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.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: PES Environmental, Inc.

WorkOrder: 1505218

Project: Gerrity Bethel

Client Sample ID: Subslab_Air_052015

Date Sampled: 5/22/2015

Lab ID: 1505218-001A

Date Received: 5/26/2015

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
Volatile Organic Compounds-EPA Method TO-15 (SIM)							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.00500	<0.0273	0.00500	0.0273		TO-15	05/29/2015 JY
1,1,2,2-Tetrachloroethane	<0.00620	<0.0426	0.00620	0.0426		TO-15	05/29/2015 JY
1,1,2-Trichloroethane (TCA)	<0.0200	<0.109	0.0200	0.109		TO-15	05/29/2015 JY
1,1-Dichloroethane	<0.00800	<0.0324	0.00800	0.0324		TO-15	05/29/2015 JY
1,1-Dichloroethene (DCE)	<0.00900	<0.0357	0.00900	0.0357		TO-15	05/29/2015 JY
1,2,4-Trichlorobenzene	<0.0500	<0.371	0.0500	0.371		TO-15	05/29/2015 JY
1,2-Dibromoethane (EDB)	<0.0200	<0.154	0.0200	0.154		TO-15	05/29/2015 JY
1,2-Dichloroethane	<0.0200	<0.0809	0.0200	0.0809		TO-15	05/29/2015 JY
Benzene	0.136	0.436	0.0400	0.128		TO-15	05/29/2015 JY
Carbon tetrachloride	0.0660	0.415	0.0200	0.126		TO-15	05/29/2015 JY
Chlorobenzene	<0.0700	<0.322	0.0700	0.322		TO-15	05/29/2015 JY
Chloroethane	<0.0980	<0.259	0.0980	0.259		TO-15	05/29/2015 JY
Chloroform	0.550	2.69	0.0200	0.0977		TO-15	05/29/2015 JY
Chloromethane	<0.400	<0.826	0.400	0.826		TO-15	05/29/2015 JY
cis-1,2-Dichloroethene	3.99	15.8	0.0200	0.0793		TO-15	05/29/2015 JY
Ethylbenzene	0.683	2.96	0.0500	0.217		TO-15	05/29/2015 JY
Hexachlorobutadiene	<0.0166	<0.177	0.0166	0.177		TO-15	05/29/2015 JY
m,p-Xylene	1.24	5.37	0.0600	0.261		TO-15	05/29/2015 JY
Methylene chloride	<0.0600	<0.208	0.0600	0.208		TO-15	05/29/2015 JY
Naphthalene	1.36	7.13	0.300	1.57		TO-15	05/29/2015 JY
Hexane	0.264	0.932	0.0700	0.247		TO-15	05/29/2015 JY
o-Xylene	0.562	2.44	0.0400	0.174		TO-15	05/29/2015 JY
Methyl tert-butyl ether (MTBE)	<0.00900	<0.0324	0.00900	0.0324		TO-15	05/29/2015 JY
Tetrachloroethene (PCE)	1,910	13,000	0.400	2.71	E	TO-15	05/29/2015 JY
Toluene	0.713	2.69	0.0500	0.188		TO-15	05/29/2015 JY
trans-1,2-Dichloroethene	0.327	1.30	0.00600	0.0238		TO-15	05/29/2015 JY
Trichloroethene (TCE)	88.5	476	0.136	0.731	E	TO-15	05/29/2015 JY
Vinyl chloride	<0.0850	<0.217	0.0850	0.217		TO-15	05/29/2015 JY
Surr: 4-Bromofluorobenzene	87.2 %Rec	--	70-130	--		TO-15	05/29/2015 JY



Client: PES Environmental, Inc.

WorkOrder: 1505218

Project: Gerrity Bethel

Client Sample ID: Indoor_Air_052015

Date Sampled: 5/22/2015

Lab ID: 1505218-002A

Date Received: 5/26/2015

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
Volatile Organic Compounds-EPA Method TO-15 (SIM)							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.00500	<0.0273	0.00500	0.0273		TO-15	05/29/2015 JY
1,1,2,2-Tetrachloroethane	<0.00620	<0.0426	0.00620	0.0426		TO-15	05/29/2015 JY
1,1,2-Trichloroethane (TCA)	<0.0200	<0.109	0.0200	0.109		TO-15	05/29/2015 JY
1,1-Dichloroethane	<0.00800	<0.0324	0.00800	0.0324		TO-15	05/29/2015 JY
1,1-Dichloroethene (DCE)	<0.00900	<0.0357	0.00900	0.0357		TO-15	05/29/2015 JY
1,2,4-Trichlorobenzene	<0.0500	<0.371	0.0500	0.371		TO-15	05/29/2015 JY
1,2-Dibromoethane (EDB)	<0.0200	<0.154	0.0200	0.154		TO-15	05/29/2015 JY
1,2-Dichloroethane	<0.0200	<0.0809	0.0200	0.0809		TO-15	05/29/2015 JY
Benzene	0.106	0.338	0.0400	0.128		TO-15	05/29/2015 JY
Carbon tetrachloride	0.107	0.671	0.0200	0.126		TO-15	05/29/2015 JY
Chlorobenzene	<0.0700	<0.322	0.0700	0.322		TO-15	05/29/2015 JY
Chloroethane	<0.0980	<0.259	0.0980	0.259		TO-15	05/29/2015 JY
Chloroform	<0.0200	<0.0977	0.0200	0.0977		TO-15	05/29/2015 JY
Chloromethane	0.529	1.09	0.400	0.826		TO-15	05/29/2015 JY
cis-1,2-Dichloroethene	<0.0200	<0.0793	0.0200	0.0793		TO-15	05/29/2015 JY
Ethylbenzene	<0.0500	<0.217	0.0500	0.217		TO-15	05/29/2015 JY
Hexachlorobutadiene	<0.0166	<0.177	0.0166	0.177		TO-15	05/29/2015 JY
m,p-Xylene	<0.0600	<0.261	0.0600	0.261		TO-15	05/29/2015 JY
Methylene chloride	<0.0600	<0.208	0.0600	0.208		TO-15	05/29/2015 JY
Naphthalene	<0.300	<1.57	0.300	1.57		TO-15	05/29/2015 JY
Hexane	1.78	6.27	0.0700	0.247		TO-15	05/29/2015 JY
o-Xylene	<0.0400	<0.174	0.0400	0.174		TO-15	05/29/2015 JY
Methyl tert-butyl ether (MTBE)	<0.00900	<0.0324	0.00900	0.0324		TO-15	05/29/2015 JY
Tetrachloroethene (PCE)	0.258	1.75	0.0500	0.339		TO-15	05/29/2015 JY
Toluene	0.656	2.47	0.0500	0.188		TO-15	05/29/2015 JY
trans-1,2-Dichloroethene	<0.00600	<0.0238	0.00600	0.0238		TO-15	05/29/2015 JY
Trichloroethene (TCE)	0.0699	0.376	0.0170	0.0914		TO-15	05/29/2015 JY
Vinyl chloride	<0.0850	<0.217	0.0850	0.217		TO-15	05/29/2015 JY
Surr: 4-Bromofluorobenzene	87.7 %Rec	--	70-130	--		TO-15	05/29/2015 JY



Client: PES Environmental, Inc.

WorkOrder: 1505218

Project: Gerrity Bethel

Client Sample ID: Outdoor_Air_052015

Date Sampled: 5/22/2015

Lab ID: 1505218-003A

Date Received: 5/26/2015

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst
Volatile Organic Compounds-EPA Method TO-15 (SIM)							
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
1,1,1-Trichloroethane	<0.00500	<0.0273	0.00500	0.0273		TO-15	05/29/2015 JY
1,1,2,2-Tetrachloroethane	<0.00620	<0.0426	0.00620	0.0426		TO-15	05/29/2015 JY
1,1,2-Trichloroethane (TCA)	<0.0200	<0.109	0.0200	0.109		TO-15	05/29/2015 JY
1,1-Dichloroethane	<0.00800	<0.0324	0.00800	0.0324		TO-15	05/29/2015 JY
1,1-Dichloroethene (DCE)	<0.00900	<0.0357	0.00900	0.0357		TO-15	05/29/2015 JY
1,2,4-Trichlorobenzene	<0.0500	<0.371	0.0500	0.371		TO-15	05/29/2015 JY
1,2-Dibromoethane (EDB)	<0.0200	<0.154	0.0200	0.154		TO-15	05/29/2015 JY
1,2-Dichloroethane	<0.0200	<0.0809	0.0200	0.0809		TO-15	05/29/2015 JY
Benzene	0.0633	0.202	0.0400	0.128		TO-15	05/29/2015 JY
Carbon tetrachloride	0.112	0.707	0.0200	0.126		TO-15	05/29/2015 JY
Chlorobenzene	<0.0700	<0.322	0.0700	0.322		TO-15	05/29/2015 JY
Chloroethane	<0.0980	<0.259	0.0980	0.259		TO-15	05/29/2015 JY
Chloroform	<0.0200	<0.0977	0.0200	0.0977		TO-15	05/29/2015 JY
Chloromethane	0.600	1.24	0.400	0.826		TO-15	05/29/2015 JY
cis-1,2-Dichloroethene	<0.0200	<0.0793	0.0200	0.0793		TO-15	05/29/2015 JY
Ethylbenzene	<0.0500	<0.217	0.0500	0.217		TO-15	05/29/2015 JY
Hexachlorobutadiene	<0.0166	<0.177	0.0166	0.177		TO-15	05/29/2015 JY
m,p-Xylene	<0.0600	<0.261	0.0600	0.261		TO-15	05/29/2015 JY
Methylene chloride	<0.0600	<0.208	0.0600	0.208		TO-15	05/29/2015 JY
Naphthalene	0.434	2.27	0.300	1.57		TO-15	05/29/2015 JY
Hexane	<0.0700	<0.247	0.0700	0.247		TO-15	05/29/2015 JY
o-Xylene	<0.0400	<0.174	0.0400	0.174		TO-15	05/29/2015 JY
Methyl tert-butyl ether (MTBE)	<0.00900	<0.0324	0.00900	0.0324		TO-15	05/29/2015 JY
Tetrachloroethene (PCE)	<0.0500	<0.339	0.0500	0.339		TO-15	05/29/2015 JY
Toluene	0.637	2.40	0.0500	0.188		TO-15	05/29/2015 JY
trans-1,2-Dichloroethene	<0.00600	<0.0238	0.00600	0.0238		TO-15	05/29/2015 JY
Trichloroethene (TCE)	<0.0170	<0.0914	0.0170	0.0914		TO-15	05/29/2015 JY
Vinyl chloride	<0.0850	<0.217	0.0850	0.217		TO-15	05/29/2015 JY
Surr: 4-Bromofluorobenzene	94.0 %Rec	--	70-130	--		TO-15	05/29/2015 JY



Date: 6/2/2015

Work Order: 1505218
 CLIENT: PES Environmental, Inc.
 Project: Gerrity Bethel

QC SUMMARY REPORT
Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID	1505218-003AREP	SampType:	REP	Units:	ppbv	Prep Date:	5/29/2015	RunNo:	22704		
Client ID:	Outdoor_Air_052015	Batch ID:	R22704	Analysis Date:	5/29/2015	SeqNo:	429896				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	0.585	0.400						0.5998	2.52	30	
Vinyl chloride	ND	0.0850						0		30	
Chloroethane	ND	0.0980						0		30	
1,1-Dichloroethene (DCE)	ND	0.00900						0		30	
Methylene chloride	ND	0.0600						0		30	
trans-1,2-Dichloroethene	ND	0.00600						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.00900						0		30	
Hexane	ND	0.0700						0		30	
1,1-Dichloroethane	ND	0.00800						0		30	
cis-1,2-Dichloroethene	ND	0.0200						0		30	
Chloroform	ND	0.0200						0		30	
1,1,1-Trichloroethane	ND	0.00500						0		30	
Carbon tetrachloride	0.104	0.0200						0.1123	7.58	30	
1,2-Dichloroethane	ND	0.0200						0		30	
Benzene	0.0578	0.0400						0.06330	9.08	30	
Trichloroethene (TCE)	ND	0.0170						0		30	
Toluene	0.635	0.0500						0.6371	0.377	30	
1,1,2-Trichloroethane (TCA)	ND	0.0200						0		30	
Tetrachloroethene (PCE)	ND	0.0500						0		30	
1,2-Dibromoethane (EDB)	ND	0.0200						0		30	
Chlorobenzene	ND	0.0700						0		30	
Ethylbenzene	ND	0.0500						0		30	
m,p-Xylene	ND	0.0600						0		30	
o-Xylene	ND	0.0400						0		30	
1,1,2,2-Tetrachloroethane	ND	0.00620						0		30	
1,2,4-Trichlorobenzene	ND	0.0500						0		30	
Hexachlorobutadiene	ND	0.0166						0		30	
Naphthalene	0.420	0.300						0.4335	3.19	30	
Surr: 4-Bromofluorobenzene	9.46		10.00		94.6	70	130		0		



Work Order: 1505218
CLIENT: PES Environmental, Inc.
Project: Gerrity Bethel

QC SUMMARY REPORT
Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID	LCS-R22704	SampType:	LCS	Units:	ppbv	Prep Date:	5/28/2015	RunNo:	22704
Client ID:	LCSW	Batch ID:	R22704			Analysis Date:	5/28/2015	SeqNo:	429898

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	2.45	0.400	2.500	0	97.9	70	130				
Vinyl chloride	2.60	0.0850	2.500	0	104	70	130				
Chloroethane	2.14	0.0980	2.500	0	85.8	70	130				
1,1-Dichloroethene (DCE)	2.55	0.00900	2.500	0	102	70	130				
Methylene chloride	2.47	0.0600	2.500	0	99.0	70	130				
trans-1,2-Dichloroethene	2.53	0.00600	2.500	0	101	70	130				
Methyl tert-butyl ether (MTBE)	2.49	0.00900	2.500	0	99.4	70	130				
Hexane	2.54	0.0700	2.500	0	101	70	130				
1,1-Dichloroethane	2.48	0.00800	2.500	0	99.1	70	130				
cis-1,2-Dichloroethene	2.57	0.0200	2.500	0	103	70	130				
Chloroform	2.46	0.0200	2.500	0	98.4	70	130				
1,1,1-Trichloroethane	2.47	0.00500	2.500	0	98.6	70	130				
Carbon tetrachloride	2.45	0.0200	2.500	0	97.9	70	130				
1,2-Dichloroethane	2.54	0.0200	2.500	0	102	70	130				
Benzene	2.59	0.0400	2.500	0	104	70	130				
Trichloroethene (TCE)	2.54	0.0170	2.500	0	102	70	130				
Toluene	2.46	0.0500	2.500	0	98.6	70	130				
1,1,2-Trichloroethane (TCA)	2.56	0.0200	2.500	0	102	70	130				
Tetrachloroethene (PCE)	2.60	0.0500	2.500	0	104	70	130				
1,2-Dibromoethane (EDB)	2.60	0.0200	2.500	0	104	70	130				
Chlorobenzene	2.59	0.0700	2.500	0	103	70	130				
Ethylbenzene	2.49	0.0500	2.500	0	99.5	70	130				
m,p-Xylene	5.04	0.0600	5.000	0	101	70	130				
o-Xylene	2.52	0.0400	2.500	0	101	70	130				
1,1,1,2-Tetrachloroethane	2.55	0.00620	2.500	0	102	70	130				
1,2,4-Trichlorobenzene	2.76	0.0500	2.500	0	110	70	130				
Hexachlorobutadiene	2.47	0.0166	2.500	0	98.9	70	130				
Naphthalene	2.72	0.300	2.500	0	109	70	130				
Surr: 4-Bromofluorobenzene	9.98		10.00		99.8	70	130				



Work Order: 1505218
CLIENT: PES Environmental, Inc.
Project: Gerrity Bethel

QC SUMMARY REPORT
Volatile Organic Compounds-EPA Method TO-15 (SIM)

Sample ID MB-R22704	SampType: MBLK	Units: ppbv	Prep Date: 5/29/2015	RunNo: 22704							
Client ID: MBLKW	Batch ID: R22704		Analysis Date: 5/29/2015	SeqNo: 429899							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	0.400									
Vinyl chloride	ND	0.0850									
Chloroethane	ND	0.0980									
1,1-Dichloroethene (DCE)	ND	0.00900									
Methylene chloride	ND	0.0600									
trans-1,2-Dichloroethene	ND	0.00600									
Methyl tert-butyl ether (MTBE)	ND	0.00900									
Hexane	ND	0.0700									
1,1-Dichloroethane	ND	0.00800									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane	ND	0.00500									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane	ND	0.0200									
Benzene	ND	0.0400									
Trichloroethene (TCE)	ND	0.0170									
Toluene	ND	0.0500									
1,1,2-Trichloroethane (TCA)	ND	0.0200									
Tetrachloroethene (PCE)	ND	0.0500									
1,2-Dibromoethane (EDB)	ND	0.0200									
Chlorobenzene	ND	0.0700									
Ethylbenzene	ND	0.0500									
m,p-Xylene	ND	0.0600									
o-Xylene	ND	0.0400									
1,1,2,2-Tetrachloroethane	ND	0.00620									
1,2,4-Trichlorobenzene	ND	0.0500									
Hexachlorobutadiene	ND	0.0166									
Naphthalene	ND	0.300									
Surr: 4-Bromofluorobenzene	9.31		10.00		93.1	70	130				



Sample Log-In Check List

Client Name: PES	Work Order Number: 1505218
Logged by: Clare Griggs	Date Received: 5/26/2015 10:12:00 AM

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 present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

MEMORANDUM

TO: Project File **DATE:** June 5, 2015
FROM: Jerry Harris
SUBJECT: Laboratory Data Validation Review
PROJECT: Gerrity Bethel
PROJECT #: 1246.030.02.001
TASK: May 22, 2015 Air Samples
LAB: Fremont Analytical Service Request No. 1505218

Three air samples were collected at the Gerrity Bethel site on May 22, 2015. The air samples were analyzed for VOCs by USEPA Method TO-15. One TO-15 analysis lot was analyzed on May 29, 2015. Laboratory analytical services were provided by Fremont Analytical (FA) of Seattle, Washington. FA Project number: 1505218.

The quality assurance review of the laboratory data is summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for review of analytical data were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999).

DATA VALIDATION

Completeness

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied Summa canisters for the air samples. The samples were shipped and received in good condition by the laboratory. Summa canisters do not require preservation or cooling. The samples were collected, handled, and delivered in an appropriate manner. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analyses for TO-15 VOCs were performed within seven days of sample collection. This is within the 30-day recommended holding time limit for air samples collected in a Summa canister.

No data were qualified based upon holding times.

Initial Calibration

Hard copies of the initial calibration data for this project are not required in the data deliverable. The laboratory is required to discuss discrepancies in initial calibration results associated with the project analyses if they occur. The laboratory reported results for tetrachloroethene and trichloroethene in sample Subslab_Air_052015 exceeded the upper calibration range of the instrument. The laboratory flagged the results for these two compounds with an E to denote that the reported concentration exceeded the instrument upper calibration range. Based on this information, the reported results are qualified as estimated and assigned a J flag. The laboratory report page showing the qualifications is attached. No other discrepancies were reported; therefore no other data qualifications were warranted.

Continuing Calibration

Hard copies of the continuing calibration verification (CCV) data for this project are not required in the data deliverable. The laboratory is required to discuss discrepancies in continuing calibration results associated with the project analyses. No discrepancies were reported; therefore no data qualifications were warranted.

Method Blank Results

One laboratory method blank was analyzed with the air sample extraction lot. This meets the required frequency for analyzing method blanks for the TO-15 analytical method. The method blank results did not report any compounds at concentrations at or above the MRLs. No data qualifications were warranted.

Trip Blank Results

A trip blank was not required for the TO-15 analyses. No qualifications were warranted due to the lack of a trip blank for this method.

Field Duplicate Analyses

No field duplicates were required or collected during this field event.

Laboratory Duplicate Analyses

A laboratory duplicate were prepared from project sample Outdoor_Air_052215 and analyzed with the sample group. Five target analytes were detected in the primary and duplicate samples.

The relative percent differences (RPDs) for these five compounds were within the laboratory control limits. No qualifications were warranted.

Surrogate Recoveries

The surrogate %R results for the TO-15 air samples, method blank, duplicate and laboratory control sample were within the laboratory surrogate control limits of 70 to 130%R. No data qualifications were warranted.

Laboratory Control Samples

One laboratory control sample (LCS) was analyzed with the TO-15 analytical group samples. The LCS was analyzed at the appropriate frequency for this project. The LCS recovery results for all control compounds met the %R acceptance criteria of 70 to 130. No data qualifications were warranted.

Matrix Spike/Matrix Spike Duplicates

A MS/MSD is not required for the TO-15 method.

Other Quality Control Issues

No other laboratory quality control issues were identified in the laboratory report.

Quantitation Limits

Results of the TO-15 VOC analyses were reported based on laboratory MRLs. The MRLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The MRLs and MDL were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

The laboratory reported results for tetrachloroethene and trichloroethene in sample Subslab_Air_052015 are qualified as estimated and assigned a J flag. The laboratory report page showing the qualifications is attached. No other data were qualified. All data, including the J-flagged data, are judged to be acceptable for their intended use. No data were rejected.



Client: PES Environmental, Inc.

WorkOrder: 1505218

Project: Gerrity Bethel

Client Sample ID: Subslab_Air_052015

Date Sampled: 5/22/2015

Lab ID: 1505218-001A

Date Received: 5/26/2015

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
Volatile Organic Compounds-EPA Method TO-15 (SIM)								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
1,1,1-Trichloroethane	<0.00500	<0.0273	0.00500	0.0273		TO-15	05/29/2015	JY
1,1,2,2-Tetrachloroethane	<0.00620	<0.0426	0.00620	0.0426		TO-15	05/29/2015	JY
1,1,2-Trichloroethane (TCA)	<0.0200	<0.109	0.0200	0.109		TO-15	05/29/2015	JY
1,1-Dichloroethane	<0.00800	<0.0324	0.00800	0.0324		TO-15	05/29/2015	JY
1,1-Dichloroethene (DCE)	<0.00900	<0.0357	0.00900	0.0357		TO-15	05/29/2015	JY
1,2,4-Trichlorobenzene	<0.0500	<0.371	0.0500	0.371		TO-15	05/29/2015	JY
1,2-Dibromoethane (EDB)	<0.0200	<0.154	0.0200	0.154		TO-15	05/29/2015	JY
1,2-Dichloroethane	<0.0200	<0.0809	0.0200	0.0809		TO-15	05/29/2015	JY
Benzene	0.136	0.436	0.0400	0.128		TO-15	05/29/2015	JY
Carbon tetrachloride	0.0660	0.415	0.0200	0.126		TO-15	05/29/2015	JY
Chlorobenzene	<0.0700	<0.322	0.0700	0.322		TO-15	05/29/2015	JY
Chloroethane	<0.0980	<0.259	0.0980	0.259		TO-15	05/29/2015	JY
Chloroform	0.550	2.69	0.0200	0.0977		TO-15	05/29/2015	JY
Chloromethane	<0.400	<0.826	0.400	0.826		TO-15	05/29/2015	JY
cis-1,2-Dichloroethene	3.99	15.8	0.0200	0.0793		TO-15	05/29/2015	JY
Ethylbenzene	0.683	2.96	0.0500	0.217		TO-15	05/29/2015	JY
Hexachlorobutadiene	<0.0166	<0.177	0.0166	0.177		TO-15	05/29/2015	JY
m,p-Xylene	1.24	5.37	0.0600	0.261		TO-15	05/29/2015	JY
Methylene chloride	<0.0600	<0.208	0.0600	0.208		TO-15	05/29/2015	JY
Naphthalene	1.36	7.13	0.300	1.57		TO-15	05/29/2015	JY
Hexane	0.264	0.932	0.0700	0.247		TO-15	05/29/2015	JY
o-Xylene	0.562	2.44	0.0400	0.174		TO-15	05/29/2015	JY
Methyl tert-butyl ether (MTBE)	<0.00900	<0.0324	0.00900	0.0324		TO-15	05/29/2015	JY
Tetrachloroethene (PCE)	1,910 J	13,000 J	0.400	2.71	E	TO-15	05/29/2015	JY
Toluene	0.713	2.69	0.0500	0.188		TO-15	05/29/2015	JY
trans-1,2-Dichloroethene	0.327	1.30	0.00600	0.0238		TO-15	05/29/2015	JY
Trichloroethene (TCE)	88.5 J	476 J	0.136	0.731	E	TO-15	05/29/2015	JY
Vinyl chloride	<0.0850	<0.217	0.0850	0.217		TO-15	05/29/2015	JY
Surr: 4-Bromofluorobenzene	87.2 %Rec	--	70-130	--		TO-15	05/29/2015	JY



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

PES Environmental, Inc.
Brian O'Neal
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Lab ID: 1607173

July 22, 2016

Attention Brian O'Neal:

Fremont Analytical, Inc. received 20 sample(s) on 7/18/2016 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260C

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,

Chelsea Ward
Project Manager

DoD/ELAP Certification #L2371, ISO/ICC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 07/22/2016

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Lab Order: 1607173

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1607173-001	SB-20-3	07/17/2016 11:30 AM	07/18/2016 1:49 PM
1607173-002	SB-20-6	07/17/2016 11:45 AM	07/18/2016 1:49 PM
1607173-003	SB-20-7	07/17/2016 11:40 AM	07/18/2016 1:49 PM
1607173-004	SB-19-3	07/17/2016 12:10 PM	07/18/2016 1:49 PM
1607173-005	SB-19-6	07/17/2016 12:20 PM	07/18/2016 1:49 PM
1607173-006	SB-19-9	07/17/2016 12:30 PM	07/18/2016 1:49 PM
1607173-007	SB-18-3	07/17/2016 1:05 PM	07/18/2016 1:49 PM
1607173-008	SB-18-6	07/17/2016 1:10 PM	07/18/2016 1:49 PM
1607173-009	SB-18-9	07/17/2016 1:25 PM	07/18/2016 1:49 PM
1607173-010	SB-21-3	07/17/2016 2:05 PM	07/18/2016 1:49 PM
1607173-011	SB-21-6	07/17/2016 2:15 PM	07/18/2016 1:49 PM
1607173-012	SB-21-9	07/17/2016 2:25 PM	07/18/2016 1:49 PM
1607173-013	SB-23-3	07/18/2016 9:00 AM	07/18/2016 1:49 PM
1607173-014	SB-23-6	07/18/2016 9:10 AM	07/18/2016 1:49 PM
1607173-015	SB-23-9	07/18/2016 9:15 AM	07/18/2016 1:49 PM
1607173-016	SB-23-071816	07/18/2016 10:00 AM	07/18/2016 1:49 PM
1607173-017	SB-22-3	07/18/2016 10:50 AM	07/18/2016 1:49 PM
1607173-018	SB-22-6	07/18/2016 11:00 AM	07/18/2016 1:49 PM
1607173-019	SB-22-9.5	07/18/2016 11:10 AM	07/18/2016 1:49 PM
1607173-020	SB-22-071816	07/18/2016 11:45 AM	07/18/2016 1:49 PM

CLIENT: PES Environmental, Inc.

Project: Bethel Junction

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.



Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:30:00 AM

Project: Bethel Junction

Lab ID: 1607173-001

Matrix: Soil

Client Sample ID: SB-20-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloromethane	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Vinyl chloride	ND	0.00242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromomethane	ND	0.109		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Trichlorofluoromethane (CFC-11)	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloroethane	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloroethene	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Methylene chloride	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
trans-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Methyl tert-butyl ether (MTBE)	ND	0.0606	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloroethane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
2,2-Dichloropropane	ND	0.0606	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
cis-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloroform	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,1-Trichloroethane (TCA)	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloropropene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Carbon tetrachloride	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dichloroethane (EDC)	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Benzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Trichloroethene (TCE)	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dichloropropane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromodichloromethane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Dibromomethane	ND	0.0485		mg/Kg-dry	1	7/21/2016 11:15:26 PM
cis-1,3-Dichloropropene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Toluene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
trans-1,3-Dichloropropylene	ND	0.0364	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,2-Trichloroethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,3-Dichloropropane	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Tetrachloroethene (PCE)	0.0945	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Dibromochloromethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dibromoethane (EDB)	ND	0.00606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,1,2-Tetrachloroethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Ethylbenzene	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
m,p-Xylene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
o-Xylene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Styrene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Isopropylbenzene	ND	0.0970		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromoform	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:30:00 AM

Project: Bethel Junction

Lab ID: 1607173-001

Matrix: Soil

Client Sample ID: SB-20-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
n-Propylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromobenzene	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,3,5-Trimethylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
2-Chlorotoluene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
4-Chlorotoluene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
tert-Butylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2,3-Trichloropropane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2,4-Trichlorobenzene	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
sec-Butylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
4-Isopropyltoluene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,3-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,4-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
n-Butylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dibromo-3-chloropropane	ND	0.606	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2,4-Trimethylbenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Hexachlorobutadiene	ND	0.121		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Naphthalene	ND	0.0364	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2,3-Trichlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Surr: Dibromofluoromethane	99.0	56.5-129		%Rec	1	7/21/2016 11:15:26 PM
Surr: Toluene-d8	96.2	64.3-131		%Rec	1	7/21/2016 11:15:26 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	63.1-141		%Rec	1	7/21/2016 11:15:26 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	16.9	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-002

Matrix: Soil

Client Sample ID: SB-20-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloromethane	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Vinyl chloride	ND	0.00224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromomethane	ND	0.101		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Trichlorofluoromethane (CFC-11)	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloroethane	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloroethene	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Methyl tert-butyl ether (MTBE)	ND	0.0561	Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
2,2-Dichloropropane	ND	0.0561	Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloroform	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,1-Trichloroethane (TCA)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Carbon tetrachloride	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichloroethane (EDC)	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Benzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromodichloromethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Dibromomethane	ND	0.0449		mg/Kg-dry	1	7/21/2016 11:44:43 PM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Toluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
trans-1,3-Dichloropropylene	ND	0.0337	Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,2-Trichloroethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3-Dichloropropane	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Tetrachloroethene (PCE)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Dibromochloromethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dibromoethane (EDB)	ND	0.00561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,1,2-Tetrachloroethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Ethylbenzene	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
m,p-Xylene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
o-Xylene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Styrene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Isopropylbenzene	ND	0.0898		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromoform	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-002

Matrix: Soil

Client Sample ID: SB-20-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
n-Propylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromobenzene	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3,5-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
2-Chlorotoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
4-Chlorotoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
tert-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,3-Trichloropropane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,4-Trichlorobenzene	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
sec-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
4-Isopropyltoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
n-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dibromo-3-chloropropane	ND	0.561	Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Hexachlorobutadiene	ND	0.112		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Naphthalene	ND	0.0337	Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Surr: Dibromofluoromethane	97.5	56.5-129		%Rec	1	7/21/2016 11:44:43 PM
Surr: Toluene-d8	96.0	64.3-131		%Rec	1	7/21/2016 11:44:43 PM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%Rec	1	7/21/2016 11:44:43 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.67	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:40:00 AM

Project: Bethel Junction

Lab ID: 1607173-003

Matrix: Soil

Client Sample ID: SB-20-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloromethane	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Vinyl chloride	ND	0.00198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromomethane	ND	0.0890		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloroethane	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloroethene	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Methylene chloride	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
trans-1,2-Dichloroethene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0494	Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloroethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
2,2-Dichloropropane	ND	0.0494	Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
cis-1,2-Dichloroethene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloroform	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloropropene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Carbon tetrachloride	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichloroethane (EDC)	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Benzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Trichloroethene (TCE)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichloropropane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromodichloromethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Dibromomethane	ND	0.0396		mg/Kg-dry	1	7/22/2016 12:13:55 AM
cis-1,3-Dichloropropene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Toluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
trans-1,3-Dichloropropylene	ND	0.0297	Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,2-Trichloroethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3-Dichloropropane	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Tetrachloroethene (PCE)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Dibromochloromethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dibromoethane (EDB)	ND	0.00494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Ethylbenzene	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
m,p-Xylene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
o-Xylene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Styrene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Isopropylbenzene	ND	0.0791		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromoform	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:40:00 AM

Project: Bethel Junction

Lab ID: 1607173-003

Matrix: Soil

Client Sample ID: SB-20-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
n-Propylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromobenzene	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3,5-Trimethylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
2-Chlorotoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
4-Chlorotoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
tert-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,3-Trichloropropane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,4-Trichlorobenzene	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
sec-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
4-Isopropyltoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,4-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
n-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dibromo-3-chloropropane	ND	0.494	Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,4-Trimethylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Hexachlorobutadiene	ND	0.0989		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Naphthalene	ND	0.0297	Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,3-Trichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Surr: Dibromofluoromethane	97.5	56.5-129		%Rec	1	7/22/2016 12:13:55 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 12:13:55 AM
Surr: 1-Bromo-4-fluorobenzene	96.8	63.1-141		%Rec	1	7/22/2016 12:13:55 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.49	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-004

Matrix: Soil

Client Sample ID: SB-19-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloromethane	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Vinyl chloride	ND	0.00221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromomethane	ND	0.0996		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Trichlorofluoromethane (CFC-11)	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloroethane	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloroethene	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Methylene chloride	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
trans-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Methyl tert-butyl ether (MTBE)	ND	0.0553	Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloroethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
2,2-Dichloropropane	ND	0.0553	Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
cis-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloroform	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,1-Trichloroethane (TCA)	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloropropene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Carbon tetrachloride	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichloroethane (EDC)	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Benzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Trichloroethene (TCE)	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichloropropane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromodichloromethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Dibromomethane	ND	0.0443		mg/Kg-dry	1	7/22/2016 12:43:12 AM
cis-1,3-Dichloropropene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Toluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
trans-1,3-Dichloropropylene	ND	0.0332	Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,2-Trichloroethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3-Dichloropropane	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Tetrachloroethene (PCE)	0.140	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Dibromochloromethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dibromoethane (EDB)	ND	0.00553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,1,2-Tetrachloroethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Ethylbenzene	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
m,p-Xylene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
o-Xylene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Styrene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Isopropylbenzene	ND	0.0885		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromoform	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-004

Matrix: Soil

Client Sample ID: SB-19-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
n-Propylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromobenzene	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3,5-Trimethylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
2-Chlorotoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
4-Chlorotoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
tert-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,3-Trichloropropane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,4-Trichlorobenzene	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
sec-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
4-Isopropyltoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,4-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
n-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dibromo-3-chloropropane	ND	0.553	Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,4-Trimethylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Hexachlorobutadiene	ND	0.111		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Naphthalene	ND	0.0332	Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,3-Trichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Surr: Dibromofluoromethane	95.8	56.5-129		%Rec	1	7/22/2016 12:43:12 AM
Surr: Toluene-d8	96.8	64.3-131		%Rec	1	7/22/2016 12:43:12 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 12:43:12 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	10.8	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:20:00 PM

Project: Bethel Junction

Lab ID: 1607173-005

Matrix: Soil

Client Sample ID: SB-19-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloromethane	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Vinyl chloride	ND	0.00231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromomethane	ND	0.104		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Trichlorofluoromethane (CFC-11)	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloroethane	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloroethene	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Methylene chloride	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
trans-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Methyl tert-butyl ether (MTBE)	ND	0.0577	Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloroethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
2,2-Dichloropropane	ND	0.0577	Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
cis-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloroform	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,1-Trichloroethane (TCA)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloropropene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Carbon tetrachloride	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichloroethane (EDC)	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Benzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Trichloroethene (TCE)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichloropropane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromodichloromethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Dibromomethane	ND	0.0462		mg/Kg-dry	1	7/22/2016 1:12:28 AM
cis-1,3-Dichloropropene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Toluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
trans-1,3-Dichloropropylene	ND	0.0346	Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,2-Trichloroethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3-Dichloropropane	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Tetrachloroethene (PCE)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Dibromochloromethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dibromoethane (EDB)	ND	0.00577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,1,2-Tetrachloroethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Ethylbenzene	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
m,p-Xylene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
o-Xylene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Styrene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Isopropylbenzene	ND	0.0924		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromoform	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:20:00 PM

Project: Bethel Junction

Lab ID: 1607173-005

Matrix: Soil

Client Sample ID: SB-19-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
n-Propylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromobenzene	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3,5-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
2-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
4-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
tert-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,3-Trichloropropane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,4-Trichlorobenzene	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
sec-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
4-Isopropyltoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,4-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
n-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dibromo-3-chloropropane	ND	0.577	Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,4-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Hexachlorobutadiene	ND	0.115		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Naphthalene	ND	0.0346	Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,3-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Surr: Dibromofluoromethane	96.6	56.5-129		%Rec	1	7/22/2016 1:12:28 AM
Surr: Toluene-d8	95.9	64.3-131		%Rec	1	7/22/2016 1:12:28 AM
Surr: 1-Bromo-4-fluorobenzene	95.8	63.1-141		%Rec	1	7/22/2016 1:12:28 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	7.81	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:30:00 PM

Project: Bethel Junction

Lab ID: 1607173-006

Matrix: Soil

Client Sample ID: SB-19-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloromethane	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Vinyl chloride	ND	0.00243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromomethane	ND	0.109		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Trichlorofluoromethane (CFC-11)	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloroethane	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloroethene	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Methylene chloride	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Methyl tert-butyl ether (MTBE)	ND	0.0607	Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
2,2-Dichloropropane	ND	0.0607	Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
cis-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloroform	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,1-Trichloroethane (TCA)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloropropene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Carbon tetrachloride	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichloroethane (EDC)	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Benzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Dibromomethane	ND	0.0486		mg/Kg-dry	1	7/22/2016 1:41:40 AM
cis-1,3-Dichloropropene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Toluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
trans-1,3-Dichloropropylene	ND	0.0364	Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,2-Trichloroethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3-Dichloropropane	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Tetrachloroethene (PCE)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Dibromochloromethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dibromoethane (EDB)	ND	0.00607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,1,2-Tetrachloroethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Ethylbenzene	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
m,p-Xylene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
o-Xylene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Styrene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Isopropylbenzene	ND	0.0971		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromoform	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:30:00 PM

Project: Bethel Junction

Lab ID: 1607173-006

Matrix: Soil

Client Sample ID: SB-19-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
n-Propylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromobenzene	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3,5-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
2-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
4-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
tert-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,3-Trichloropropane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,4-Trichlorobenzene	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
sec-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
4-Isopropyltoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
n-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dibromo-3-chloropropane	ND	0.607	Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Hexachlorobutadiene	ND	0.121		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Naphthalene	ND	0.0364	Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Surr: Dibromofluoromethane	96.2	56.5-129		%Rec	1	7/22/2016 1:41:40 AM
Surr: Toluene-d8	98.0	64.3-131		%Rec	1	7/22/2016 1:41:40 AM
Surr: 1-Bromo-4-fluorobenzene	96.3	63.1-141		%Rec	1	7/22/2016 1:41:40 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	5.14	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-007

Matrix: Soil

Client Sample ID: SB-18-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloromethane	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Vinyl chloride	ND	0.00197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromomethane	ND	0.0889		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloroethane	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloroethene	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Methylene chloride	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
trans-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0494	Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloroethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
2,2-Dichloropropane	ND	0.0494	Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
cis-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloroform	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Carbon tetrachloride	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichloroethane (EDC)	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Benzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Trichloroethene (TCE)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichloropropane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromodichloromethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Dibromomethane	ND	0.0395		mg/Kg-dry	1	7/22/2016 2:10:55 AM
cis-1,3-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Toluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
trans-1,3-Dichloropropylene	ND	0.0296	Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,2-Trichloroethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3-Dichloropropane	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Tetrachloroethene (PCE)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Dibromochloromethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dibromoethane (EDB)	ND	0.00494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Ethylbenzene	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
m,p-Xylene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
o-Xylene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Styrene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Isopropylbenzene	ND	0.0790		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromoform	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-007

Matrix: Soil

Client Sample ID: SB-18-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
n-Propylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromobenzene	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3,5-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
2-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
4-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
tert-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,3-Trichloropropane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,4-Trichlorobenzene	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
sec-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
4-Isopropyltoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,4-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
n-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dibromo-3-chloropropane	ND	0.494	Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,4-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Hexachlorobutadiene	ND	0.0987		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Naphthalene	ND	0.0296	Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,3-Trichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Surr: Dibromofluoromethane	97.6	56.5-129		%Rec	1	7/22/2016 2:10:55 AM
Surr: Toluene-d8	96.1	64.3-131		%Rec	1	7/22/2016 2:10:55 AM
Surr: 1-Bromo-4-fluorobenzene	96.1	63.1-141		%Rec	1	7/22/2016 2:10:55 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	11.5	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-008

Matrix: Soil

Client Sample ID: SB-18-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloromethane	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Vinyl chloride	ND	0.00229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromomethane	ND	0.103		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloroethane	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloroethene	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Methylene chloride	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
trans-1,2-Dichloroethene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0572	Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloroethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
2,2-Dichloropropane	ND	0.0572	Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
cis-1,2-Dichloroethene	0.162	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloroform	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Carbon tetrachloride	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichloroethane (EDC)	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Benzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Trichloroethene (TCE)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichloropropane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromodichloromethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Dibromomethane	ND	0.0457		mg/Kg-dry	1	7/22/2016 2:40:07 AM
cis-1,3-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Toluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
trans-1,3-Dichloropropylene	ND	0.0343	Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,2-Trichloroethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3-Dichloropropane	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Tetrachloroethene (PCE)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Dibromochloromethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dibromoethane (EDB)	ND	0.00572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Ethylbenzene	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
m,p-Xylene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
o-Xylene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Styrene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Isopropylbenzene	ND	0.0915		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromoform	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-008

Matrix: Soil

Client Sample ID: SB-18-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
n-Propylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromobenzene	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3,5-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
2-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
4-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
tert-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,3-Trichloropropane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,4-Trichlorobenzene	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,4-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
n-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dibromo-3-chloropropane	ND	0.572	Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,4-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Hexachlorobutadiene	ND	0.114		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Naphthalene	ND	0.0343	Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,3-Trichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Surr: Dibromofluoromethane	96.2	56.5-129		%Rec	1	7/22/2016 2:40:07 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 2:40:07 AM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%Rec	1	7/22/2016 2:40:07 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	7.66	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-009

Matrix: Soil

Client Sample ID: SB-18-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloromethane	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Vinyl chloride	ND	0.00257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromomethane	ND	0.116		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Trichlorofluoromethane (CFC-11)	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloroethane	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloroethene	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Methylene chloride	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
trans-1,2-Dichloroethene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Methyl tert-butyl ether (MTBE)	ND	0.0642	Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloroethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
2,2-Dichloropropane	ND	0.0642	Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
cis-1,2-Dichloroethene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloroform	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,1-Trichloroethane (TCA)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloropropene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Carbon tetrachloride	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichloroethane (EDC)	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Benzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Trichloroethene (TCE)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichloropropane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromodichloromethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Dibromomethane	ND	0.0514		mg/Kg-dry	1	7/22/2016 3:09:11 AM
cis-1,3-Dichloropropene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Toluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
trans-1,3-Dichloropropylene	ND	0.0385	Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,2-Trichloroethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3-Dichloropropane	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Tetrachloroethene (PCE)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Dibromochloromethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dibromoethane (EDB)	ND	0.00642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,1,2-Tetrachloroethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Ethylbenzene	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
m,p-Xylene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
o-Xylene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Styrene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Isopropylbenzene	ND	0.103		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromoform	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-009

Matrix: Soil

Client Sample ID: SB-18-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
n-Propylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromobenzene	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3,5-Trimethylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
2-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
4-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
tert-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,3-Trichloropropane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,4-Trichlorobenzene	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
sec-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
4-Isopropyltoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,4-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
n-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dibromo-3-chloropropane	ND	0.642	Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,4-Trimethylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Hexachlorobutadiene	ND	0.128		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Naphthalene	ND	0.0385	Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,3-Trichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Surr: Dibromofluoromethane	97.2	56.5-129		%Rec	1	7/22/2016 3:09:11 AM
Surr: Toluene-d8	96.1	64.3-131		%Rec	1	7/22/2016 3:09:11 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 3:09:11 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	24.0	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-010

Matrix: Soil

Client Sample ID: SB-21-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloromethane	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Vinyl chloride	ND	0.00208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromomethane	ND	0.0936		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloroethane	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloroethene	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Methylene chloride	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
trans-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0520	Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloroethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
2,2-Dichloropropane	ND	0.0520	Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
cis-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloroform	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloropropene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Carbon tetrachloride	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichloroethane (EDC)	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Benzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Trichloroethene (TCE)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichloropropane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromodichloromethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Dibromomethane	ND	0.0416		mg/Kg-dry	1	7/22/2016 3:38:22 AM
cis-1,3-Dichloropropene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Toluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
trans-1,3-Dichloropropylene	ND	0.0312	Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,2-Trichloroethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3-Dichloropropane	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Tetrachloroethene (PCE)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Dibromochloromethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dibromoethane (EDB)	ND	0.00520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Ethylbenzene	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
m,p-Xylene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
o-Xylene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Styrene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Isopropylbenzene	ND	0.0832		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromoform	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-010

Matrix: Soil

Client Sample ID: SB-21-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
n-Propylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromobenzene	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3,5-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
2-Chlorotoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
4-Chlorotoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
tert-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,3-Trichloropropane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,4-Trichlorobenzene	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
sec-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
4-Isopropyltoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,4-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
n-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dibromo-3-chloropropane	ND	0.520	Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,4-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Hexachlorobutadiene	ND	0.104		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Naphthalene	ND	0.0312	Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,3-Trichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Surr: Dibromofluoromethane	95.8	56.5-129		%Rec	1	7/22/2016 3:38:22 AM
Surr: Toluene-d8	96.4	64.3-131		%Rec	1	7/22/2016 3:38:22 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 3:38:22 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.50	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:15:00 PM

Project: Bethel Junction

Lab ID: 1607173-011

Matrix: Soil

Client Sample ID: SB-21-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloromethane	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Vinyl chloride	ND	0.00227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromomethane	ND	0.102		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Trichlorofluoromethane (CFC-11)	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloroethane	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloroethene	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Methylene chloride	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
trans-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Methyl tert-butyl ether (MTBE)	ND	0.0566	Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloroethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
2,2-Dichloropropane	ND	0.0566	Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
cis-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloroform	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,1-Trichloroethane (TCA)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Carbon tetrachloride	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichloroethane (EDC)	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Benzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Trichloroethene (TCE)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichloropropane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromodichloromethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Dibromomethane	ND	0.0453		mg/Kg-dry	1	7/22/2016 4:07:35 AM
cis-1,3-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Toluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
trans-1,3-Dichloropropylene	ND	0.0340	Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,2-Trichloroethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3-Dichloropropane	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Tetrachloroethene (PCE)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Dibromochloromethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dibromoethane (EDB)	ND	0.00566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,1,2-Tetrachloroethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Ethylbenzene	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
m,p-Xylene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
o-Xylene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Styrene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Isopropylbenzene	ND	0.0906		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromoform	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:15:00 PM

Project: Bethel Junction

Lab ID: 1607173-011

Matrix: Soil

Client Sample ID: SB-21-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
n-Propylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromobenzene	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3,5-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
2-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
4-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
tert-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,3-Trichloropropane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,4-Trichlorobenzene	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
sec-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
4-Isopropyltoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,4-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
n-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dibromo-3-chloropropane	ND	0.566	Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,4-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Naphthalene	ND	0.0340	Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,3-Trichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Surr: Dibromofluoromethane	96.7	56.5-129		%Rec	1	7/22/2016 4:07:35 AM
Surr: Toluene-d8	96.3	64.3-131		%Rec	1	7/22/2016 4:07:35 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	63.1-141		%Rec	1	7/22/2016 4:07:35 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.74	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-012

Matrix: Soil

Client Sample ID: SB-21-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloromethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Vinyl chloride	ND	0.00282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromomethane	ND	0.127		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Trichlorofluoromethane (CFC-11)	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloroethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloroethene	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Methylene chloride	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
trans-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Methyl tert-butyl ether (MTBE)	ND	0.0705	Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
2,2-Dichloropropane	ND	0.0705	Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
cis-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloroform	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,1-Trichloroethane (TCA)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloropropene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Carbon tetrachloride	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichloroethane (EDC)	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Benzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Trichloroethene (TCE)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichloropropane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromodichloromethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Dibromomethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 4:36:45 AM
cis-1,3-Dichloropropene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Toluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
trans-1,3-Dichloropropylene	ND	0.0423	Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,2-Trichloroethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3-Dichloropropane	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Tetrachloroethene (PCE)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Dibromochloromethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dibromoethane (EDB)	ND	0.00705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,1,2-Tetrachloroethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Ethylbenzene	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
m,p-Xylene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
o-Xylene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Styrene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Isopropylbenzene	ND	0.113		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromoform	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-012

Matrix: Soil

Client Sample ID: SB-21-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
n-Propylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromobenzene	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3,5-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
2-Chlorotoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
4-Chlorotoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
tert-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,3-Trichloropropane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,4-Trichlorobenzene	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
sec-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
4-Isopropyltoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,4-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
n-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dibromo-3-chloropropane	ND	0.705	Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,4-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Hexachlorobutadiene	ND	0.141		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Naphthalene	ND	0.0423	Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,3-Trichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Surr: Dibromofluoromethane	95.2	56.5-129		%Rec	1	7/22/2016 4:36:45 AM
Surr: Toluene-d8	96.3	64.3-131		%Rec	1	7/22/2016 4:36:45 AM
Surr: 1-Bromo-4-fluorobenzene	95.4	63.1-141		%Rec	1	7/22/2016 4:36:45 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	3.96	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-013

Matrix: Soil

Client Sample ID: SB-23-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloromethane	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Vinyl chloride	ND	0.00237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromomethane	ND	0.107		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloroethane	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloroethene	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Methylene chloride	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
trans-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0592	Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloroethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
2,2-Dichloropropane	ND	0.0592	Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
cis-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloroform	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloropropene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Carbon tetrachloride	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichloroethane (EDC)	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Benzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Trichloroethene (TCE)	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichloropropane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromodichloromethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Dibromomethane	ND	0.0473		mg/Kg-dry	1	7/22/2016 5:05:56 AM
cis-1,3-Dichloropropene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Toluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
trans-1,3-Dichloropropylene	ND	0.0355	Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,2-Trichloroethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3-Dichloropropane	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Tetrachloroethene (PCE)	0.0432	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Dibromochloromethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dibromoethane (EDB)	ND	0.00592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Ethylbenzene	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
m,p-Xylene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
o-Xylene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Styrene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Isopropylbenzene	ND	0.0947		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromoform	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-013

Matrix: Soil

Client Sample ID: SB-23-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
n-Propylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromobenzene	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3,5-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
2-Chlorotoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
4-Chlorotoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
tert-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,3-Trichloropropane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,4-Trichlorobenzene	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
sec-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
4-Isopropyltoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,4-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
n-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dibromo-3-chloropropane	ND	0.592	Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,4-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Hexachlorobutadiene	ND	0.118		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Naphthalene	ND	0.0355	Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,3-Trichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Surr: Dibromofluoromethane	94.7	56.5-129		%Rec	1	7/22/2016 5:05:56 AM
Surr: Toluene-d8	96.9	64.3-131		%Rec	1	7/22/2016 5:05:56 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%Rec	1	7/22/2016 5:05:56 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.20	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-014

Matrix: Soil

Client Sample ID: SB-23-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloromethane	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Vinyl chloride	ND	0.00240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromomethane	ND	0.108		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloroethane	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloroethene	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Methylene chloride	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
trans-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0600	Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloroethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
2,2-Dichloropropane	ND	0.0600	Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
cis-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloroform	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloropropene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Carbon tetrachloride	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichloroethane (EDC)	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Benzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Trichloroethene (TCE)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichloropropane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromodichloromethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Dibromomethane	ND	0.0480		mg/Kg-dry	1	7/22/2016 5:35:07 AM
cis-1,3-Dichloropropene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Toluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
trans-1,3-Dichloropropylene	ND	0.0360	Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,2-Trichloroethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3-Dichloropropane	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Tetrachloroethene (PCE)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Dibromochloromethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dibromoethane (EDB)	ND	0.00600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Ethylbenzene	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
m,p-Xylene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
o-Xylene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Styrene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Isopropylbenzene	ND	0.0960		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromoform	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-014

Matrix: Soil

Client Sample ID: SB-23-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
n-Propylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromobenzene	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3,5-Trimethylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
2-Chlorotoluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
4-Chlorotoluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
tert-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,3-Trichloropropane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,4-Trichlorobenzene	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
sec-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
4-Isopropyltoluene	0.0888	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,4-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
n-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dibromo-3-chloropropane	ND	0.600	Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,4-Trimethylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Hexachlorobutadiene	ND	0.120		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Naphthalene	ND	0.0360	Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,3-Trichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Surr: Dibromofluoromethane	95.1	56.5-129		%Rec	1	7/22/2016 5:35:07 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 5:35:07 AM
Surr: 1-Bromo-4-fluorobenzene	98.4	63.1-141		%Rec	1	7/22/2016 5:35:07 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	13.5	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:15:00 AM

Project: Bethel Junction

Lab ID: 1607173-015

Matrix: Soil

Client Sample ID: SB-23-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloromethane	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Vinyl chloride	ND	0.00200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromomethane	ND	0.0900		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Trichlorofluoromethane (CFC-11)	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloroethane	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloroethene	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Methylene chloride	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Methyl tert-butyl ether (MTBE)	ND	0.0500	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloroethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
2,2-Dichloropropane	ND	0.0500	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloroform	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Benzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Trichloroethene (TCE)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichloropropane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromodichloromethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Dibromomethane	ND	0.0400		mg/Kg-dry	1	7/22/2016 6:04:14 AM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Toluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
trans-1,3-Dichloropropylene	ND	0.0300	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3-Dichloropropane	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
m,p-Xylene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
o-Xylene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Styrene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Isopropylbenzene	ND	0.0800		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromoform	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:15:00 AM

Project: Bethel Junction

Lab ID: 1607173-015

Matrix: Soil

Client Sample ID: SB-23-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
n-Propylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromobenzene	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,4-Trichlorobenzene	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
sec-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
4-Isopropyltoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dibromo-3-chloropropane	ND	0.500	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Hexachlorobutadiene	ND	0.100		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Naphthalene	ND	0.0300	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Surr: Dibromofluoromethane	95.2	56.5-129		%Rec	1	7/22/2016 6:04:14 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 6:04:14 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	63.1-141		%Rec	1	7/22/2016 6:04:14 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	17.0	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-016

Matrix: Water

Client Sample ID: SB-23-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Vinyl chloride	ND	0.200		µg/L	1	7/21/2016 10:21:51 PM
Bromomethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Methylene chloride	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/21/2016 10:21:51 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloroform	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Benzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Dibromomethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Toluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Dibromochloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/21/2016 10:21:51 PM
Chlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Ethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
m,p-Xylene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
o-Xylene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Styrene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromoform	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-016

Matrix: Water

Client Sample ID: SB-23-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/21/2016 10:21:51 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/21/2016 10:21:51 PM
Naphthalene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/21/2016 10:21:51 PM
Surr: Dibromofluoromethane	98.0	45.4-152		%Rec	1	7/21/2016 10:21:51 PM
Surr: Toluene-d8	95.9	40.1-139		%Rec	1	7/21/2016 10:21:51 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	64.2-128		%Rec	1	7/21/2016 10:21:51 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:50:00 AM

Project: Bethel Junction

Lab ID: 1607173-017

Matrix: Soil

Client Sample ID: SB-22-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloromethane	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Vinyl chloride	ND	0.00201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromomethane	ND	0.0903		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Trichlorofluoromethane (CFC-11)	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloroethane	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloroethene	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Methylene chloride	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
trans-1,2-Dichloroethene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.0501	Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloroethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
2,2-Dichloropropane	ND	0.0501	Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
cis-1,2-Dichloroethene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloroform	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,1-Trichloroethane (TCA)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloropropene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Carbon tetrachloride	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichloroethane (EDC)	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Benzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Trichloroethene (TCE)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichloropropane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromodichloromethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Dibromomethane	ND	0.0401		mg/Kg-dry	1	7/22/2016 6:33:25 AM
cis-1,3-Dichloropropene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Toluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
trans-1,3-Dichloropropylene	ND	0.0301	Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,2-Trichloroethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3-Dichloropropane	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Tetrachloroethene (PCE)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Dibromochloromethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dibromoethane (EDB)	ND	0.00501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,1,2-Tetrachloroethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Ethylbenzene	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
m,p-Xylene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
o-Xylene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Styrene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Isopropylbenzene	ND	0.0802		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromoform	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:50:00 AM

Project: Bethel Junction

Lab ID: 1607173-017

Matrix: Soil

Client Sample ID: SB-22-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
n-Propylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromobenzene	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3,5-Trimethylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
2-Chlorotoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
4-Chlorotoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
tert-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,3-Trichloropropane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,4-Trichlorobenzene	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
sec-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
4-Isopropyltoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,4-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
n-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dibromo-3-chloropropane	ND	0.501	Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,4-Trimethylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Hexachlorobutadiene	ND	0.100		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Naphthalene	ND	0.0301	Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,3-Trichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Surr: Dibromofluoromethane	95.6	56.5-129		%Rec	1	7/22/2016 6:33:25 AM
Surr: Toluene-d8	96.7	64.3-131		%Rec	1	7/22/2016 6:33:25 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%Rec	1	7/22/2016 6:33:25 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	11.4	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-018

Matrix: Soil

Client Sample ID: SB-22-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloromethane	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Vinyl chloride	ND	0.00272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromomethane	ND	0.122		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloroethane	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloroethene	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Methylene chloride	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
trans-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0680	Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloroethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
2,2-Dichloropropane	ND	0.0680	Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
cis-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloroform	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloropropene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Carbon tetrachloride	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichloroethane (EDC)	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Benzene	0.0693	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Trichloroethene (TCE)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichloropropane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromodichloromethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Dibromomethane	ND	0.0544		mg/Kg-dry	1	7/22/2016 8:29:56 AM
cis-1,3-Dichloropropene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Toluene	0.198	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
trans-1,3-Dichloropropylene	ND	0.0408	Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,2-Trichloroethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3-Dichloropropane	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Tetrachloroethene (PCE)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Dibromochloromethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dibromoethane (EDB)	ND	0.00680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Ethylbenzene	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
m,p-Xylene	0.0455	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
o-Xylene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Styrene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Isopropylbenzene	ND	0.109		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromoform	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-018

Matrix: Soil

Client Sample ID: SB-22-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
n-Propylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromobenzene	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3,5-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
2-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
4-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
tert-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,3-Trichloropropane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,4-Trichlorobenzene	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
sec-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
4-Isopropyltoluene	1.55	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,4-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
n-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dibromo-3-chloropropane	ND	0.680	Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,4-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Hexachlorobutadiene	ND	0.136		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Naphthalene	ND	0.0408	Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,3-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Surr: Dibromofluoromethane	99.2	56.5-129		%Rec	1	7/22/2016 8:29:56 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 8:29:56 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%Rec	1	7/22/2016 8:29:56 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	12.9	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-019

Matrix: Soil

Client Sample ID: SB-22-9.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloromethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Vinyl chloride	ND	0.00188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromomethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Trichlorofluoromethane (CFC-11)	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloroethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloroethene	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Methylene chloride	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
trans-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Methyl tert-butyl ether (MTBE)	ND	0.0470	Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloroethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
2,2-Dichloropropane	ND	0.0470	Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
cis-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloroform	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,1-Trichloroethane (TCA)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloropropene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Carbon tetrachloride	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichloroethane (EDC)	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Benzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Trichloroethene (TCE)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichloropropane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromodichloromethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Dibromomethane	ND	0.0376		mg/Kg-dry	1	7/22/2016 8:59:01 AM
cis-1,3-Dichloropropene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Toluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
trans-1,3-Dichloropropylene	ND	0.0282	Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,2-Trichloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3-Dichloropropane	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Tetrachloroethene (PCE)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Dibromochloromethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dibromoethane (EDB)	ND	0.00470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,1,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Ethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
m,p-Xylene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
o-Xylene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Styrene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Isopropylbenzene	ND	0.0752		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromoform	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-019

Matrix: Soil

Client Sample ID: SB-22-9.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
n-Propylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3,5-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
2-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
4-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
tert-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,3-Trichloropropane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,4-Trichlorobenzene	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
sec-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
4-Isopropyltoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
n-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dibromo-3-chloropropane	ND	0.470	Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Hexachlorobutadiene	ND	0.0941		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Naphthalene	ND	0.0282	Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Surr: Dibromofluoromethane	98.0	56.5-129		%Rec	1	7/22/2016 8:59:01 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 8:59:01 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%Rec	1	7/22/2016 8:59:01 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	13.3	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-020

Matrix: Water

Client Sample ID: SB-22-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Vinyl chloride	ND	0.200		µg/L	1	7/21/2016 10:52:23 PM
Bromomethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Methylene chloride	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	7/21/2016 10:52:23 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloroform	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Benzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Dibromomethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Toluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Dibromochloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/21/2016 10:52:23 PM
Chlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Ethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
m,p-Xylene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
o-Xylene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Styrene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromoform	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-020

Matrix: Water

Client Sample ID: SB-22-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/21/2016 10:52:23 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/21/2016 10:52:23 PM
Naphthalene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/21/2016 10:52:23 PM
Surr: Dibromofluoromethane	96.4	45.4-152		%Rec	1	7/21/2016 10:52:23 PM
Surr: Toluene-d8	94.3	40.1-139		%Rec	1	7/21/2016 10:52:23 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	64.2-128		%Rec	1	7/21/2016 10:52:23 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14317	SampType:	LCS	Units:	mg/Kg	Prep Date:	7/21/2016	RunNo:	30700		
Client ID:	LCSS	Batch ID:	14317	Analysis Date:	7/21/2016	SeqNo:	579692				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.34	0.0600	1.000	0	134	34.5	141				
Chloromethane	1.01	0.0600	1.000	0	101	38.8	132				
Vinyl chloride	1.06	0.00200	1.000	0	106	44	142				
Bromomethane	1.22	0.0900	1.000	0	122	40.9	157				
Trichlorofluoromethane (CFC-11)	1.38	0.0500	1.000	0	138	42.9	147				
Chloroethane	1.12	0.0600	1.000	0	112	37.1	144				
1,1-Dichloroethene	1.04	0.0500	1.000	0	104	49.7	142				
Methylene chloride	1.02	0.0200	1.000	0	102	46.3	140				
trans-1,2-Dichloroethene	0.936	0.0200	1.000	0	93.6	68	130				
Methyl tert-butyl ether (MTBE)	0.810	0.0500	1.000	0	81.0	59.1	138				Q
1,1-Dichloroethane	0.975	0.0200	1.000	0	97.5	61.9	137				
2,2-Dichloropropane	0.805	0.0500	1.000	0	80.5	28.1	149				Q
cis-1,2-Dichloroethene	0.952	0.0200	1.000	0	95.2	71.3	135				
Chloroform	0.957	0.0200	1.000	0	95.7	67.5	129				
1,1,1-Trichloroethane (TCA)	0.907	0.0200	1.000	0	90.7	69	132				
1,1-Dichloropropene	0.980	0.0200	1.000	0	98.0	72.7	131				
Carbon tetrachloride	1.11	0.0200	1.000	0	111	63.4	137				
1,2-Dichloroethane (EDC)	0.894	0.0300	1.000	0	89.4	61.9	136				
Benzene	0.952	0.0200	1.000	0	95.2	64.3	133				
Trichloroethene (TCE)	0.948	0.0200	1.000	0	94.8	65.5	137				
1,2-Dichloropropane	0.936	0.0200	1.000	0	93.6	63.2	142				
Bromodichloromethane	0.983	0.0200	1.000	0	98.3	73.2	131				
Dibromomethane	0.942	0.0400	1.000	0	94.2	70	130				
cis-1,3-Dichloropropene	0.896	0.0200	1.000	0	89.6	59.1	143				
Toluene	0.964	0.0200	1.000	0	96.4	67.3	138				
trans-1,3-Dichloropropylene	0.854	0.0300	1.000	0	85.4	49.2	149				Q
1,1,2-Trichloroethane	0.930	0.0300	1.000	0	93.0	74.5	129				
1,3-Dichloropropane	0.912	0.0500	1.000	0	91.2	70	130				
Tetrachloroethene (PCE)	0.985	0.0200	1.000	0	98.5	52.7	150				
Dibromochloromethane	0.967	0.0300	1.000	0	96.7	70.6	144				
1,2-Dibromoethane (EDB)	0.914	0.00500	1.000	0	91.4	70	130				

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14317	SampType:	LCS	Units:	mg/Kg	Prep Date:	7/21/2016	RunNo:	30700		
Client ID:	LCSS	Batch ID:	14317	Analysis Date:	7/21/2016	SeqNo:	579692				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.946	0.0200	1.000	0	94.6	76.1	123				
1,1,1,2-Tetrachloroethane	0.931	0.0300	1.000	0	93.1	65.9	141				
Ethylbenzene	0.952	0.0300	1.000	0	95.2	74	129				
m,p-Xylene	1.93	0.0200	2.000	0	96.3	70	124				
o-Xylene	0.962	0.0200	1.000	0	96.2	72.7	124				
Styrene	0.959	0.0200	1.000	0	95.9	76.8	130				
Isopropylbenzene	0.978	0.0800	1.000	0	97.8	70	130				
Bromoform	0.952	0.0200	1.000	0	95.2	67	154				
1,1,2,2-Tetrachloroethane	0.882	0.0200	1.000	0	88.2	60	130				
n-Propylbenzene	0.995	0.0200	1.000	0	99.5	74.8	125				
Bromobenzene	0.950	0.0300	1.000	0	95.0	49.2	144				
1,3,5-Trimethylbenzene	0.981	0.0200	1.000	0	98.1	74.6	123				
2-Chlorotoluene	0.968	0.0200	1.000	0	96.8	76.7	129				
4-Chlorotoluene	0.974	0.0200	1.000	0	97.4	77.5	125				
tert-Butylbenzene	0.998	0.0200	1.000	0	99.8	66.2	130				
1,2,3-Trichloropropane	0.852	0.0200	1.000	0	85.2	67.9	136				
1,2,4-Trichlorobenzene	0.915	0.0500	1.000	0	91.5	62.6	143				
sec-Butylbenzene	1.01	0.0200	1.000	0	101	75.6	133				
4-Isopropyltoluene	0.996	0.0200	1.000	0	99.6	76.8	131				
1,3-Dichlorobenzene	0.989	0.0200	1.000	0	98.9	72.8	128				
1,4-Dichlorobenzene	0.982	0.0200	1.000	0	98.2	72.6	126				
n-Butylbenzene	1.05	0.0200	1.000	0	105	65.3	136				
1,2-Dichlorobenzene	0.954	0.0200	1.000	0	95.4	72.8	126				
1,2-Dibromo-3-chloropropane	0.858	0.500	1.000	0	85.8	61.2	139				Q
1,2,4-Trimethylbenzene	0.988	0.0200	1.000	0	98.8	77.5	129				
Hexachlorobutadiene	1.02	0.100	1.000	0	102	42	151				
Naphthalene	0.862	0.0300	1.000	0	86.2	62.3	134				Q
1,2,3-Trichlorobenzene	0.918	0.0200	1.000	0	91.8	54.8	143				
Surr: Dibromofluoromethane	1.34		1.250		107	56.5	129				
Surr: Toluene-d8	1.26		1.250		101	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.29		1.250		104	63.1	141				

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14317	SampType:	LCS	Units:	mg/Kg	Prep Date:	7/21/2016	RunNo:	30700				
Client ID:	LCSS	Batch ID:	14317			Analysis Date:	7/21/2016	SeqNo:	579692				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	MB-14317	SampType:	MBLK	Units:	mg/Kg	Prep Date:	7/21/2016	RunNo:	30700				
Client ID:	MBLKS	Batch ID:	14317			Analysis Date:	7/21/2016	SeqNo:	579682				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0600											
Chloromethane	ND	0.0600											
Vinyl chloride	ND	0.00200											
Bromomethane	ND	0.0900											
Trichlorofluoromethane (CFC-11)	ND	0.0500											
Chloroethane	ND	0.0600											
1,1-Dichloroethene	ND	0.0500											
Methylene chloride	ND	0.0200											
trans-1,2-Dichloroethene	ND	0.0200											
Methyl tert-butyl ether (MTBE)	ND	0.0500											Q
1,1-Dichloroethane	ND	0.0200											
2,2-Dichloropropane	ND	0.0500											Q
cis-1,2-Dichloroethene	ND	0.0200											
Chloroform	ND	0.0200											
1,1,1-Trichloroethane (TCA)	ND	0.0200											
1,1-Dichloropropene	ND	0.0200											
Carbon tetrachloride	ND	0.0200											
1,2-Dichloroethane (EDC)	ND	0.0300											
Benzene	ND	0.0200											
Trichloroethene (TCE)	ND	0.0200											
1,2-Dichloropropane	ND	0.0200											
Bromodichloromethane	ND	0.0200											
Dibromomethane	ND	0.0400											
cis-1,3-Dichloropropene	ND	0.0200											

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-14317	SampType: MBLK	Units: mg/Kg	Prep Date: 7/21/2016	RunNo: 30700
Client ID: MBLKS	Batch ID: 14317		Analysis Date: 7/21/2016	SeqNo: 579682

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0300									Q
1,1,2-Trichloroethane	ND	0.0300									
1,3-Dichloropropane	ND	0.0500									
Tetrachloroethene (PCE)	ND	0.0200									
Dibromochloromethane	ND	0.0300									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0300									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Styrene	ND	0.0200									
Isopropylbenzene	ND	0.0800									
Bromoform	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0200									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0200									
2-Chlorotoluene	ND	0.0200									
4-Chlorotoluene	ND	0.0200									
tert-Butylbenzene	ND	0.0200									
1,2,3-Trichloropropane	ND	0.0200									
1,2,4-Trichlorobenzene	ND	0.0500									
sec-Butylbenzene	ND	0.0200									
4-Isopropyltoluene	ND	0.0200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									Q

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-14317	SampType: MBLK	Units: mg/Kg	Prep Date: 7/21/2016	RunNo: 30700
Client ID: MBLKS	Batch ID: 14317		Analysis Date: 7/21/2016	SeqNo: 579682

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0300									Q
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.09		1.250		87.3	56.5	129				
Surr: Toluene-d8	1.18		1.250		94.2	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.14		1.250		91.1	63.1	141				

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID 1607173-019BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/21/2016	RunNo: 30700
Client ID: SB-22-9.5	Batch ID: 14317		Analysis Date: 7/22/2016	SeqNo: 579719

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.50	0.0564	0.9405	0	159	43.5	121				S
Chloromethane	1.07	0.0564	0.9405	0	114	45	130				
Vinyl chloride	1.09	0.00188	0.9405	0	116	51.2	146				
Bromomethane	1.17	0.0846	0.9405	0	125	21.3	120				S
Trichlorofluoromethane (CFC-11)	2.02	0.0470	0.9405	0	215	35	131				S
Chloroethane	1.16	0.0564	0.9405	0	123	43.8	117				S
1,1-Dichloroethene	0.988	0.0470	0.9405	0	105	61.9	141				
Methylene chloride	0.971	0.0188	0.9405	0	103	54.7	142				
trans-1,2-Dichloroethene	0.866	0.0188	0.9405	0	92.1	52	136				
Methyl tert-butyl ether (MTBE)	0.755	0.0470	0.9405	0	80.3	54.4	132				Q
1,1-Dichloroethane	0.920	0.0188	0.9405	0	97.8	51.8	141				
2,2-Dichloropropane	0.502	0.0470	0.9405	0	53.4	36	123				Q
cis-1,2-Dichloroethene	0.873	0.0188	0.9405	0	92.8	58.6	136				
Chloroform	0.884	0.0188	0.9405	0	94.0	53.2	129				
1,1,1-Trichloroethane (TCA)	0.830	0.0188	0.9405	0	88.2	58.3	145				
1,1-Dichloropropene	0.888	0.0188	0.9405	0	94.5	55.1	138				
Carbon tetrachloride	0.966	0.0188	0.9405	0	103	53.3	144				

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1607173-019BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/21/2016	RunNo: 30700
Client ID: SB-22-9.5	Batch ID: 14317		Analysis Date: 7/22/2016	SeqNo: 579719

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	0.849	0.0282	0.9405	0	90.3	51.3	139				
Benzene	0.878	0.0188	0.9405	0	93.4	63.5	133				
Trichloroethene (TCE)	0.871	0.0188	0.9405	0	92.6	68.6	132				
1,2-Dichloropropane	0.869	0.0188	0.9405	0	92.4	59	136				
Bromodichloromethane	0.878	0.0188	0.9405	0	93.3	50.7	141				
Dibromomethane	0.863	0.0376	0.9405	0	91.8	50.6	137				
cis-1,3-Dichloropropene	0.763	0.0188	0.9405	0	81.1	50.4	138				
Toluene	0.915	0.0188	0.9405	0	97.3	63.4	132				
trans-1,3-Dichloropropylene	0.716	0.0282	0.9405	0	76.2	44.1	147				Q
1,1,2-Trichloroethane	0.885	0.0282	0.9405	0	94.1	51.6	137				
1,3-Dichloropropane	0.867	0.0470	0.9405	0	92.2	53.1	134				
Tetrachloroethene (PCE)	0.922	0.0188	0.9405	0	98.1	35.6	158				
Dibromochloromethane	0.884	0.0282	0.9405	0	94.0	55.3	140				
1,2-Dibromoethane (EDB)	0.871	0.00470	0.9405	0	92.6	50.4	136				
Chlorobenzene	0.881	0.0188	0.9405	0	93.7	60	133				
1,1,1,2-Tetrachloroethane	0.855	0.0282	0.9405	0	91.0	53.1	142				
Ethylbenzene	0.879	0.0282	0.9405	0	93.5	54.5	134				
m,p-Xylene	1.79	0.0188	1.881	0	95.1	53.1	132				
o-Xylene	0.896	0.0188	0.9405	0	95.3	53.3	139				
Styrene	0.909	0.0188	0.9405	0	96.7	51.1	132				
Isopropylbenzene	0.913	0.0752	0.9405	0	97.1	58.9	138				
Bromoform	0.896	0.0188	0.9405	0	95.3	57.9	130				
1,1,1,2-Tetrachloroethane	0.823	0.0188	0.9405	0	87.6	51.9	131				
n-Propylbenzene	0.946	0.0188	0.9405	0	101	53.6	140				
Bromobenzene	0.899	0.0282	0.9405	0	95.6	54.2	140				
1,3,5-Trimethylbenzene	0.934	0.0188	0.9405	0	99.3	51.8	136				
2-Chlorotoluene	0.925	0.0188	0.9405	0	98.4	51.6	136				
4-Chlorotoluene	0.928	0.0188	0.9405	0	98.7	50.1	139				
tert-Butylbenzene	0.953	0.0188	0.9405	0	101	50.5	135				
1,2,3-Trichloropropane	0.821	0.0188	0.9405	0	87.3	50.5	131				
1,2,4-Trichlorobenzene	0.814	0.0470	0.9405	0	86.5	50.8	130				

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID 1607173-019BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 7/21/2016	RunNo: 30700							
Client ID: SB-22-9.5	Batch ID: 14317		Analysis Date: 7/22/2016	SeqNo: 579719							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

sec-Butylbenzene	0.956	0.0188	0.9405	0	102	52.6	141				
4-Isopropyltoluene	0.944	0.0188	0.9405	0	100	52.9	134				
1,3-Dichlorobenzene	0.909	0.0188	0.9405	0	96.7	52.6	131				
1,4-Dichlorobenzene	0.914	0.0188	0.9405	0	97.2	52.9	129				
n-Butylbenzene	0.936	0.0188	0.9405	0	99.5	52.6	130				
1,2-Dichlorobenzene	0.878	0.0188	0.9405	0	93.3	55.8	129				
1,2-Dibromo-3-chloropropane	0.783	0.470	0.9405	0	83.2	40.5	131				Q
1,2,4-Trimethylbenzene	0.941	0.0188	0.9405	0	100	50.6	137				
Hexachlorobutadiene	0.896	0.0941	0.9405	0	95.3	40.6	158				
Naphthalene	0.743	0.0282	0.9405	0	79.0	52.3	124				Q
1,2,3-Trichlorobenzene	0.808	0.0188	0.9405	0	86.0	54.4	124				
Surr: Dibromofluoromethane	1.27		1.176		108	56.5	129				
Surr: Toluene-d8	1.22		1.176		104	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.176		107	63.1	141				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID 1607173-019BMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 7/21/2016	RunNo: 30700							
Client ID: SB-22-9.5	Batch ID: 14317		Analysis Date: 7/22/2016	SeqNo: 579720							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	1.43	0.0564	0.9405	0	152	43.5	121	1.499	4.98	30	S
Chloromethane	1.06	0.0564	0.9405	0	113	45	130	1.073	1.10	30	
Vinyl chloride	1.06	0.00188	0.9405	0	113	51.2	146	1.086	2.50	30	
Bromomethane	1.20	0.0846	0.9405	0	128	21.3	120	1.171	2.62	30	S
Trichlorofluoromethane (CFC-11)	2.03	0.0470	0.9405	0	216	35	131	2.024	0.394	30	S
Chloroethane	1.15	0.0564	0.9405	0	122	43.8	117	1.157	0.857	30	S
1,1-Dichloroethene	0.996	0.0470	0.9405	0	106	61.9	141	0.9880	0.759	30	
Methylene chloride	0.962	0.0188	0.9405	0	102	54.7	142	0.9706	0.876	30	
trans-1,2-Dichloroethene	0.868	0.0188	0.9405	0	92.3	52	136	0.8662	0.163	30	

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1607173-019BMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 7/21/2016	RunNo: 30700
Client ID: SB-22-9.5	Batch ID: 14317		Analysis Date: 7/22/2016	SeqNo: 579720

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.780	0.0470	0.9405	0	82.9	54.4	132	0.7552	3.19	30	Q
1,1-Dichloroethane	0.919	0.0188	0.9405	0	97.8	51.8	141	0.9198	0.0511	30	
2,2-Dichloropropane	0.511	0.0470	0.9405	0	54.3	36	123	0.5018	1.76	30	Q
cis-1,2-Dichloroethene	0.869	0.0188	0.9405	0	92.4	58.6	136	0.8728	0.432	30	
Chloroform	0.884	0.0188	0.9405	0	94.0	53.2	129	0.8841	0	30	
1,1,1-Trichloroethane (TCA)	0.833	0.0188	0.9405	0	88.6	58.3	145	0.8295	0.452	30	
1,1-Dichloropropene	0.886	0.0188	0.9405	0	94.2	55.1	138	0.8883	0.318	30	
Carbon tetrachloride	0.949	0.0188	0.9405	0	101	53.3	144	0.9659	1.77	30	
1,2-Dichloroethane (EDC)	0.842	0.0282	0.9405	0	89.6	51.3	139	0.8493	0.834	30	
Benzene	0.874	0.0188	0.9405	0	92.9	63.5	133	0.8784	0.537	30	
Trichloroethene (TCE)	0.866	0.0188	0.9405	0	92.1	68.6	132	0.8709	0.596	30	
1,2-Dichloropropane	0.863	0.0188	0.9405	0	91.8	59	136	0.8686	0.597	30	
Bromodichloromethane	0.873	0.0188	0.9405	0	92.9	50.7	141	0.8775	0.483	30	
Dibromomethane	0.857	0.0376	0.9405	0	91.1	50.6	137	0.8634	0.765	30	
cis-1,3-Dichloropropene	0.770	0.0188	0.9405	0	81.9	50.4	138	0.7628	0.982	30	
Toluene	0.901	0.0188	0.9405	0	95.8	63.4	132	0.9147	1.50	30	
trans-1,3-Dichloropropylene	0.743	0.0282	0.9405	0	79.0	44.1	147	0.7162	3.67	30	Q
1,1,2-Trichloroethane	0.875	0.0282	0.9405	0	93.1	51.6	137	0.8846	1.07	30	
1,3-Dichloropropane	0.853	0.0470	0.9405	0	90.7	53.1	134	0.8667	1.59	30	
Tetrachloroethene (PCE)	0.908	0.0188	0.9405	0	96.6	35.6	158	0.9222	1.54	30	
Dibromochloromethane	0.885	0.0282	0.9405	0	94.1	55.3	140	0.8841	0.106	30	
1,2-Dibromoethane (EDB)	0.856	0.00470	0.9405	0	91.0	50.4	136	0.8709	1.74	30	
Chlorobenzene	0.883	0.0188	0.9405	0	93.9	60	133	0.8808	0.213	30	
1,1,1,2-Tetrachloroethane	0.859	0.0282	0.9405	0	91.4	53.1	142	0.8554	0.439	30	
Ethylbenzene	0.877	0.0282	0.9405	0	93.3	54.5	134	0.8789	0.214	30	
m,p-Xylene	1.77	0.0188	1.881	0	94.4	53.1	132	1.789	0.792	30	
o-Xylene	0.904	0.0188	0.9405	0	96.1	53.3	139	0.8963	0.836	30	
Styrene	0.903	0.0188	0.9405	0	96.0	51.1	132	0.9095	0.727	30	
Isopropylbenzene	0.916	0.0752	0.9405	0	97.4	58.9	138	0.9128	0.360	30	
Bromoform	0.896	0.0188	0.9405	0	95.3	57.9	130	0.8958	0.0525	30	
1,1,2,2-Tetrachloroethane	0.816	0.0188	0.9405	0	86.8	51.9	131	0.8234	0.918	30	

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1607173-019BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	7/21/2016	RunNo:	30700		
Client ID:	SB-22-9.5	Batch ID:	14317	Analysis Date:	7/22/2016	SeqNo:	579720				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	0.933	0.0188	0.9405	0	99.2	53.6	140	0.9457	1.40	30	
Bromobenzene	0.906	0.0282	0.9405	0	96.3	54.2	140	0.8987	0.782	30	
1,3,5-Trimethylbenzene	0.924	0.0188	0.9405	0	98.3	51.8	136	0.9339	1.06	30	
2-Chlorotoluene	0.925	0.0188	0.9405	0	98.4	51.6	136	0.9250	0.0508	30	
4-Chlorotoluene	0.930	0.0188	0.9405	0	98.9	50.1	139	0.9283	0.202	30	
tert-Butylbenzene	0.946	0.0188	0.9405	0	101	50.5	135	0.9532	0.792	30	
1,2,3-Trichloropropane	0.807	0.0188	0.9405	0	85.9	50.5	131	0.8211	1.67	30	
1,2,4-Trichlorobenzene	0.816	0.0470	0.9405	0	86.8	50.8	130	0.8136	0.346	30	
sec-Butylbenzene	0.951	0.0188	0.9405	0	101	52.6	141	0.9556	0.444	30	
4-Isopropyltoluene	0.924	0.0188	0.9405	0	98.2	52.9	134	0.9443	2.22	30	
1,3-Dichlorobenzene	0.914	0.0188	0.9405	0	97.2	52.6	131	0.9090	0.516	30	
1,4-Dichlorobenzene	0.906	0.0188	0.9405	0	96.4	52.9	129	0.9137	0.827	30	
n-Butylbenzene	0.925	0.0188	0.9405	0	98.4	52.6	130	0.9358	1.11	30	
1,2-Dichlorobenzene	0.887	0.0188	0.9405	0	94.4	55.8	129	0.8775	1.12	30	
1,2-Dibromo-3-chloropropane	0.770	0.470	0.9405	0	81.9	40.5	131	0.7825	1.64	30	Q
1,2,4-Trimethylbenzene	0.932	0.0188	0.9405	0	99.1	50.6	137	0.9415	1.00	30	
Hexachlorobutadiene	0.886	0.0941	0.9405	0	94.2	40.6	158	0.8958	1.16	30	
Naphthalene	0.745	0.0282	0.9405	0	79.2	52.3	124	0.7425	0.316	30	Q
1,2,3-Trichlorobenzene	0.811	0.0188	0.9405	0	86.2	54.4	124	0.8084	0.290	30	
Surr: Dibromofluoromethane	1.27		1.176		108	56.5	129		0		
Surr: Toluene-d8	1.20		1.176		102	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.25		1.176		106	63.1	141		0		

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14322	SampType:	LCS	Units:	µg/L	Prep Date:	7/21/2016	RunNo:	30727		
Client ID:	LCSW	Batch ID:	14322	Analysis Date:	7/21/2016	SeqNo:	579783				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	21.4	1.00	20.00	0	107	43	136				
Chloromethane	18.9	1.00	20.00	0	94.6	43.9	139				
Vinyl chloride	18.4	0.200	20.00	0	92.0	53.6	139				
Bromomethane	20.0	1.00	20.00	0	100	42.5	152				
Trichlorofluoromethane (CFC-11)	18.4	1.00	20.00	0	92.0	63.7	133				
Chloroethane	20.3	1.00	20.00	0	101	53	141				
1,1-Dichloroethene	18.8	1.00	20.00	0	93.8	65.6	136				
Methylene chloride	18.1	1.00	20.00	0	90.5	67.1	131				
trans-1,2-Dichloroethene	17.8	1.00	20.00	0	89.0	71.7	129				
Methyl tert-butyl ether (MTBE)	17.8	1.00	20.00	0	89.1	67.7	131				
1,1-Dichloroethane	18.2	1.00	20.00	0	90.8	67.9	134				
2,2-Dichloropropane	21.1	2.00	20.00	0	106	33.7	152				Q
cis-1,2-Dichloroethene	17.6	1.00	20.00	0	88.0	71.1	130				
Chloroform	18.7	1.00	20.00	0	93.7	66.3	131				
1,1,1-Trichloroethane (TCA)	18.4	1.00	20.00	0	92.2	71	131				
1,1-Dichloropropene	18.4	1.00	20.00	0	91.9	69.9	124				
Carbon tetrachloride	18.9	1.00	20.00	0	94.6	66.2	134				
1,2-Dichloroethane (EDC)	18.1	1.00	20.00	0	90.4	68.8	123				
Benzene	18.8	1.00	20.00	0	93.8	69.3	132				
Trichloroethene (TCE)	18.8	0.500	20.00	0	94.1	65.2	136				
1,2-Dichloropropane	18.5	1.00	20.00	0	92.6	70.5	130				
Bromodichloromethane	18.5	1.00	20.00	0	92.4	67.2	137				
Dibromomethane	17.9	1.00	20.00	0	89.7	75.5	126				
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	90.9	62.6	137				
Toluene	18.9	1.00	20.00	0	94.6	61.3	145				
trans-1,3-Dichloropropene	17.9	1.00	20.00	0	89.3	58.5	142				
1,1,2-Trichloroethane	18.1	1.00	20.00	0	90.5	71.7	131				
1,3-Dichloropropane	18.0	1.00	20.00	0	90.2	73.5	127				
Tetrachloroethene (PCE)	18.8	1.00	20.00	0	93.8	47.5	147				
Dibromochloromethane	18.0	1.00	20.00	0	89.8	67.2	134				
1,2-Dibromoethane (EDB)	17.8	0.0600	20.00	0	88.9	73.6	125				

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14322	SampType:	LCS	Units:	µg/L	Prep Date:	7/21/2016	RunNo:	30727		
Client ID:	LCSW	Batch ID:	14322	Analysis Date:	7/21/2016	SeqNo:	579783				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.3	1.00	20.00	0	96.7	73.9	126				
1,1,1,2-Tetrachloroethane	18.8	1.00	20.00	0	94.1	76.8	124				
Ethylbenzene	18.6	1.00	20.00	0	93.0	72	130				
m,p-Xylene	39.4	1.00	40.00	0	98.4	70.3	134				
o-Xylene	19.4	1.00	20.00	0	96.9	72.1	131				
Styrene	19.1	1.00	20.00	0	95.7	64.3	140				
Isopropylbenzene	19.2	1.00	20.00	0	95.8	73.9	128				
Bromoform	17.4	1.00	20.00	0	86.8	55.3	141				
1,1,2,2-Tetrachloroethane	17.7	1.00	20.00	0	88.6	62.9	132				
n-Propylbenzene	19.0	1.00	20.00	0	95.0	74.5	127				
Bromobenzene	18.7	1.00	20.00	0	93.6	71	131				
1,3,5-Trimethylbenzene	19.2	1.00	20.00	0	96.0	73.1	128				
2-Chlorotoluene	19.2	1.00	20.00	0	96.2	70.8	130				
4-Chlorotoluene	19.2	1.00	20.00	0	96.0	70.1	131				
tert-Butylbenzene	19.0	1.00	20.00	0	95.2	68.2	131				
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.4	67.7	131				
1,2,4-Trichlorobenzene	18.6	2.00	20.00	0	93.0	51.8	152				
sec-Butylbenzene	18.7	1.00	20.00	0	93.6	72	129				
4-Isopropyltoluene	18.9	1.00	20.00	0	94.6	69.2	130				
1,3-Dichlorobenzene	19.7	1.00	20.00	0	98.7	71	115				
1,4-Dichlorobenzene	19.5	1.00	20.00	0	97.6	66.8	119				
n-Butylbenzene	19.8	1.00	20.00	0	99.2	73.8	127				
1,2-Dichlorobenzene	19.5	1.00	20.00	0	97.4	69.7	119				
1,2-Dibromo-3-chloropropane	17.2	1.00	20.00	0	85.8	63.1	136				
1,2,4-Trimethylbenzene	19.4	1.00	20.00	0	97.0	73.4	127				
Hexachlorobutadiene	20.0	4.00	20.00	0	100	58.6	138				
Naphthalene	17.2	1.00	20.00	0	85.9	41.8	165				
1,2,3-Trichlorobenzene	18.0	4.00	20.00	0	90.0	48.7	156				
Surr: Dibromofluoromethane	24.2		25.00		96.6	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128				

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14322	SampType:	LCS	Units:	µg/L	Prep Date:	7/21/2016	RunNo:	30727				
Client ID:	LCSW	Batch ID:	14322			Analysis Date:	7/21/2016	SeqNo:	579783				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	MB-14322	SampType:	MBLK	Units:	µg/L	Prep Date:	7/21/2016	RunNo:	30727				
Client ID:	MBLKW	Batch ID:	14322			Analysis Date:	7/21/2016	SeqNo:	579784				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00											
Chloromethane	ND	1.00											
Vinyl chloride	ND	0.200											
Bromomethane	ND	1.00											
Trichlorofluoromethane (CFC-11)	ND	1.00											
Chloroethane	ND	1.00											
1,1-Dichloroethene	ND	1.00											
Methylene chloride	ND	1.00											
trans-1,2-Dichloroethene	ND	1.00											
Methyl tert-butyl ether (MTBE)	ND	1.00											
1,1-Dichloroethane	ND	1.00											
2,2-Dichloropropane	ND	2.00											Q
cis-1,2-Dichloroethene	ND	1.00											
Chloroform	ND	1.00											
1,1,1-Trichloroethane (TCA)	ND	1.00											
1,1-Dichloropropene	ND	1.00											
Carbon tetrachloride	ND	1.00											
1,2-Dichloroethane (EDC)	ND	1.00											
Benzene	ND	1.00											
Trichloroethene (TCE)	ND	0.500											
1,2-Dichloropropane	ND	1.00											
Bromodichloromethane	ND	1.00											
Dibromomethane	ND	1.00											
cis-1,3-Dichloropropene	ND	1.00											

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: MB-14322	SampType: MBLK	Units: µg/L	Prep Date: 7/21/2016	RunNo: 30727
Client ID: MBLKW	Batch ID: 14322		Analysis Date: 7/21/2016	SeqNo: 579784

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-14322	SampType: MBLK	Units: µg/L	Prep Date: 7/21/2016	RunNo: 30727							
Client ID: MBLKW	Batch ID: 14322		Analysis Date: 7/21/2016	SeqNo: 579784							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	23.6		25.00		94.6	45.4	152				
Surr: Toluene-d8	23.5		25.00		93.8	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.7		25.00		94.8	64.2	128				

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID 1607219-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/22/2016	RunNo: 30727							
Client ID: BATCH	Batch ID: 14322		Analysis Date: 7/22/2016	SeqNo: 579778							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	Q
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	

Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1607219-002ADUP	SampType: DUP	Units: µg/L	Prep Date: 7/22/2016	RunNo: 30727
Client ID: BATCH	Batch ID: 14322		Analysis Date: 7/22/2016	SeqNo: 579778

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	1.00						0		30	
1,1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1607219-002ADUP	SampType:	DUP	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727		
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579778				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.8		25.00		95.1	45.4	152		0		
Surr: Toluene-d8	23.7		25.00		94.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.4		25.00		93.8	64.2	128		0		

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	1607161-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727		
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579766				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.6	1.00	20.00	0	118	33.3	122				
Chloromethane	19.8	1.00	20.00	0	99.0	48.2	145				
Vinyl chloride	20.2	0.200	20.00	0	101	58.1	158				
Bromomethane	22.0	1.00	20.00	0	110	31.5	135				
Trichlorofluoromethane (CFC-11)	20.3	1.00	20.00	0	101	54.7	138				
Chloroethane	21.2	1.00	20.00	0	106	49.9	143				
1,1-Dichloroethene	20.1	1.00	20.00	0	100	63	141				
Methylene chloride	18.6	1.00	20.00	0	93.0	61.6	135				
trans-1,2-Dichloroethene	18.6	1.00	20.00	0	92.9	63.5	138				
Methyl tert-butyl ether (MTBE)	17.3	1.00	20.00	0	86.4	60.9	132				

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1607161-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579766		

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	19.0	1.00	20.00	0	95.0	67.8	136				
2,2-Dichloropropane	15.5	2.00	20.00	0	77.5	31.5	121				Q
cis-1,2-Dichloroethene	18.0	1.00	20.00	0	90.2	67.1	123				
Chloroform	19.4	1.00	20.00	0	97.0	66.7	136				
1,1,1-Trichloroethane (TCA)	20.2	1.00	20.00	0	101	64.2	146				
1,1-Dichloropropene	20.2	1.00	20.00	0	101	73.8	136				
Carbon tetrachloride	21.6	1.00	20.00	0	108	62.7	146				
1,2-Dichloroethane (EDC)	18.3	1.00	20.00	0	91.7	63.4	137				
Benzene	19.7	1.00	20.00	0	98.4	65.4	138				
Trichloroethene (TCE)	20.0	0.500	20.00	0	100	60.4	134				
1,2-Dichloropropane	19.0	1.00	20.00	0	95.0	62.6	138				
Bromodichloromethane	19.0	1.00	20.00	0	94.9	59.4	139				
Dibromomethane	18.1	1.00	20.00	0	90.3	63.6	139				
cis-1,3-Dichloropropene	17.5	1.00	20.00	0	87.6	63.8	132				
Toluene	19.7	1.00	20.00	0	98.6	64	139				
trans-1,3-Dichloropropene	16.8	1.00	20.00	0	83.9	57.7	125				
1,1,2-Trichloroethane	18.0	1.00	20.00	0	90.0	59.4	127				
1,3-Dichloropropane	17.8	1.00	20.00	0	89.0	64.3	135				
Tetrachloroethene (PCE)	20.0	1.00	20.00	0	99.9	50.3	133				
Dibromochloromethane	18.1	1.00	20.00	0	90.4	61.6	139				
1,2-Dibromoethane (EDB)	17.5	0.0600	20.00	0	87.6	63.2	134				
Chlorobenzene	19.3	1.00	20.00	0	96.5	65.8	134				
1,1,1,2-Tetrachloroethane	19.2	1.00	20.00	0	95.9	65.4	135				
Ethylbenzene	19.3	1.00	20.00	0	96.4	64.5	136				
m,p-Xylene	40.6	1.00	40.00	0.1000	101	63.3	135				
o-Xylene	20.0	1.00	20.00	0	100	65.4	134				
Styrene	19.2	1.00	20.00	0	96.2	59.1	134				
Isopropylbenzene	20.2	1.00	20.00	0	101	56	147				
Bromoform	17.4	1.00	20.00	0	87.1	57.7	139				
1,1,2,2-Tetrachloroethane	17.4	1.00	20.00	0	87.2	59.8	146				
n-Propylbenzene	19.9	1.00	20.00	0	99.4	57.6	142				

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1607161-001AMS	SampType:	MS	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727		
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579766				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	19.0	1.00	20.00	0	94.8	63.6	130				
1,3,5-Trimethylbenzene	19.7	1.00	20.00	0	98.7	59.9	136				
2-Chlorotoluene	19.9	1.00	20.00	0	99.6	61.7	134				
4-Chlorotoluene	19.5	1.00	20.00	0	97.5	58.4	134				
tert-Butylbenzene	20.1	1.00	20.00	0	101	66.8	141				
1,2,3-Trichloropropane	16.8	1.00	20.00	0	83.9	62.4	129				
1,2,4-Trichlorobenzene	17.2	2.00	20.00	0	86.0	50.9	133				
sec-Butylbenzene	20.0	1.00	20.00	0	100	56	146				
4-Isopropyltoluene	19.5	1.00	20.00	0	97.4	56.4	136				
1,3-Dichlorobenzene	19.5	1.00	20.00	0	97.5	58.2	128				
1,4-Dichlorobenzene	19.8	1.00	20.00	0	98.8	60.1	123				
n-Butylbenzene	19.8	1.00	20.00	0	98.8	54.6	135				
1,2-Dichlorobenzene	19.4	1.00	20.00	0	97.0	65.4	133				
1,2-Dibromo-3-chloropropane	16.3	1.00	20.00	0	81.4	51.8	142				
1,2,4-Trimethylbenzene	19.8	1.00	20.00	0	99.2	63.7	132				
Hexachlorobutadiene	20.0	4.00	20.00	0	100	58.1	130				
Naphthalene	15.4	1.00	20.00	0	76.9	54.5	132				
1,2,3-Trichlorobenzene	16.7	4.00	20.00	0	83.5	57	131				
Surr: Dibromofluoromethane	24.7		25.00		99.0	45.4	152				
Surr: Toluene-d8	25.1		25.00		100	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.4		25.00		102	64.2	128				

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	1607161-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727		
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579767				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.1	1.00	20.00	0	115	33.3	122	23.65	2.40	30	
Chloromethane	19.4	1.00	20.00	0	96.8	48.2	145	19.80	2.25	30	
Vinyl chloride	20.3	0.200	20.00	0	101	58.1	158	20.17	0.495	30	

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1607161-001AMSD	SampType: MSD	Units: µg/L	Prep Date: 7/22/2016	RunNo: 30727
Client ID: BATCH	Batch ID: 14322		Analysis Date: 7/22/2016	SeqNo: 579767

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	21.5	1.00	20.00	0	108	31.5	135	22.01	2.20	30	
Trichlorofluoromethane (CFC-11)	21.4	1.00	20.00	0	107	54.7	138	20.26	5.33	30	
Chloroethane	21.4	1.00	20.00	0	107	49.9	143	21.21	0.985	30	
1,1-Dichloroethene	21.1	1.00	20.00	0	106	63	141	20.09	5.09	30	
Methylene chloride	19.2	1.00	20.00	0	96.0	61.6	135	18.61	3.07	30	
trans-1,2-Dichloroethene	18.8	1.00	20.00	0	94.1	63.5	138	18.58	1.23	30	
Methyl tert-butyl ether (MTBE)	17.3	1.00	20.00	0	86.6	60.9	132	17.28	0.173	30	
1,1-Dichloroethane	19.2	1.00	20.00	0	96.2	67.8	136	19.00	1.31	30	
2,2-Dichloropropane	15.4	2.00	20.00	0	77.2	31.5	121	15.50	0.453	30	Q
cis-1,2-Dichloroethene	18.1	1.00	20.00	0	90.4	67.1	123	18.04	0.277	30	
Chloroform	19.4	1.00	20.00	0	97.2	66.7	136	19.39	0.258	30	
1,1,1-Trichloroethane (TCA)	20.6	1.00	20.00	0	103	64.2	146	20.15	1.97	30	
1,1-Dichloropropene	20.0	1.00	20.00	0	100	73.8	136	20.24	1.04	30	
Carbon tetrachloride	21.7	1.00	20.00	0	109	62.7	146	21.64	0.461	30	
1,2-Dichloroethane (EDC)	18.5	1.00	20.00	0	92.6	63.4	137	18.34	1.03	30	
Benzene	19.8	1.00	20.00	0	99.0	65.4	138	19.68	0.658	30	
Trichloroethene (TCE)	20.1	0.500	20.00	0	100	60.4	134	20.04	0.150	30	
1,2-Dichloropropane	19.0	1.00	20.00	0	94.9	62.6	138	18.99	0.0527	30	
Bromodichloromethane	19.1	1.00	20.00	0	95.3	59.4	139	18.98	0.421	30	
Dibromomethane	18.0	1.00	20.00	0	90.1	63.6	139	18.06	0.222	30	
cis-1,3-Dichloropropene	17.6	1.00	20.00	0	88.1	63.8	132	17.52	0.569	30	
Toluene	19.9	1.00	20.00	0	99.5	64	139	19.73	0.858	30	
trans-1,3-Dichloropropene	16.7	1.00	20.00	0	83.6	57.7	125	16.78	0.298	30	
1,1,2-Trichloroethane	18.2	1.00	20.00	0	90.8	59.4	127	18.00	0.830	30	
1,3-Dichloropropane	18.1	1.00	20.00	0	90.6	64.3	135	17.79	1.84	30	
Tetrachloroethene (PCE)	20.1	1.00	20.00	0	101	50.3	133	19.98	0.599	30	
Dibromochloromethane	18.3	1.00	20.00	0	91.3	61.6	139	18.08	0.991	30	
1,2-Dibromoethane (EDB)	17.8	0.0600	20.00	0	89.1	63.2	134	17.53	1.64	30	
Chlorobenzene	20.4	1.00	20.00	0	102	65.8	134	19.29	5.45	30	
1,1,1,2-Tetrachloroethane	19.7	1.00	20.00	0	98.6	65.4	135	19.18	2.78	30	
Ethylbenzene	19.8	1.00	20.00	0	99.0	64.5	136	19.28	2.66	30	

Work Order: 1607173
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1607161-001AMSD	SampType:	MSD	Units:	µg/L	Prep Date:	7/22/2016	RunNo:	30727		
Client ID:	BATCH	Batch ID:	14322	Analysis Date:	7/22/2016	SeqNo:	579767				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	41.5	1.00	40.00	0.1000	103	63.3	135	40.56	2.19	30	
o-Xylene	20.2	1.00	20.00	0	101	65.4	134	20.00	1.14	30	
Styrene	19.9	1.00	20.00	0	99.4	59.1	134	19.24	3.32	30	
Isopropylbenzene	20.8	1.00	20.00	0	104	56	147	20.20	2.78	30	
Bromoform	17.8	1.00	20.00	0	88.9	57.7	139	17.42	2.05	30	
1,1,2,2-Tetrachloroethane	17.5	1.00	20.00	0	87.6	59.8	146	17.43	0.572	30	
n-Propylbenzene	20.3	1.00	20.00	0	102	57.6	142	19.89	2.19	30	
Bromobenzene	19.4	1.00	20.00	0	97.1	63.6	130	18.95	2.45	30	
1,3,5-Trimethylbenzene	20.3	1.00	20.00	0	102	59.9	136	19.74	2.99	30	
2-Chlorotoluene	20.2	1.00	20.00	0	101	61.7	134	19.91	1.40	30	
4-Chlorotoluene	20.0	1.00	20.00	0	100	58.4	134	19.50	2.58	30	
tert-Butylbenzene	20.8	1.00	20.00	0	104	66.8	141	20.13	3.13	30	
1,2,3-Trichloropropane	17.0	1.00	20.00	0	84.8	62.4	129	16.78	1.13	30	
1,2,4-Trichlorobenzene	18.4	2.00	20.00	0	91.9	50.9	133	17.19	6.69	30	
sec-Butylbenzene	20.5	1.00	20.00	0	103	56	146	20.00	2.66	30	
4-Isopropyltoluene	20.0	1.00	20.00	0	100	56.4	136	19.48	2.58	30	
1,3-Dichlorobenzene	20.3	1.00	20.00	0	102	58.2	128	19.50	4.12	30	
1,4-Dichlorobenzene	20.1	1.00	20.00	0	100	60.1	123	19.77	1.56	30	
n-Butylbenzene	20.8	1.00	20.00	0	104	54.6	135	19.77	4.89	30	
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	65.4	133	19.40	4.24	30	
1,2-Dibromo-3-chloropropane	16.7	1.00	20.00	0	83.3	51.8	142	16.29	2.25	30	
1,2,4-Trimethylbenzene	20.1	1.00	20.00	0	101	63.7	132	19.84	1.30	30	
Hexachlorobutadiene	20.9	4.00	20.00	0	104	58.1	130	20.02	4.21	30	
Naphthalene	17.1	1.00	20.00	0	85.3	54.5	132	15.38	10.4	30	
1,2,3-Trichlorobenzene	17.9	4.00	20.00	0	89.7	57	131	16.70	7.16	30	
Surr: Dibromofluoromethane	24.5		25.00		98.0	45.4	152		0		
Surr: Toluene-d8	24.9		25.00		99.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128		0		

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Work Order: 1607173
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Sample Moisture (Percent Moisture)

Sample ID 1607173-001ADUP	SampType: DUP	Units: wt%	Prep Date: 7/20/2016	RunNo: 30665							
Client ID: SB-20-3	Batch ID: R30665		Analysis Date: 7/20/2016	SeqNo: 578400							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.2	0.500						16.95	4.43	20	

Client Name: **PES**

 Work Order Number: **1607173**

 Logged by: **Erica Silva**

 Date Received: **7/18/2016 1:49:00 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
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	4.9
Sample	6.2
Temp Blank	0.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

MEMORANDUM

TO: Project File
DATE: July 29, 2016
FROM: Jessie Compeau
PROJECT: 1246.030.03.002
SUBJECT: Bethel Junction, Soil and Groundwater Sample Data Review – July 17 and 18, 2016
Sampling Event
Fremont Lab Package 1607173

Eighteen (18) soil samples and two (2) groundwater samples were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on July 17 and 18, 2016. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Project samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C. The results were reported in Fremont Lab Package 1607173.

The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols. Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of 4.9 degrees Centigrade (°C). Samples in the cooler were recorded at a temperature of 6.2°C and generally within the recommended preservation temperature range of 4.0°C ± 2.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (soils and preserved water) from the data of sample collection. All holding time criteria were met.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. The following issues were noted during the review:

Case narrative notes and qualifiers indicate that either initial or continuing calibration criteria associated with groundwater samples analyzed on July 21, 2016 were not met for 2,2-dichloropropane. All associated 2,2-dichloropropane results for groundwater samples (samples SB-23-071816 and SB-22-071816) were non-detected and qualified as estimated (UJ).

Case narrative notes and qualifiers indicate that either initial or continuing calibration criteria associated with soil samples analyzed on July 22, 2016 were not met for methyl tert-butyl ether (MTBE), 2,2-dichloropropane, trans-1,3-dichloropropylene, 1,2-dibromo-3-chloropropane, and naphthalene. All associated methyl tert-butyl ether (MTBE), 2,2-dichloropropane, trans-1,3-dichloropropylene, 1,2-dibromo-3-chloropropane, and naphthalene results for all associated soil samples were non-detected and qualified as estimated (UJ).

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blanks for soils and waters were included with the analytical batch per method requirement. The target analytes were not detected in the method blank for soil or water at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

Trip Blank Results

USEPA Method 8260C (VOCs):

Trip blanks were not collected.

Field, Rinsate, or Equipment Blank Results

USEPA Method 8260C (VOCs):

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

Laboratory duplicate analyses was not performed on soil samples. Refer to matrix spike results for soil precision data.

A laboratory duplicate was performed on a non-client water sample within the analytical batch. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Field duplicates were not collected. Refer to the laboratory duplicate or matrix spike results for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the soil and water samples, laboratory duplicates, laboratory control samples, matrix spikes, and the method blanks were within the laboratory surrogate control limits for all of the analyses.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

A matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on soil sample SB-22-9.5. Matrix spike analysis was performed on an unrelated water sample within the analytical batch. One MS is required for each sample event (maximum of 20 samples in a group); therefore, the MS analysis meets this required frequency. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria with the following discussion:

Soil matrix spike recoveries for dichlorodifluoromethane (CFC-12), bromomethane, trichlorofluoromethane (CFC-11), and chloroethane were elevated and above Fremont laboratory control limit criteria. No action was taken since these compounds were not detected in the associated samples.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

Laboratory control samples (LCSs) for soil and water were analyzed by USEPA Method 8260C method for each VOC analysis group. The frequency of analysis of LCSs was appropriate. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for soils and water. No data qualifications were warranted.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. The reported MRLs are considered appropriate for this project. No data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999)

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:30:00 AM

Project: Bethel Junction

Lab ID: 1607173-001

Matrix: Soil

Client Sample ID: SB-20-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloromethane	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Vinyl chloride	ND	0.00242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromomethane	ND	0.109		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Trichlorofluoromethane (CFC-11)	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloroethane	ND	0.0727		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloroethene	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Methylene chloride	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
trans-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Methyl tert-butyl ether (MTBE)	ND	0.0606	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloroethane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
2,2-Dichloropropane	ND	0.0606	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
cis-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chloroform	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,1-Trichloroethane (TCA)	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1-Dichloropropene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Carbon tetrachloride	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dichloroethane (EDC)	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Benzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Trichloroethene (TCE)	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dichloropropane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromodichloromethane	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Dibromomethane	ND	0.0485		mg/Kg-dry	1	7/21/2016 11:15:26 PM
cis-1,3-Dichloropropene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Toluene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
trans-1,3-Dichloropropylene	ND	0.0364	Q	mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,2-Trichloroethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,3-Dichloropropane	ND	0.0606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Tetrachloroethene (PCE)	0.0945	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Dibromochloromethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,2-Dibromoethane (EDB)	ND	0.00606		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Chlorobenzene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
1,1,1,2-Tetrachloroethane	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Ethylbenzene	ND	0.0364		mg/Kg-dry	1	7/21/2016 11:15:26 PM
m,p-Xylene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
o-Xylene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Styrene	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Isopropylbenzene	ND	0.0970		mg/Kg-dry	1	7/21/2016 11:15:26 PM
Bromoform	ND	0.0242		mg/Kg-dry	1	7/21/2016 11:15:26 PM

Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-002

Matrix: Soil

Client Sample ID: SB-20-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloromethane	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Vinyl chloride	ND	0.00224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromomethane	ND	0.101		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Trichlorofluoromethane (CFC-11)	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloroethane	ND	0.0673		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloroethene	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Methyl tert-butyl ether (MTBE)	ND	0.0561	UJ Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
2,2-Dichloropropane	ND	0.0561	UJ Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chloroform	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,1-Trichloroethane (TCA)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Carbon tetrachloride	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichloroethane (EDC)	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Benzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromodichloromethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Dibromomethane	ND	0.0449		mg/Kg-dry	1	7/21/2016 11:44:43 PM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Toluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
trans-1,3-Dichloropropylene	ND	0.0337	UJ Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,2-Trichloroethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3-Dichloropropane	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Tetrachloroethene (PCE)	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Dibromochloromethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dibromoethane (EDB)	ND	0.00561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Chlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,1,1,2-Tetrachloroethane	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Ethylbenzene	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
m,p-Xylene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
o-Xylene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Styrene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Isopropylbenzene	ND	0.0898		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromoform	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM

Original

Jc
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-002

Matrix: Soil

Client Sample ID: SB-20-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
n-Propylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Bromobenzene	ND	0.0337		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3,5-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
2-Chlorotoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
4-Chlorotoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
tert-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,3-Trichloropropane	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,4-Trichlorobenzene	ND	0.0561		mg/Kg-dry	1	7/21/2016 11:44:43 PM
sec-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
4-Isopropyltoluene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
n-Butylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2-Dibromo-3-chloropropane	ND	0.561	VJ Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Hexachlorobutadiene	ND	0.112		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Naphthalene	ND	0.0337	VJ Q	mg/Kg-dry	1	7/21/2016 11:44:43 PM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	7/21/2016 11:44:43 PM
Surr: Dibromofluoromethane	97.5	56.5-129		%Rec	1	7/21/2016 11:44:43 PM
Surr: Toluene-d8	96.0	64.3-131		%Rec	1	7/21/2016 11:44:43 PM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%Rec	1	7/21/2016 11:44:43 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.67	0.500		wt%	1	7/20/2016 9:57:51 AM
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Jc
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:40:00 AM

Project: Bethel Junction

Lab ID: 1607173-003

Matrix: Soil

Client Sample ID: SB-20-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloromethane	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Vinyl chloride	ND	0.00198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromomethane	ND	0.0890		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloroethane	ND	0.0593		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloroethene	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Methylene chloride	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
trans-1,2-Dichloroethene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0494	VS Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloroethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
2,2-Dichloropropane	ND	0.0494	VS Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
cis-1,2-Dichloroethene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chloroform	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1-Dichloropropene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Carbon tetrachloride	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichloroethane (EDC)	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Benzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Trichloroethene (TCE)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichloropropane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromodichloromethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Dibromomethane	ND	0.0396		mg/Kg-dry	1	7/22/2016 12:13:55 AM
cis-1,3-Dichloropropene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Toluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
trans-1,3-Dichloropropylene	ND	0.0297	VS Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,2-Trichloroethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3-Dichloropropane	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Tetrachloroethene (PCE)	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Dibromochloromethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dibromoethane (EDB)	ND	0.00494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Chlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Ethylbenzene	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
m,p-Xylene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
o-Xylene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Styrene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Isopropylbenzene	ND	0.0791		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromoform	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM

Original

Handwritten signature and date: JC 7/28/16



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 11:40:00 AM

Project: Bethel Junction

Lab ID: 1607173-003

Matrix: Soil

Client Sample ID: SB-20-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
n-Propylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Bromobenzene	ND	0.0297		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3,5-Trimethylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
2-Chlorotoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
4-Chlorotoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
tert-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,3-Trichloropropane	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,4-Trichlorobenzene	ND	0.0494		mg/Kg-dry	1	7/22/2016 12:13:55 AM
sec-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
4-Isopropyltoluene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,3-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,4-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
n-Butylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2-Dibromo-3-chloropropane	ND	0.494	VS Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,4-Trimethylbenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Hexachlorobutadiene	ND	0.0989		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Naphthalene	ND	0.0297	VS Q	mg/Kg-dry	1	7/22/2016 12:13:55 AM
1,2,3-Trichlorobenzene	ND	0.0198		mg/Kg-dry	1	7/22/2016 12:13:55 AM
Surr: Dibromofluoromethane	97.5	56.5-129		%Rec	1	7/22/2016 12:13:55 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 12:13:55 AM
Surr: 1-Bromo-4-fluorobenzene	96.8	63.1-141		%Rec	1	7/22/2016 12:13:55 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.49	0.500		wt%	1	7/20/2016 9:57:51 AM
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Jc
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-004

Matrix: Soil

Client Sample ID: SB-19-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloromethane	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Vinyl chloride	ND	0.00221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromomethane	ND	0.0996		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Trichlorofluoromethane (CFC-11)	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloroethane	ND	0.0664		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloroethene	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Methylene chloride	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
trans-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Methyl tert-butyl ether (MTBE)	ND	0.0553	VJ Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloroethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
2,2-Dichloropropane	ND	0.0553	VJ Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
cis-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chloroform	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,1-Trichloroethane (TCA)	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1-Dichloropropene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Carbon tetrachloride	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichloroethane (EDC)	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Benzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Trichloroethene (TCE)	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichloropropane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromodichloromethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Dibromomethane	ND	0.0443		mg/Kg-dry	1	7/22/2016 12:43:12 AM
cis-1,3-Dichloropropene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Toluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
trans-1,3-Dichloropropylene	ND	0.0332	VJ Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,2-Trichloroethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3-Dichloropropane	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Tetrachloroethene (PCE)	0.140	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Dibromochloromethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dibromoethane (EDB)	ND	0.00553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Chlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,1,1,2-Tetrachloroethane	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Ethylbenzene	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
m,p-Xylene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
o-Xylene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Styrene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Isopropylbenzene	ND	0.0885		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromoform	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM

Original

Jc
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-004

Matrix: Soil

Client Sample ID: SB-19-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
n-Propylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Bromobenzene	ND	0.0332		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3,5-Trimethylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
2-Chlorotoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
4-Chlorotoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
tert-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,3-Trichloropropane	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,4-Trichlorobenzene	ND	0.0553		mg/Kg-dry	1	7/22/2016 12:43:12 AM
sec-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
4-Isopropyltoluene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,3-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,4-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
n-Butylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2-Dibromo-3-chloropropane	ND	0.553	JS Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,4-Trimethylbenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Hexachlorobutadiene	ND	0.111		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Naphthalene	ND	0.0332	JS Q	mg/Kg-dry	1	7/22/2016 12:43:12 AM
1,2,3-Trichlorobenzene	ND	0.0221		mg/Kg-dry	1	7/22/2016 12:43:12 AM
Surr: Dibromofluoromethane	95.8	56.5-129		%Rec	1	7/22/2016 12:43:12 AM
Surr: Toluene-d8	96.8	64.3-131		%Rec	1	7/22/2016 12:43:12 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 12:43:12 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	10.8	0.500		wt%	1	7/20/2016 9:57:51 AM
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JS 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:20:00 PM

Project: Bethel Junction

Lab ID: 1607173-005

Matrix: Soil

Client Sample ID: SB-19-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloromethane	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Vinyl chloride	ND	0.00231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromomethane	ND	0.104		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Trichlorofluoromethane (CFC-11)	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloroethane	ND	0.0693		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloroethene	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Methylene chloride	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
trans-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Methyl tert-butyl ether (MTBE)	ND	0.0577	US Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloroethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
2,2-Dichloropropane	ND	0.0577	US Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
cis-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chloroform	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,1-Trichloroethane (TCA)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1-Dichloropropene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Carbon tetrachloride	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichloroethane (EDC)	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Benzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Trichloroethene (TCE)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichloropropane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromodichloromethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Dibromomethane	ND	0.0462		mg/Kg-dry	1	7/22/2016 1:12:28 AM
cis-1,3-Dichloropropene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Toluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
trans-1,3-Dichloropropylene	ND	0.0346	US Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,2-Trichloroethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3-Dichloropropane	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Tetrachloroethene (PCE)	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Dibromochloromethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dibromoethane (EDB)	ND	0.00577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Chlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,1,1,2-Tetrachloroethane	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Ethylbenzene	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
m,p-Xylene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
o-Xylene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Styrene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Isopropylbenzene	ND	0.0924		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromoform	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM

Original

Handwritten signature and date: Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:20:00 PM

Project: Bethel Junction

Lab ID: 1607173-005

Matrix: Soil

Client Sample ID: SB-19-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
n-Propylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Bromobenzene	ND	0.0346		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3,5-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
2-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
4-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
tert-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,3-Trichloropropane	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,4-Trichlorobenzene	ND	0.0577		mg/Kg-dry	1	7/22/2016 1:12:28 AM
sec-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
4-Isopropyltoluene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,3-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,4-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
n-Butylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2-Dibromo-3-chloropropane	ND	0.577	US Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,4-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Hexachlorobutadiene	ND	0.115		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Naphthalene	ND	0.0346	US Q	mg/Kg-dry	1	7/22/2016 1:12:28 AM
1,2,3-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	7/22/2016 1:12:28 AM
Surr: Dibromofluoromethane	96.6	56.5-129		%Rec	1	7/22/2016 1:12:28 AM
Surr: Toluene-d8	95.9	64.3-131		%Rec	1	7/22/2016 1:12:28 AM
Surr: 1-Bromo-4-fluorobenzene	95.8	63.1-141		%Rec	1	7/22/2016 1:12:28 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	7.81	0.500		wt%	1	7/20/2016 9:57:51 AM
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Handwritten signature and date: Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:30:00 PM

Project: Bethel Junction

Lab ID: 1607173-006

Matrix: Soil

Client Sample ID: SB-19-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloromethane	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Vinyl chloride	ND	0.00243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromomethane	ND	0.109		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Trichlorofluoromethane (CFC-11)	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloroethane	ND	0.0729		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloroethene	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Methylene chloride	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Methyl tert-butyl ether (MTBE)	ND	0.0607	JS Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
2,2-Dichloropropane	ND	0.0607	JS Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
cis-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chloroform	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,1-Trichloroethane (TCA)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1-Dichloropropene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Carbon tetrachloride	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichloroethane (EDC)	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Benzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Dibromomethane	ND	0.0486		mg/Kg-dry	1	7/22/2016 1:41:40 AM
cis-1,3-Dichloropropene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Toluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
trans-1,3-Dichloropropylene	ND	0.0364	JS Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,2-Trichloroethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3-Dichloropropane	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Tetrachloroethene (PCE)	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Dibromochloromethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dibromoethane (EDB)	ND	0.00607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Chlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,1,1,2-Tetrachloroethane	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Ethylbenzene	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
m,p-Xylene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
o-Xylene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Styrene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Isopropylbenzene	ND	0.0971		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromoform	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM

Original

JS
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 12:30:00 PM

Project: Bethel Junction

Lab ID: 1607173-006

Matrix: Soil

Client Sample ID: SB-19-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
n-Propylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Bromobenzene	ND	0.0364		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3,5-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
2-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
4-Chlorotoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
tert-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,3-Trichloropropane	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,4-Trichlorobenzene	ND	0.0607		mg/Kg-dry	1	7/22/2016 1:41:40 AM
sec-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
4-Isopropyltoluene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
n-Butylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2-Dibromo-3-chloropropane	ND	0.607	JS Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Hexachlorobutadiene	ND	0.121		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Naphthalene	ND	0.0364	JS Q	mg/Kg-dry	1	7/22/2016 1:41:40 AM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	7/22/2016 1:41:40 AM
Surr: Dibromofluoromethane	96.2	56.5-129		%Rec	1	7/22/2016 1:41:40 AM
Surr: Toluene-d8	98.0	64.3-131		%Rec	1	7/22/2016 1:41:40 AM
Surr: 1-Bromo-4-fluorobenzene	96.3	63.1-141		%Rec	1	7/22/2016 1:41:40 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	5.14	0.500		wt%	1	7/20/2016 9:57:51 AM
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JS 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-007

Matrix: Soil

Client Sample ID: SB-18-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloromethane	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Vinyl chloride	ND	0.00197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromomethane	ND	0.0889		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloroethane	ND	0.0592		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloroethene	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Methylene chloride	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
trans-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0494	US Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloroethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
2,2-Dichloropropane	ND	0.0494	US Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
cis-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chloroform	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Carbon tetrachloride	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichloroethane (EDC)	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Benzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Trichloroethene (TCE)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichloropropane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromodichloromethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Dibromomethane	ND	0.0395		mg/Kg-dry	1	7/22/2016 2:10:55 AM
cis-1,3-Dichloropropene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Toluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
trans-1,3-Dichloropropylene	ND	0.0296	US Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,2-Trichloroethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3-Dichloropropane	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Tetrachloroethene (PCE)	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Dibromochloromethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dibromoethane (EDB)	ND	0.00494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Chlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Ethylbenzene	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
m,p-Xylene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
o-Xylene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Styrene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Isopropylbenzene	ND	0.0790		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromoform	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM

Original

Handwritten signature and date: Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-007

Matrix: Soil

Client Sample ID: SB-18-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
n-Propylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Bromobenzene	ND	0.0296		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3,5-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
2-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
4-Chlorotoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
tert-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,3-Trichloropropane	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,4-Trichlorobenzene	ND	0.0494		mg/Kg-dry	1	7/22/2016 2:10:55 AM
sec-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
4-Isopropyltoluene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,3-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,4-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
n-Butylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2-Dibromo-3-chloropropane	ND	0.494	VJ Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,4-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Hexachlorobutadiene	ND	0.0987		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Naphthalene	ND	0.0296	VJ Q	mg/Kg-dry	1	7/22/2016 2:10:55 AM
1,2,3-Trichlorobenzene	ND	0.0197		mg/Kg-dry	1	7/22/2016 2:10:55 AM
Surr: Dibromofluoromethane	97.6	56.5-129		%Rec	1	7/22/2016 2:10:55 AM
Surr: Toluene-d8	96.1	64.3-131		%Rec	1	7/22/2016 2:10:55 AM
Surr: 1-Bromo-4-fluorobenzene	96.1	63.1-141		%Rec	1	7/22/2016 2:10:55 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	11.5	0.500		wt%	1	7/20/2016 9:57:51 AM
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JC
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-008

Matrix: Soil

Client Sample ID: SB-18-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloromethane	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Vinyl chloride	ND	0.00229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromomethane	ND	0.103		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloroethane	ND	0.0686		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloroethene	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Methylene chloride	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
trans-1,2-Dichloroethene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0572	UJ Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloroethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
2,2-Dichloropropane	ND	0.0572	UJ Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
cis-1,2-Dichloroethene	0.162	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chloroform	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Carbon tetrachloride	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichloroethane (EDC)	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Benzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Trichloroethene (TCE)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichloropropane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromodichloromethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Dibromomethane	ND	0.0457		mg/Kg-dry	1	7/22/2016 2:40:07 AM
cis-1,3-Dichloropropene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Toluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
trans-1,3-Dichloropropylene	ND	0.0343	UJ Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,2-Trichloroethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3-Dichloropropane	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Tetrachloroethene (PCE)	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Dibromochloromethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dibromoethane (EDB)	ND	0.00572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Chlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Ethylbenzene	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
m,p-Xylene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
o-Xylene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Styrene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Isopropylbenzene	ND	0.0915		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromoform	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM

Original

Jc
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:10:00 PM

Project: Bethel Junction

Lab ID: 1607173-008

Matrix: Soil

Client Sample ID: SB-18-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
n-Propylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Bromobenzene	ND	0.0343		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3,5-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
2-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
4-Chlorotoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
tert-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,3-Trichloropropane	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,4-Trichlorobenzene	ND	0.0572		mg/Kg-dry	1	7/22/2016 2:40:07 AM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,3-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,4-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
n-Butylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2-Dibromo-3-chloropropane	ND	0.572	US Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,4-Trimethylbenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Hexachlorobutadiene	ND	0.114		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Naphthalene	ND	0.0343	US Q	mg/Kg-dry	1	7/22/2016 2:40:07 AM
1,2,3-Trichlorobenzene	ND	0.0229		mg/Kg-dry	1	7/22/2016 2:40:07 AM
Surr: Dibromofluoromethane	96.2	56.5-129		%Rec	1	7/22/2016 2:40:07 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 2:40:07 AM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%Rec	1	7/22/2016 2:40:07 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	7.66	0.500		wt%	1	7/20/2016 9:57:51 AM
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Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-009

Matrix: Soil

Client Sample ID: SB-18-9

Analyses Result RL Qual Units DF Date Analyzed

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloromethane	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Vinyl chloride	ND	0.00257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromomethane	ND	0.116		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Trichlorofluoromethane (CFC-11)	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloroethane	ND	0.0771		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloroethene	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Methylene chloride	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
trans-1,2-Dichloroethene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Methyl tert-butyl ether (MTBE)	ND	0.0642	US Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloroethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
2,2-Dichloropropane	ND	0.0642	US Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
cis-1,2-Dichloroethene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chloroform	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,1-Trichloroethane (TCA)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1-Dichloropropene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Carbon tetrachloride	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichloroethane (EDC)	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Benzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Trichloroethene (TCE)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichloropropane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromodichloromethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Dibromomethane	ND	0.0514		mg/Kg-dry	1	7/22/2016 3:09:11 AM
cis-1,3-Dichloropropene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Toluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
trans-1,3-Dichloropropylene	ND	0.0385	US Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,2-Trichloroethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3-Dichloropropane	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Tetrachloroethene (PCE)	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Dibromochloromethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dibromoethane (EDB)	ND	0.00642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Chlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,1,1,2-Tetrachloroethane	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Ethylbenzene	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
m,p-Xylene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
o-Xylene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Styrene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Isopropylbenzene	ND	0.103		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromoform	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM

Original

JC
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 1:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-009

Matrix: Soil

Client Sample ID: SB-18-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
n-Propylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Bromobenzene	ND	0.0385		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3,5-Trimethylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
2-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
4-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
tert-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,3-Trichloropropane	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,4-Trichlorobenzene	ND	0.0642		mg/Kg-dry	1	7/22/2016 3:09:11 AM
sec-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
4-Isopropyltoluene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,3-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,4-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
n-Butylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2-Dibromo-3-chloropropane	ND	0.642	VJ Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,4-Trimethylbenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Hexachlorobutadiene	ND	0.128		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Naphthalene	ND	0.0385	VJ Q	mg/Kg-dry	1	7/22/2016 3:09:11 AM
1,2,3-Trichlorobenzene	ND	0.0257		mg/Kg-dry	1	7/22/2016 3:09:11 AM
Surr: Dibromofluoromethane	97.2	56.5-129		%Rec	1	7/22/2016 3:09:11 AM
Surr: Toluene-d8	96.1	64.3-131		%Rec	1	7/22/2016 3:09:11 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 3:09:11 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	24.0	0.500		wt%	1	7/20/2016 9:57:51 AM
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JL
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-010

Matrix: Soil

Client Sample ID: SB-21-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloromethane	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Vinyl chloride	ND	0.00208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromomethane	ND	0.0936		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloroethane	ND	0.0624		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloroethene	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Methylene chloride	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
trans-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0520	UJ Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloroethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
2,2-Dichloropropane	ND	0.0520	UJ Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
cis-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chloroform	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1-Dichloropropene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Carbon tetrachloride	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichloroethane (EDC)	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Benzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Trichloroethene (TCE)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichloropropane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromodichloromethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Dibromomethane	ND	0.0416		mg/Kg-dry	1	7/22/2016 3:38:22 AM
cis-1,3-Dichloropropene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Toluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
trans-1,3-Dichloropropylene	ND	0.0312	UJ Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,2-Trichloroethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3-Dichloropropane	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Tetrachloroethene (PCE)	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Dibromochloromethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dibromoethane (EDB)	ND	0.00520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Chlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Ethylbenzene	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
m,p-Xylene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
o-Xylene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Styrene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Isopropylbenzene	ND	0.0832		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromoform	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM

Original

Handwritten signature and date: JF 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:05:00 PM

Project: Bethel Junction

Lab ID: 1607173-010

Matrix: Soil

Client Sample ID: SB-21-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
n-Propylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Bromobenzene	ND	0.0312		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3,5-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
2-Chlorotoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
4-Chlorotoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
tert-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,3-Trichloropropane	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,4-Trichlorobenzene	ND	0.0520		mg/Kg-dry	1	7/22/2016 3:38:22 AM
sec-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
4-Isopropyltoluene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,3-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,4-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
n-Butylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2-Dibromo-3-chloropropane	ND	0.520	VJ Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,4-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Hexachlorobutadiene	ND	0.104		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Naphthalene	ND	0.0312	VJ Q	mg/Kg-dry	1	7/22/2016 3:38:22 AM
1,2,3-Trichlorobenzene	ND	0.0208		mg/Kg-dry	1	7/22/2016 3:38:22 AM
Surr: Dibromofluoromethane	95.8	56.5-129		%Rec	1	7/22/2016 3:38:22 AM
Surr: Toluene-d8	96.4	64.3-131		%Rec	1	7/22/2016 3:38:22 AM
Surr: 1-Bromo-4-fluorobenzene	97.2	63.1-141		%Rec	1	7/22/2016 3:38:22 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.50	0.500		wt%	1	7/20/2016 9:57:51 AM
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Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:15:00 PM

Project: Bethel Junction

Lab ID: 1607173-011

Matrix: Soil

Client Sample ID: SB-21-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloromethane	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Vinyl chloride	ND	0.00227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromomethane	ND	0.102		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Trichlorofluoromethane (CFC-11)	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloroethane	ND	0.0680		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloroethene	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Methylene chloride	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
trans-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Methyl tert-butyl ether (MTBE)	ND	0.0566	VS Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloroethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
2,2-Dichloropropane	ND	0.0566	VS Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
cis-1,2-Dichloroethene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chloroform	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,1-Trichloroethane (TCA)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Carbon tetrachloride	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichloroethane (EDC)	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Benzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Trichloroethene (TCE)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichloropropane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromodichloromethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Dibromomethane	ND	0.0453		mg/Kg-dry	1	7/22/2016 4:07:35 AM
cis-1,3-Dichloropropene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Toluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
trans-1,3-Dichloropropylene	ND	0.0340	VS Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,2-Trichloroethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3-Dichloropropane	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Tetrachloroethene (PCE)	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Dibromochloromethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dibromoethane (EDB)	ND	0.00566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Chlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,1,1,2-Tetrachloroethane	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Ethylbenzene	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
m,p-Xylene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
o-Xylene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Styrene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Isopropylbenzene	ND	0.0906		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromoform	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM

Original

Handwritten signature and date: 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:15:00 PM

Project: Bethel Junction

Lab ID: 1607173-011

Matrix: Soil

Client Sample ID: SB-21-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
n-Propylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Bromobenzene	ND	0.0340		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3,5-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
2-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
4-Chlorotoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
tert-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,3-Trichloropropane	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,4-Trichlorobenzene	ND	0.0566		mg/Kg-dry	1	7/22/2016 4:07:35 AM
sec-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
4-Isopropyltoluene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,3-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,4-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
n-Butylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2-Dibromo-3-chloropropane	ND	0.566	VJ Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,4-Trimethylbenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Hexachlorobutadiene	ND	0.113		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Naphthalene	ND	0.0340	VJ Q	mg/Kg-dry	1	7/22/2016 4:07:35 AM
1,2,3-Trichlorobenzene	ND	0.0227		mg/Kg-dry	1	7/22/2016 4:07:35 AM
Surr: Dibromofluoromethane	96.7	56.5-129		%Rec	1	7/22/2016 4:07:35 AM
Surr: Toluene-d8	96.3	64.3-131		%Rec	1	7/22/2016 4:07:35 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	63.1-141		%Rec	1	7/22/2016 4:07:35 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.74	0.500		wt%	1	7/20/2016 9:57:51 AM
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JC 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-012

Matrix: Soil

Client Sample ID: SB-21-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloromethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Vinyl chloride	ND	0.00282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromomethane	ND	0.127		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Trichlorofluoromethane (CFC-11)	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloroethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloroethene	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Methylene chloride	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
trans-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Methyl tert-butyl ether (MTBE)	ND	0.0705	VJ Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
2,2-Dichloropropane	ND	0.0705	VJ Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
cis-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chloroform	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,1-Trichloroethane (TCA)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1-Dichloropropene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Carbon tetrachloride	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichloroethane (EDC)	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Benzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Trichloroethene (TCE)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichloropropane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromodichloromethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Dibromomethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 4:36:45 AM
cis-1,3-Dichloropropene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Toluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
trans-1,3-Dichloropropylene	ND	0.0423	VJ Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,2-Trichloroethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3-Dichloropropane	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Tetrachloroethene (PCE)	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Dibromochloromethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dibromoethane (EDB)	ND	0.00705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Chlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,1,1,2-Tetrachloroethane	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Ethylbenzene	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
m,p-Xylene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
o-Xylene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Styrene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Isopropylbenzene	ND	0.113		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromoform	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM

Original

Jc
7/28/16



Client: PES Environmental, Inc.

Collection Date: 7/17/2016 2:25:00 PM

Project: Bethel Junction

Lab ID: 1607173-012

Matrix: Soil

Client Sample ID: SB-21-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
n-Propylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Bromobenzene	ND	0.0423		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3,5-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
2-Chlorotoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
4-Chlorotoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
tert-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,3-Trichloropropane	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,4-Trichlorobenzene	ND	0.0705		mg/Kg-dry	1	7/22/2016 4:36:45 AM
sec-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
4-Isopropyltoluene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,3-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,4-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
n-Butylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2-Dibromo-3-chloropropane	ND	0.705	VJ Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,4-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Hexachlorobutadiene	ND	0.141		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Naphthalene	ND	0.0423	VJ Q	mg/Kg-dry	1	7/22/2016 4:36:45 AM
1,2,3-Trichlorobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 4:36:45 AM
Surr: Dibromofluoromethane	95.2	56.5-129		%Rec	1	7/22/2016 4:36:45 AM
Surr: Toluene-d8	96.3	64.3-131		%Rec	1	7/22/2016 4:36:45 AM
Surr: 1-Bromo-4-fluorobenzene	95.4	63.1-141		%Rec	1	7/22/2016 4:36:45 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	3.96	0.500		wt%	1	7/20/2016 9:57:51 AM
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Handwritten signature and date: 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-013

Matrix: Soil

Client Sample ID: SB-23-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloromethane	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Vinyl chloride	ND	0.00237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromomethane	ND	0.107		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloroethane	ND	0.0710		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloroethene	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Methylene chloride	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
trans-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0592	VJ Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloroethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
2,2-Dichloropropane	ND	0.0592	VJ Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
cis-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chloroform	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1-Dichloropropene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Carbon tetrachloride	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichloroethane (EDC)	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Benzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Trichloroethene (TCE)	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichloropropane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromodichloromethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Dibromomethane	ND	0.0473		mg/Kg-dry	1	7/22/2016 5:05:56 AM
cis-1,3-Dichloropropene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Toluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
trans-1,3-Dichloropropylene	ND	0.0355	VJ Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,2-Trichloroethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3-Dichloropropane	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Tetrachloroethene (PCE)	0.0432	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Dibromochloromethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dibromoethane (EDB)	ND	0.00592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Chlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Ethylbenzene	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
m,p-Xylene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
o-Xylene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Styrene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Isopropylbenzene	ND	0.0947		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromoform	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM

Original

Handwritten signature and date: Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-013

Matrix: Soil

Client Sample ID: SB-23-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
n-Propylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Bromobenzene	ND	0.0355		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3,5-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
2-Chlorotoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
4-Chlorotoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
tert-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,3-Trichloropropane	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,4-Trichlorobenzene	ND	0.0592		mg/Kg-dry	1	7/22/2016 5:05:56 AM
sec-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
4-Isopropyltoluene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,3-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,4-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
n-Butylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2-Dibromo-3-chloropropane	ND	0.592	VJ Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,4-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Hexachlorobutadiene	ND	0.118		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Naphthalene	ND	0.0355	VJ Q	mg/Kg-dry	1	7/22/2016 5:05:56 AM
1,2,3-Trichlorobenzene	ND	0.0237		mg/Kg-dry	1	7/22/2016 5:05:56 AM
Surr: Dibromofluoromethane	94.7	56.5-129		%Rec	1	7/22/2016 5:05:56 AM
Surr: Toluene-d8	96.9	64.3-131		%Rec	1	7/22/2016 5:05:56 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%Rec	1	7/22/2016 5:05:56 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	9.20	0.500		wt%	1	7/20/2016 9:57:51 AM
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JC 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-014

Matrix: Soil

Client Sample ID: SB-23-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloromethane	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Vinyl chloride	ND	0.00240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromomethane	ND	0.108		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloroethane	ND	0.0720		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloroethene	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Methylene chloride	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
trans-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0600	VJ Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloroethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
2,2-Dichloropropane	ND	0.0600	VJ Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
cis-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chloroform	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1-Dichloropropene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Carbon tetrachloride	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichloroethane (EDC)	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Benzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Trichloroethene (TCE)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichloropropane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromodichloromethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Dibromomethane	ND	0.0480		mg/Kg-dry	1	7/22/2016 5:35:07 AM
cis-1,3-Dichloropropene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Toluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
trans-1,3-Dichloropropylene	ND	0.0360	VJ Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,2-Trichloroethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3-Dichloropropane	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Tetrachloroethene (PCE)	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Dibromochloromethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dibromoethane (EDB)	ND	0.00600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Chlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Ethylbenzene	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
m,p-Xylene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
o-Xylene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Styrene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Isopropylbenzene	ND	0.0960		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromoform	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM

Original

JC
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-014

Matrix: Soil

Client Sample ID: SB-23-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
n-Propylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Bromobenzene	ND	0.0360		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3,5-Trimethylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
2-Chlorotoluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
4-Chlorotoluene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
tert-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,3-Trichloropropane	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,4-Trichlorobenzene	ND	0.0600		mg/Kg-dry	1	7/22/2016 5:35:07 AM
sec-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
4-Isopropyltoluene	0.0888	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,3-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,4-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
n-Butylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2-Dibromo-3-chloropropane	ND	0.600	US Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,4-Trimethylbenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Hexachlorobutadiene	ND	0.120		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Naphthalene	ND	0.0360	US Q	mg/Kg-dry	1	7/22/2016 5:35:07 AM
1,2,3-Trichlorobenzene	ND	0.0240		mg/Kg-dry	1	7/22/2016 5:35:07 AM
Surr: Dibromofluoromethane	95.1	56.5-129		%Rec	1	7/22/2016 5:35:07 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 5:35:07 AM
Surr: 1-Bromo-4-fluorobenzene	98.4	63.1-141		%Rec	1	7/22/2016 5:35:07 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	13.5	0.500		wt%	1	7/20/2016 9:57:51 AM
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Handwritten signature and date: 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:15:00 AM

Project: Bethel Junction

Lab ID: 1607173-015

Matrix: Soil

Client Sample ID: SB-23-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloromethane	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Vinyl chloride	ND	0.00200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromomethane	ND	0.0900		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Trichlorofluoromethane (CFC-11)	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloroethane	ND	0.0600		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloroethene	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Methylene chloride	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Methyl tert-butyl ether (MTBE)	ND	0.0500	US Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloroethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
2,2-Dichloropropane	ND	0.0500	US Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chloroform	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichloroethane (EDC)	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Benzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Trichloroethene (TCE)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichloropropane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromodichloromethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Dibromomethane	ND	0.0400		mg/Kg-dry	1	7/22/2016 6:04:14 AM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Toluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
trans-1,3-Dichloropropylene	ND	0.0300	US Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,2-Trichloroethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3-Dichloropropane	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
m,p-Xylene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
o-Xylene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Styrene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Isopropylbenzene	ND	0.0800		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromoform	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM

Original

Handwritten signature and date: JS 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 9:15:00 AM

Project: Bethel Junction

Lab ID: 1607173-015

Matrix: Soil

Client Sample ID: SB-23-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
n-Propylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Bromobenzene	ND	0.0300		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3,5-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,4-Trichlorobenzene	ND	0.0500		mg/Kg-dry	1	7/22/2016 6:04:14 AM
sec-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
4-Isopropyltoluene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2-Dibromo-3-chloropropane	ND	0.500	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Hexachlorobutadiene	ND	0.100		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Naphthalene	ND	0.0300	Q	mg/Kg-dry	1	7/22/2016 6:04:14 AM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	7/22/2016 6:04:14 AM
Surr: Dibromofluoromethane	95.2	56.5-129		%Rec	1	7/22/2016 6:04:14 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 6:04:14 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	63.1-141		%Rec	1	7/22/2016 6:04:14 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	17.0	0.500		wt%	1	7/20/2016 9:57:51 AM
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Handwritten signature and date: 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-016

Matrix: Water

Client Sample ID: SB-23-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Vinyl chloride	ND	0.200		µg/L	1	7/21/2016 10:21:51 PM
Bromomethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Methylene chloride	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
2,2-Dichloropropane	ND	2.00	U5 Q	µg/L	1	7/21/2016 10:21:51 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Chloroform	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Benzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Dibromomethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Toluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Dibromochloromethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/21/2016 10:21:51 PM
Chlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Ethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
m,p-Xylene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
o-Xylene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Styrene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromoform	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM

Original

RC
7/28/16



Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-016

Matrix: Water

Client Sample ID: SB-23-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Bromobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/21/2016 10:21:51 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/21/2016 10:21:51 PM
Naphthalene	ND	1.00		µg/L	1	7/21/2016 10:21:51 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/21/2016 10:21:51 PM
Surr: Dibromofluoromethane	98.0	45.4-152		%Rec	1	7/21/2016 10:21:51 PM
Surr: Toluene-d8	95.9	40.1-139		%Rec	1	7/21/2016 10:21:51 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	64.2-128		%Rec	1	7/21/2016 10:21:51 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Handwritten signature and date: NG 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 10:50:00 AM

Project: Bethel Junction

Lab ID: 1607173-017

Matrix: Soil

Client Sample ID: SB-22-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloromethane	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Vinyl chloride	ND	0.00201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromomethane	ND	0.0903		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Trichlorofluoromethane (CFC-11)	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloroethane	ND	0.0602		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloroethene	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Methylene chloride	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
trans-1,2-Dichloroethene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.0501	VS Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloroethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
2,2-Dichloropropane	ND	0.0501	VS Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
cis-1,2-Dichloroethene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chloroform	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,1-Trichloroethane (TCA)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1-Dichloropropene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Carbon tetrachloride	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichloroethane (EDC)	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Benzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Trichloroethene (TCE)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichloropropane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromodichloromethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Dibromomethane	ND	0.0401		mg/Kg-dry	1	7/22/2016 6:33:25 AM
cis-1,3-Dichloropropene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Toluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
trans-1,3-Dichloropropylene	ND	0.0301	VS Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,2-Trichloroethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3-Dichloropropane	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Tetrachloroethene (PCE)	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Dibromochloromethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dibromoethane (EDB)	ND	0.00501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Chlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,1,1,2-Tetrachloroethane	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Ethylbenzene	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
m,p-Xylene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
o-Xylene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Styrene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Isopropylbenzene	ND	0.0802		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromoform	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM

Original

Handwritten signature and date: 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.
 Project: Bethel Junction
 Lab ID: 1607173-017
 Client Sample ID: SB-22-3

Collection Date: 7/18/2016 10:50:00 AM
 Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
n-Propylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Bromobenzene	ND	0.0301		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3,5-Trimethylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
2-Chlorotoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
4-Chlorotoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
tert-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,3-Trichloropropane	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,4-Trichlorobenzene	ND	0.0501		mg/Kg-dry	1	7/22/2016 6:33:25 AM
sec-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
4-Isopropyltoluene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,3-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,4-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
n-Butylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2-Dibromo-3-chloropropane	ND	0.501	JS Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,4-Trimethylbenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Hexachlorobutadiene	ND	0.100		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Naphthalene	ND	0.0301	JS Q	mg/Kg-dry	1	7/22/2016 6:33:25 AM
1,2,3-Trichlorobenzene	ND	0.0201		mg/Kg-dry	1	7/22/2016 6:33:25 AM
Surr: Dibromofluoromethane	95.6	56.5-129		%Rec	1	7/22/2016 6:33:25 AM
Surr: Toluene-d8	96.7	64.3-131		%Rec	1	7/22/2016 6:33:25 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	63.1-141		%Rec	1	7/22/2016 6:33:25 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	11.4	0.500		wt%	1	7/20/2016 9:57:51 AM
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JS
7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-018

Matrix: Soil

Client Sample ID: SB-22-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloromethane	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Vinyl chloride	ND	0.00272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromomethane	ND	0.122		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloroethane	ND	0.0816		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloroethene	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Methylene chloride	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
trans-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0680	VJ Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloroethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
2,2-Dichloropropane	ND	0.0680	VJ Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
cis-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chloroform	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1-Dichloropropene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Carbon tetrachloride	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichloroethane (EDC)	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Benzene	0.0693	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Trichloroethene (TCE)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichloropropane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromodichloromethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Dibromomethane	ND	0.0544		mg/Kg-dry	1	7/22/2016 8:29:56 AM
cis-1,3-Dichloropropene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Toluene	0.198	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
trans-1,3-Dichloropropylene	ND	0.0408	VJ Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,2-Trichloroethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3-Dichloropropane	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Tetrachloroethene (PCE)	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Dibromochloromethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dibromoethane (EDB)	ND	0.00680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Chlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Ethylbenzene	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
m,p-Xylene	0.0455	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
o-Xylene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Styrene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Isopropylbenzene	ND	0.109		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromoform	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM

Original



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:00:00 AM

Project: Bethel Junction

Lab ID: 1607173-018

Matrix: Soil

Client Sample ID: SB-22-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
n-Propylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Bromobenzene	ND	0.0408		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3,5-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
2-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
4-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
tert-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,3-Trichloropropane	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,4-Trichlorobenzene	ND	0.0680		mg/Kg-dry	1	7/22/2016 8:29:56 AM
sec-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
4-Isopropyltoluene	1.55	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,3-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,4-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
n-Butylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2-Dibromo-3-chloropropane	ND	0.680	VJ Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,4-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Hexachlorobutadiene	ND	0.136		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Naphthalene	ND	0.0408	VJ Q	mg/Kg-dry	1	7/22/2016 8:29:56 AM
1,2,3-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	7/22/2016 8:29:56 AM
Surr: Dibromofluoromethane	99.2	56.5-129		%Rec	1	7/22/2016 8:29:56 AM
Surr: Toluene-d8	101	64.3-131		%Rec	1	7/22/2016 8:29:56 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%Rec	1	7/22/2016 8:29:56 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	12.9	0.500		wt%	1	7/20/2016 9:57:51 AM
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Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-019

Matrix: Soil

Client Sample ID: SB-22-9.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloromethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Vinyl chloride	ND	0.00188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromomethane	ND	0.0846		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Trichlorofluoromethane (CFC-11)	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloroethane	ND	0.0564		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloroethene	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Methylene chloride	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
trans-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Methyl tert-butyl ether (MTBE)	ND	0.0470	VJ Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloroethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
2,2-Dichloropropane	ND	0.0470	VJ Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
cis-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chloroform	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,1-Trichloroethane (TCA)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1-Dichloropropene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Carbon tetrachloride	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichloroethane (EDC)	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Benzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Trichloroethene (TCE)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichloropropane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromodichloromethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Dibromomethane	ND	0.0376		mg/Kg-dry	1	7/22/2016 8:59:01 AM
cis-1,3-Dichloropropene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Toluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
trans-1,3-Dichloropropylene	ND	0.0282	VJ Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,2-Trichloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3-Dichloropropane	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Tetrachloroethene (PCE)	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Dibromochloromethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dibromoethane (EDB)	ND	0.00470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Chlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,1,1,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Ethylbenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
m,p-Xylene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
o-Xylene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Styrene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Isopropylbenzene	ND	0.0752		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromoform	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM

Handwritten signature and date: Jc 7/28/16



Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:10:00 AM

Project: Bethel Junction

Lab ID: 1607173-019

Matrix: Soil

Client Sample ID: SB-22-9.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14317

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
n-Propylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Bromobenzene	ND	0.0282		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3,5-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
2-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
4-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
tert-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,3-Trichloropropane	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,4-Trichlorobenzene	ND	0.0470		mg/Kg-dry	1	7/22/2016 8:59:01 AM
sec-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
4-Isopropyltoluene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
n-Butylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2-Dibromo-3-chloropropane	ND	0.470	US Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Hexachlorobutadiene	ND	0.0941		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Naphthalene	ND	0.0282	US Q	mg/Kg-dry	1	7/22/2016 8:59:01 AM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	7/22/2016 8:59:01 AM
Surr: Dibromofluoromethane	98.0	56.5-129		%Rec	1	7/22/2016 8:59:01 AM
Surr: Toluene-d8	100	64.3-131		%Rec	1	7/22/2016 8:59:01 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	63.1-141		%Rec	1	7/22/2016 8:59:01 AM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R30665

Analyst: ME

Percent Moisture	13.3	0.500		wt%	1	7/20/2016 9:57:51 AM
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Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-020

Matrix: Water

Client Sample ID: SB-22-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Vinyl chloride	ND	0.200		µg/L	1	7/21/2016 10:52:23 PM
Bromomethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Methylene chloride	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
2,2-Dichloropropane	ND	2.00	✓ Q	µg/L	1	7/21/2016 10:52:23 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Chloroform	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Carbon tetrachloride	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Benzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromodichloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Dibromomethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Toluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Dibromochloromethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	7/21/2016 10:52:23 PM
Chlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Ethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
m,p-Xylene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
o-Xylene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Styrene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Isopropylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromoform	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM

Original

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Analytical Report

WO#: 1607173

Date Reported: 7/22/2016

Client: PES Environmental, Inc.

Collection Date: 7/18/2016 11:45:00 AM

Project: Bethel Junction

Lab ID: 1607173-020

Matrix: Water

Client Sample ID: SB-22-071816

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14322

Analyst: NG

1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
n-Propylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Bromobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
2-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
4-Chlorotoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
tert-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	7/21/2016 10:52:23 PM
sec-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
n-Butylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	7/21/2016 10:52:23 PM
Naphthalene	ND	1.00		µg/L	1	7/21/2016 10:52:23 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	7/21/2016 10:52:23 PM
Surr: Dibromofluoromethane	96.4	45.4-152		%Rec	1	7/21/2016 10:52:23 PM
Surr: Toluene-d8	94.3	40.1-139		%Rec	1	7/21/2016 10:52:23 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	64.2-128		%Rec	1	7/21/2016 10:52:23 PM

NOTES:

Q - Indicates an analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Handwritten signature and date: JC 7/22/16



PES Environmental, Inc.

Brian O'Neal
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction

Lab ID: 1608081

August 16, 2016

Attention Brian O'Neal:

Fremont Analytical, Inc. received 1 sample(s) on 8/9/2016 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,

Chelsea Ward
Project Manager



Date: 08/16/2016

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Lab Order: 1608081

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1608081-001	SYS-080816	08/08/2016 1:45 PM	08/09/2016 12:25 PM

CLIENT: PES Environmental, Inc.

Project: Bethel Junction

WorkOrder Narrative:

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.

Standard temperature and pressure assumes 24.45 = (25C and 1 atm).

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: PES Environmental, Inc.

WorkOrder: 1608081

Project: Bethel Junction

Client Sample ID: SYS-080816

Date Sampled: 8/8/2016

Lab ID: 1608081-001A

Date Received: 8/9/2016

Sample Type: Summa Canister

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
<u>Volatile Organic Compounds by EPA Method TO-15</u>					
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)	
1,1,1-Trichloroethane	<0.200	<1.09	0.200	1.09	EPA-TO-15 08/13/2016 BC
1,1,2,2-Tetrachloroethane	<0.300	<2.06	0.300	2.06	EPA-TO-15 08/13/2016 BC
CFC-113	<0.500	<3.83	0.500	3.83	EPA-TO-15 08/13/2016 BC
1,1,2-Trichloroethane (TCA)	<0.500	<2.73	0.500	2.73	EPA-TO-15 08/13/2016 BC
1,1-Dichloroethane	<0.200	<0.810	0.200	0.810	EPA-TO-15 08/13/2016 BC
1,1-Dichloroethene (DCE)	<0.200	<0.793	0.200	0.793	EPA-TO-15 08/13/2016 BC
1,2,4-Trichlorobenzene	<0.300	<2.23	0.300	2.23	EPA-TO-15 08/13/2016 BC
1,2,4-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15 08/13/2016 BC
1,2-Dibromoethane (EDB)	<0.200	<1.54	0.200	1.54	EPA-TO-15 08/13/2016 BC
1,2-Dichlorobenzene	<0.500	<3.01	0.500	3.01	EPA-TO-15 08/13/2016 BC
1,2-Dichloroethane	<0.200	<0.809	0.200	0.809	EPA-TO-15 08/13/2016 BC
1,2-Dichloropropane	<0.500	<2.31	0.500	2.31	EPA-TO-15 08/13/2016 BC
1,3,5-Trimethylbenzene	<0.300	<1.47	0.300	1.47	EPA-TO-15 08/13/2016 BC
1,3-Butadiene	<0.500	<1.11	0.500	1.11	EPA-TO-15 08/13/2016 BC
1,3-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 08/13/2016 BC
1,4-Dichlorobenzene	<0.300	<1.80	0.300	1.80	EPA-TO-15 08/13/2016 BC
1,4-Dioxane	<1.00	<3.60	1.00	3.60	EPA-TO-15 08/13/2016 BC
(MEK) 2-Butanone	<0.500	<1.47	0.500	1.47	EPA-TO-15 08/13/2016 BC
2-Hexanone	<1.00	<4.10	1.00	4.10	EPA-TO-15 08/13/2016 BC
Isopropyl Alcohol	1.33	3.27	1.00	2.46	EPA-TO-15 08/13/2016 BC
4-Methyl-2-pentanone (MIBK)	<1.00	<4.10	1.00	4.10	EPA-TO-15 08/13/2016 BC
Acetone	5.49	13.0	1.00	2.38	EPA-TO-15 08/13/2016 BC
Acrolein	<0.500	<1.15	0.500	1.15	EPA-TO-15 08/13/2016 BC
Benzene	<0.200	<0.639	0.200	0.639	EPA-TO-15 08/13/2016 BC
Benzyl chloride	<0.500	<2.59	0.500	2.59	EPA-TO-15 08/13/2016 BC
Dichlorobromomethane	<0.300	<2.01	0.300	2.01	EPA-TO-15 08/13/2016 BC
Bromoform	<0.200	<2.07	0.200	2.07	EPA-TO-15 08/13/2016 BC
Bromomethane	<0.500	<1.94	0.500	1.94	EPA-TO-15 08/13/2016 BC
Carbon disulfide	<1.50	<4.67	1.50	4.67	EPA-TO-15 08/13/2016 BC
Carbon tetrachloride	<0.200	<1.26	0.200	1.26	EPA-TO-15 08/13/2016 BC



Client: PES Environmental, Inc.

WorkOrder: 1608081

Project: Bethel Junction

Client Sample ID: SYS-080816

Date Sampled: 8/8/2016

Lab ID: 1608081-001A

Date Received: 8/9/2016

Sample Type: Summa Canister

Analyte	Concentration		Reporting Limit		Qual	Method	Date/Analyst	
<u>Volatile Organic Compounds by EPA Method TO-15</u>								
	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)				
Chlorobenzene	<0.200	<0.921	0.200	0.921		EPA-TO-15	08/13/2016	BC
Dibromochloromethane	<0.500	<4.26	0.500	4.26		EPA-TO-15	08/13/2016	BC
Chloroethane	<0.500	<1.32	0.500	1.32		EPA-TO-15	08/13/2016	BC
Chloroform	<0.200	<0.977	0.200	0.977		EPA-TO-15	08/13/2016	BC
Chloromethane	<0.500	<1.03	0.500	1.03		EPA-TO-15	08/13/2016	BC
cis-1,2-Dichloroethene	4.00	15.9	3.20	12.7		EPA-TO-15	08/13/2016	BC
cis-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	08/13/2016	BC
Cyclohexane	<0.200	<0.688	0.200	0.688		EPA-TO-15	08/13/2016	BC
Dichlorodifluoromethane (CFC-12)	<0.300	<1.48	0.300	1.48		EPA-TO-15	08/13/2016	BC
Dichlorotetrafluoroethane (CFC-114)	<0.500	<3.50	0.500	3.50		EPA-TO-15	08/13/2016	BC
Ethyl acetate	<1.00	<3.60	1.00	3.60		EPA-TO-15	08/13/2016	BC
Ethylbenzene	<0.300	<1.30	0.300	1.30		EPA-TO-15	08/13/2016	BC
Heptane	<0.500	<2.01	0.500	2.01		EPA-TO-15	08/13/2016	BC
Hexachlorobutadiene	<1.00	<10.7	1.00	10.7		EPA-TO-15	08/13/2016	BC
m,p-Xylene	<0.200	<0.868	0.200	0.868		EPA-TO-15	08/13/2016	BC
Methyl methacrylate	<0.300	<1.23	0.300	1.23		EPA-TO-15	08/13/2016	BC
Methylene chloride	<1.50	<5.21	1.50	5.21		EPA-TO-15	08/13/2016	BC
Naphthalene	0.300	1.57	0.300	1.57		EPA-TO-15	08/13/2016	BC
Hexane	0.390	1.37	0.200	0.705		EPA-TO-15	08/13/2016	BC
o-Xylene	<0.200	<0.868	0.200	0.868		EPA-TO-15	08/13/2016	BC
4-Ethyltoluene	<0.300	<1.47	0.300	1.47		EPA-TO-15	08/13/2016	BC
Propylene	4.95	8.52	0.500	0.861		EPA-TO-15	08/13/2016	BC
Styrene	0.430	1.83	0.300	1.28		EPA-TO-15	08/13/2016	BC
Methyl tert-butyl ether (MTBE)	<0.200	<0.721	0.200	0.721		EPA-TO-15	08/13/2016	BC
Tetrachloroethene (PCE)	23.4	158	4.80	32.6		EPA-TO-15	08/13/2016	BC
Tetrahydrofuran	<0.500	<1.47	0.500	1.47		EPA-TO-15	08/13/2016	BC
Toluene	<0.200	<0.754	0.200	0.754		EPA-TO-15	08/13/2016	BC
trans-1,2-Dichloroethene	0.660	2.62	0.200	0.793		EPA-TO-15	08/13/2016	BC
trans-1,3-dichloropropene	<0.500	<2.27	0.500	2.27		EPA-TO-15	08/13/2016	BC
Trichloroethene (TCE)	3.68	19.8	0.200	1.07		EPA-TO-15	08/13/2016	BC



Client: PES Environmental, Inc.
WorkOrder: 1608081
Project: Bethel Junction

Client Sample ID: SYS-080816
Lab ID: 1608081-001A
Sample Type: Summa Canister

Date Sampled: 8/8/2016
Date Received: 8/9/2016

Analyte	Concentration	Reporting Limit	Qual	Method	Date/Analyst
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Volatile Organic Compounds by EPA Method TO-15

	(ppbv)	(ug/m ³)	(ppbv)	(ug/m ³)			
Trichlorofluoromethane (CFC-11)	<0.300	<1.69	0.300	1.69	EPA-TO-15	08/13/2016	BC
Vinyl acetate	<1.00	<3.52	1.00	3.52	EPA-TO-15	08/13/2016	BC
Vinyl chloride	0.860	2.20	0.200	0.511	EPA-TO-15	08/13/2016	BC
Surr: 4-Bromofluorobenzene	96.7 %Rec	--	70-130	--	EPA-TO-15	08/13/2016	BC

Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID LCS-R31157	SampType: LCS	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157							
Client ID: LCSW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587940							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Propylene	4.29	0.500	5.000	0	85.8	70	130				
Dichlorodifluoromethane (CFC-12)	4.50	0.300	5.000	0	90.0	70	130				
Chloromethane	4.28	0.500	5.000	0	85.6	70	130				
Dichlorotetrafluoroethane (CFC-114)	4.36	0.500	5.000	0	87.2	70	130				
Vinyl chloride	4.31	0.200	5.000	0	86.2	70	130				
1,3-Butadiene	4.31	0.500	5.000	0	86.2	70	130				
Bromomethane	4.34	0.500	5.000	0	86.8	70	130				
Trichlorofluoromethane (CFC-11)	4.33	0.300	5.000	0	86.6	70	130				
Chloroethane	4.09	0.500	5.000	0	81.8	70	130				
Acrolein	4.21	0.500	5.000	0	84.2	70	130				
1,1-Dichloroethene (DCE)	4.25	0.200	5.000	0	85.0	70	130				
Acetone	4.31	1.00	5.000	0	86.2	70	130				
Isopropyl Alcohol	4.36	1.00	5.000	0	87.2	70	130				
Methylene chloride	4.51	1.50	5.000	0	90.2	70	130				
Carbon disulfide	4.36	1.50	5.000	0	87.2	70	130				
trans-1,2-Dichloroethene	4.37	0.200	5.000	0	87.4	70	130				
Methyl tert-butyl ether (MTBE)	4.44	0.200	5.000	0	88.8	70	130				
Hexane	4.21	0.200	5.000	0	84.2	70	130				
1,1-Dichloroethane	4.21	0.200	5.000	0	84.2	70	130				
Vinyl acetate	4.31	1.00	5.000	0	86.2	70	130				
cis-1,2-Dichloroethene	4.39	0.200	5.000	0	87.8	70	130				
(MEK) 2-Butanone	3.93	0.500	5.000	0	78.6	70	130				
Ethyl acetate	4.16	1.00	5.000	0	83.2	70	130				
Chloroform	4.33	0.200	5.000	0	86.6	70	130				
Tetrahydrofuran	4.38	0.500	5.000	0	87.6	70	130				
1,1,1-Trichloroethane	4.38	0.200	5.000	0	87.6	70	130				
Carbon tetrachloride	4.35	0.200	5.000	0	87.0	70	130				
1,2-Dichloroethane	4.23	0.200	5.000	0	84.6	70	130				
Benzene	4.24	0.200	5.000	0	84.8	70	130				
Cyclohexane	4.24	0.200	5.000	0	84.8	70	130				
Trichloroethene (TCE)	4.41	0.200	5.000	0	88.2	70	130				

Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID LCS-R31157	SampType: LCS	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157
Client ID: LCSW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587940

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	4.34	0.500	5.000	0	86.8	70	130				
Methyl methacrylate	4.31	0.300	5.000	0	86.2	70	130				
Dichlorobromomethane	4.25	0.300	5.000	0	85.0	70	130				
1,4-Dioxane	4.25	1.00	5.000	0	85.0	70	130				
cis-1,3-dichloropropene	4.31	0.500	5.000	0	86.2	70	130				
Toluene	4.26	0.200	5.000	0	85.2	70	130				
trans-1,3-dichloropropene	4.28	0.500	5.000	0	85.6	70	130				
1,1,2-Trichloroethane (TCA)	4.30	0.500	5.000	0	86.0	70	130				
Tetrachloroethene (PCE)	4.34	0.300	5.000	0	86.8	70	130				
Dibromochloromethane	4.46	0.500	5.000	0	89.2	70	130				
1,2-Dibromoethane (EDB)	4.43	0.200	5.000	0	88.6	70	130				
Chlorobenzene	4.53	0.200	5.000	0	90.6	70	130				
Ethylbenzene	4.61	0.300	5.000	0	92.2	70	130				
m,p-Xylene	8.99	0.200	10.00	0	89.9	70	130				
o-Xylene	4.51	0.200	5.000	0	90.2	70	130				
Styrene	4.45	0.300	5.000	0	89.0	70	130				
Bromoform	4.49	0.200	5.000	0	89.8	70	130				
1,1,1,2-Tetrachloroethane	4.47	0.300	5.000	0	89.4	70	130				
1,3,5-Trimethylbenzene	4.44	0.300	5.000	0	88.8	70	130				
1,2,4-Trimethylbenzene	4.53	0.300	5.000	0	90.6	70	130				
Benzyl chloride	4.57	0.500	5.000	0	91.4	70	130				
4-Ethyltoluene	4.86	0.300	5.000	0	97.2	70	130				
1,3-Dichlorobenzene	4.42	0.300	5.000	0	88.4	70	130				
1,4-Dichlorobenzene	4.46	0.300	5.000	0	89.2	70	130				
1,2-Dichlorobenzene	4.52	0.500	5.000	0	90.4	70	130				
1,2,4-Trichlorobenzene	4.23	0.300	5.000	0	84.6	70	130				
Hexachlorobutadiene	4.25	1.00	5.000	0	85.0	70	130				
Naphthalene	4.95	0.300	5.000	0	99.0	70	130				
2-Hexanone	4.33	1.00	5.000	0	86.6	70	130				
4-Methyl-2-pentanone (MIBK)	4.52	1.00	5.000	0	90.4	70	130				
CFC-113	4.48	0.500	5.000	0	89.6	70	130				

Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID LCS-R31157	SampType: LCS	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157							
Client ID: LCSW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587940							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Heptane	4.42	0.500	5.000	0	88.4	70	130				
Surr: 4-Bromofluorobenzene	9.73		10.00		97.3	70	130				

Sample ID MB-R31157	SampType: MBLK	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157							
Client ID: MBLKW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587942							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics	ND	1.00									
Propylene	ND	0.500									
Dichlorodifluoromethane (CFC-12)	ND	0.300									
Chloromethane	ND	0.500									
Dichlorotetrafluoroethane (CFC-114)	ND	0.500									
Vinyl chloride	ND	0.200									
1,3-Butadiene	ND	0.500									
Bromomethane	ND	0.500									
Trichlorofluoromethane (CFC-11)	ND	0.300									
Chloroethane	ND	0.500									
Acrolein	ND	0.500									
1,1-Dichloroethene (DCE)	ND	0.200									
Acetone	ND	1.00									
Isopropyl Alcohol	ND	1.00									
Methylene chloride	ND	1.50									
Carbon disulfide	ND	1.50									
trans-1,2-Dichloroethene	ND	0.200									
Methyl tert-butyl ether (MTBE)	ND	0.200									
Hexane	ND	0.200									
1,1-Dichloroethane	ND	0.200									
Vinyl acetate	ND	1.00									
cis-1,2-Dichloroethene	ND	0.200									
(MEK) 2-Butanone	ND	0.500									



Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID MB-R31157	SampType: MBLK	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157							
Client ID: MBLKW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587942							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ethyl acetate	ND	1.00									
Chloroform	ND	0.200									
Tetrahydrofuran	ND	0.500									
1,1,1-Trichloroethane	ND	0.200									
Carbon tetrachloride	ND	0.200									
1,2-Dichloroethane	ND	0.200									
Benzene	ND	0.200									
Cyclohexane	ND	0.200									
Trichloroethene (TCE)	ND	0.200									
1,2-Dichloropropane	ND	0.500									
Methyl methacrylate	ND	0.300									
Dichlorobromomethane	ND	0.300									
1,4-Dioxane	ND	1.00									
cis-1,3-dichloropropene	ND	0.500									
Toluene	ND	0.200									
trans-1,3-dichloropropene	ND	0.500									
1,1,2-Trichloroethane (TCA)	ND	0.500									
Tetrachloroethene (PCE)	ND	0.300									
Dibromochloromethane	ND	0.500									
1,2-Dibromoethane (EDB)	ND	0.200									
Chlorobenzene	ND	0.200									
Ethylbenzene	ND	0.300									
m,p-Xylene	ND	0.200									
o-Xylene	ND	0.200									
Styrene	ND	0.300									
Bromoform	ND	0.200									
1,1,1,2-Tetrachloroethane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.300									
1,2,4-Trimethylbenzene	ND	0.300									
Benzyl chloride	ND	0.500									
4-Ethyltoluene	ND	0.300									

Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID MB-R31157	SampType: MBLK	Units: ppbv	Prep Date: 8/12/2016	RunNo: 31157							
Client ID: MBLKW	Batch ID: R31157		Analysis Date: 8/12/2016	SeqNo: 587942							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.300									
1,4-Dichlorobenzene	ND	0.300									
1,2-Dichlorobenzene	ND	0.500									
1,2,4-Trichlorobenzene	ND	0.300									
Hexachlorobutadiene	ND	1.00									
Naphthalene	ND	0.300									
2-Hexanone	ND	1.00									
4-Methyl-2-pentanone (MIBK)	ND	1.00									
CFC-113	ND	0.500									
Heptane	ND	0.500									
Surr: 4-Bromofluorobenzene	9.72		10.00		97.2	70	130				

Sample ID 1608096-001AREP	SampType: REP	Units: ppbv	Prep Date: 8/13/2016	RunNo: 31157							
Client ID: BATCH	Batch ID: R31157		Analysis Date: 8/13/2016	SeqNo: 587939							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	1.00						0		30	
Propylene	ND	0.500						0		30	
Dichlorodifluoromethane (CFC-12)	ND	0.300						0		30	
Chloromethane	ND	0.500						0		30	
Dichlorotetrafluoroethane (CFC-114)	ND	0.500						0		30	
Vinyl chloride	ND	0.200						0		30	
1,3-Butadiene	ND	0.500						0		30	
Bromomethane	ND	0.500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.300						0		30	
Chloroethane	ND	0.500						0		30	
Acrolein	ND	0.500						0		30	
1,1-Dichloroethene (DCE)	ND	0.200						0		30	
Acetone	ND	1.00						0		30	
Isopropyl Alcohol	ND	1.00						0		30	



Work Order: 1608081
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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

Sample ID 1608096-001AREP	SampType: REP	Units: ppbv	Prep Date: 8/13/2016	RunNo: 31157							
Client ID: BATCH	Batch ID: R31157		Analysis Date: 8/13/2016	SeqNo: 587939							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	ND	1.50						0		30	
Carbon disulfide	ND	1.50						0		30	
trans-1,2-Dichloroethene	ND	0.200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.200						0		30	
Hexane	ND	0.200						0		30	
1,1-Dichloroethane	ND	0.200						0		30	
Vinyl acetate	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	0.200						0		30	
(MEK) 2-Butanone	ND	0.500						0		30	
Ethyl acetate	ND	1.00						0		30	
Chloroform	3.38	0.200						3.220	4.85	30	
Tetrahydrofuran	ND	0.500						0		30	
1,1,1-Trichloroethane	ND	0.200						0		30	
Carbon tetrachloride	ND	0.200						0		30	
1,2-Dichloroethane	ND	0.200						0		30	
Benzene	ND	0.200						0		30	
Cyclohexane	ND	0.200						0		30	
Trichloroethene (TCE)	ND	0.200						0		30	
1,2-Dichloropropane	ND	0.500						0		30	
Methyl methacrylate	ND	0.300						0		30	
Dichlorobromomethane	ND	0.300						0		30	
1,4-Dioxane	ND	1.00						0		30	
cis-1,3-dichloropropene	ND	0.500						0		30	
Toluene	0.610	0.200						0.5700	6.78	30	
trans-1,3-dichloropropene	ND	0.500						0		30	
1,1,2-Trichloroethane (TCA)	ND	0.500						0		30	
Tetrachloroethene (PCE)	1.43	0.300						1.260	12.6	30	
Dibromochloromethane	ND	0.500						0		30	
1,2-Dibromoethane (EDB)	ND	0.200						0		30	
Chlorobenzene	ND	0.200						0		30	
Ethylbenzene	ND	0.300						0		30	



Work Order: 1608081
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

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

Sample ID 1608096-001AREP	SampType: REP	Units: ppbv	Prep Date: 8/13/2016	RunNo: 31157							
Client ID: BATCH	Batch ID: R31157		Analysis Date: 8/13/2016	SeqNo: 587939							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

m,p-Xylene	ND	0.200						0		30	
o-Xylene	ND	0.200						0		30	
Styrene	ND	0.300						0		30	
Bromoform	ND	0.200						0		30	
1,1,2,2-Tetrachloroethane	ND	0.300						0		30	
1,3,5-Trimethylbenzene	ND	0.300						0		30	
1,2,4-Trimethylbenzene	0.440	0.300						0.4300	2.30	30	
Benzyl chloride	ND	0.500						0		30	
4-Ethyltoluene	ND	0.300						0		30	
1,3-Dichlorobenzene	ND	0.300						0		30	
1,4-Dichlorobenzene	ND	0.300						0		30	
1,2-Dichlorobenzene	ND	0.500						0		30	
1,2,4-Trichlorobenzene	ND	0.300						0		30	
Hexachlorobutadiene	ND	1.00						0		30	
Naphthalene	ND	0.300						0		30	
2-Hexanone	ND	1.00						0		30	
4-Methyl-2-pentanone (MIBK)	ND	1.00						0		30	
CFC-113	ND	0.500						0		30	
Heptane	ND	0.500						0		30	
Surr: 4-Bromofluorobenzene	9.43		10.00		94.3	70	130		0		

Client Name: **PES**

Work Order Number: **1608081**

Logged by: **Clare Griggs**

Date Received: **8/9/2016 12:25:00 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 Sample**
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont Analytical
 3600 Fremont Ave N.
 Seattle, WA 98103
 Tel: 206-352-3790
 Fax: 206-352-7178

Air Chain of Custody Record & Laboratory Services Agreement

Laboratory Project No (Internal):

1008081

Date: 8-8-16 Page: 1 of 1
 Project Name: Bellel Junction
 Project No: 1246.0308001 Collected by: K. Spruytstad

Client: PES Environmental, Inc.
 Address: 1215 4th Ave STE 1350
 City, State, zip: Seattle, WA 98161
 Telephone: 206-524-3980 Fax: _____

Location: Port Orkney, WA
 Reports to (PM): Brian D'neal
 Email (PM): Bdneal@pessent.com

* Gas Matrix Codes: I = Indoor SS = Subslab L = Landfill SG = Soil Gas M = Plume Mapping Q = Fuel Gas Quality L = LEED (Consult Client Services)
 ** Container Codes: 6L = Six Liter Canister (Summa) TB = Tedlar Bag BV = 1 Liter Bottle Vac MC = 1 Liter Minican HP = High Pressure Cylinder HJ = Glass Headspace Jar

Sample Name	Canister / Flow Reg Serial #	Sample Date & Time	Gas Matrix Code *	Anticipated Fill Time	Sample Volume	Container Type **	Internal			Field Initial Sample Pressure ("Hg)	Field Final Sample Pressure ("Hg)	Analysis Requested	Internal		
							Evacuation Pressure (mmHg)	Pressure at Time of Pick-up ("Hg)	Equipment Certification Code				Receipt Date	Final Pressure ("Hg)	
1 <u>575-080816</u>	13968	<u>8-8-16</u>	<u>SG1</u>	<u>Grab</u>	<u>6L</u>	<u>Summa</u>	<u>10 mTorr</u>	<u>7/19/16 17:00</u>	<u>85/116</u>	<u>30</u>	<u>30</u>	<u>4</u>	<u>TD-15</u>	<u>8/9</u>	<u>4</u>
4															
4															
4															
5															

Condition: _____ Seals Intact: Y N N/A Turn-around times for samples received after 4:00pm will begin on the following business day.

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished [Signature] Date/Time 8-9-16/1224 Received [Signature] Date/Time 8/9/16 12:25
 Relinquished [Signature] Date/Time _____ Received [Signature] Date/Time _____

TAT -> STB Rush (specify)

MEMORANDUM

TO: Project File **DATE:** September 7, 2016
FROM: Jessie Compeau
SUBJECT: Laboratory Data Validation Review
PROJECT: Bethel Junction - Air Sampling Data Review
PROJECT #: 1246.030.03.002
TASK: August 8, 2016 Air Sample
LAB: Fremont Analytical Service Request No. 1608081

One air sample was collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on August 8, 2016. The air sample was analyzed for VOCs by USEPA Method TO-15. Laboratory analytical services were provided by Fremont Analytical (FA) of Seattle, Washington. FA Project number: 1608081.

The quality assurance review of the laboratory data is summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for review of analytical data were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999).

DATA VALIDATION

Completeness

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa canister for the air sample. The sample was hand delivered and received in good condition by the laboratory. Summa canisters do not require preservation or cooling. The samples were collected, handled, and delivered in an appropriate manner. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for TO-15 VOCs was performed within five days of sample collection. This is within the 30-day recommended holding time limit for air samples collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. The case narrative did not indicate any issues with calibration; therefore no qualifications were warranted.

Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The method blank results did not report any compounds at concentrations at or above the MRLs. No data qualifications were warranted.

Trip Blank Results

A trip blank was not required for the TO-15 analyses. No qualifications were warranted due to the lack of a trip blank for this method.

Field Duplicate Analyses

No field duplicates were required or collected during this field event.

Laboratory Duplicate Analyses

A laboratory duplicate was performed on non-client sample analyzed within the same batch. The relative percent differences (RPDs) for these all target compounds were within the laboratory control limits (30% RPD). No qualifications were warranted.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the TO-15 air sample, method blank, duplicate and laboratory control sample were within the laboratory surrogate control limits of 70 -130% R. No data qualifications were warranted.

Laboratory Control Samples

One laboratory control sample (LCS) was run for the TO-15 analytical group sample. The LCS was run at the appropriate frequency for this project. The LCS recovery results for all control compounds met the % R acceptance criteria of 70 -130% % R.

Matrix Spike/Matrix Spike Duplicates

A MS/MSD is not required for the TO-15 method.

Other Quality Control Issues

No other laboratory quality control issues were identified in the laboratory report.

Quantitation Limits

Results of the TO-15 VOC analysis were reported based on laboratory MRLs. The MRLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The MRLs and MDL were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

No data qualifiers were assigned. All data are judged to be acceptable for their intended use.



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

PES Environmental, Inc.

Brian O'Neal
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction

Lab ID: 1609223

September 26, 2016

Attention Brian O'Neal:

Fremont Analytical, Inc. received 3 sample(s) on 9/19/2016 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260C

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 "Chelsea Ward".

Chelsea Ward
Project Manager

DoD/ELAP Certification #L2371, ISO/ICC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 09/26/2016

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Lab Order: 1609223

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1609223-001	SB-24-3	09/18/2016 10:30 AM	09/19/2016 8:13 AM
1609223-002	SB-25-3	09/18/2016 12:00 PM	09/19/2016 8:13 AM
1609223-003	SB-26-3	09/18/2016 1:30 PM	09/19/2016 8:13 AM

CLIENT: PES Environmental, Inc.

Project: Bethel Junction

I. SAMPLE RECEIPT:

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

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. 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 and the MS/MSD 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.

Qualifiers:

- * - Flagged value is not within established control limits
- 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
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Client: PES Environmental, Inc.

Collection Date: 9/18/2016 10:30:00 AM

Project: Bethel Junction

Lab ID: 1609223-001

Matrix: Soil

Client Sample ID: SB-24-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0773		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloromethane	ND	0.0773		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Vinyl chloride	ND	0.00258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromomethane	ND	0.116		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Trichlorofluoromethane (CFC-11)	ND	0.0644	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloroethane	ND	0.0773	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloroethene	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Methylene chloride	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
trans-1,2-Dichloroethene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Methyl tert-butyl ether (MTBE)	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloroethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
2,2-Dichloropropane	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
cis-1,2-Dichloroethene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloroform	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,1-Trichloroethane (TCA)	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloropropene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Carbon tetrachloride	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichloroethane (EDC)	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Benzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Trichloroethene (TCE)	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichloropropane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromodichloromethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Dibromomethane	ND	0.0515		mg/Kg-dry	1	9/20/2016 11:32:31 PM
cis-1,3-Dichloropropene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Toluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
trans-1,3-Dichloropropylene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,2-Trichloroethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,3-Dichloropropane	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Tetrachloroethene (PCE)	0.0329	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Dibromochloromethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dibromoethane (EDB)	ND	0.00644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,1,2-Tetrachloroethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Ethylbenzene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
m,p-Xylene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
o-Xylene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Styrene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Isopropylbenzene	ND	0.103		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromoform	ND	0.0258	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM



Client: PES Environmental, Inc.

Collection Date: 9/18/2016 10:30:00 AM

Project: Bethel Junction

Lab ID: 1609223-001

Matrix: Soil

Client Sample ID: SB-24-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
n-Propylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromobenzene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,3,5-Trimethylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
2-Chlorotoluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
4-Chlorotoluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
tert-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,3-Trichloropropane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,4-Trichlorobenzene	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
sec-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
4-Isopropyltoluene	ND	0.0258		mg/Kg-dry	1	9/21/2016 11:10:25 AM
1,3-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,4-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
n-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dibromo-3-chloropropane	ND	0.644	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,4-Trimethylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Hexachlorobutadiene	ND	0.129		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Naphthalene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,3-Trichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Surr: Dibromofluoromethane	89.3	56.5-129		%Rec	1	9/20/2016 11:32:31 PM
Surr: Toluene-d8	100	64.3-131		%Rec	1	9/20/2016 11:32:31 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	63.1-141		%Rec	1	9/20/2016 11:32:31 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	9.80	0.500		wt%	1	9/21/2016 9:43:49 AM
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Client: PES Environmental, Inc.

Collection Date: 9/18/2016 12:00:00 PM

Project: Bethel Junction

Lab ID: 1609223-002

Matrix: Soil

Client Sample ID: SB-25-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0793		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloromethane	ND	0.0793		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Vinyl chloride	ND	0.00264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromomethane	ND	0.119		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Trichlorofluoromethane (CFC-11)	ND	0.0661	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloroethane	ND	0.0793	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloroethene	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Methylene chloride	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
trans-1,2-Dichloroethene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Methyl tert-butyl ether (MTBE)	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloroethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
2,2-Dichloropropane	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
cis-1,2-Dichloroethene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloroform	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,1-Trichloroethane (TCA)	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloropropene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Carbon tetrachloride	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichloroethane (EDC)	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Benzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Trichloroethene (TCE)	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichloropropane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromodichloromethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Dibromomethane	ND	0.0528		mg/Kg-dry	1	9/21/2016 12:01:37 AM
cis-1,3-Dichloropropene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Toluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
trans-1,3-Dichloropropylene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,2-Trichloroethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,3-Dichloropropane	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Tetrachloroethene (PCE)	0.0462	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Dibromochloromethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dibromoethane (EDB)	ND	0.00661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,1,2-Tetrachloroethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Ethylbenzene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
m,p-Xylene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
o-Xylene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Styrene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Isopropylbenzene	ND	0.106		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromoform	ND	0.0264	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM



Client: PES Environmental, Inc.

Collection Date: 9/18/2016 12:00:00 PM

Project: Bethel Junction

Lab ID: 1609223-002

Matrix: Soil

Client Sample ID: SB-25-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
n-Propylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromobenzene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,3,5-Trimethylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
2-Chlorotoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
4-Chlorotoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
tert-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,3-Trichloropropane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,4-Trichlorobenzene	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
sec-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
4-Isopropyltoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 11:39:46 AM
1,3-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,4-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
n-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dibromo-3-chloropropane	ND	0.661	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,4-Trimethylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Hexachlorobutadiene	ND	0.132		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Naphthalene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,3-Trichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Surr: Dibromofluoromethane	89.1	56.5-129		%Rec	1	9/21/2016 12:01:37 AM
Surr: Toluene-d8	98.6	64.3-131		%Rec	1	9/21/2016 12:01:37 AM
Surr: 1-Bromo-4-fluorobenzene	94.9	63.1-141		%Rec	1	9/21/2016 12:01:37 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	3.62	0.500		wt%	1	9/21/2016 9:43:49 AM
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Client: PES Environmental, Inc.

Collection Date: 9/18/2016 1:30:00 PM

Project: Bethel Junction

Lab ID: 1609223-003

Matrix: Soil

Client Sample ID: SB-26-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0618		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloromethane	ND	0.0618		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Vinyl chloride	ND	0.00206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromomethane	ND	0.0928		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Trichlorofluoromethane (CFC-11)	ND	0.0515	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloroethane	ND	0.0618	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloroethene	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Methylene chloride	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
trans-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Methyl tert-butyl ether (MTBE)	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloroethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
2,2-Dichloropropane	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
cis-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloroform	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,1-Trichloroethane (TCA)	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Carbon tetrachloride	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichloroethane (EDC)	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Benzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Trichloroethene (TCE)	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichloropropane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromodichloromethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Dibromomethane	ND	0.0412		mg/Kg-dry	1	9/21/2016 12:30:48 AM
cis-1,3-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Toluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
trans-1,3-Dichloropropylene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,2-Trichloroethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,3-Dichloropropane	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Tetrachloroethene (PCE)	0.0330	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Dibromochloromethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dibromoethane (EDB)	ND	0.00515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,1,2-Tetrachloroethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Ethylbenzene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
m,p-Xylene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
o-Xylene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Styrene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Isopropylbenzene	ND	0.0825		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromoform	ND	0.0206	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM



Client: PES Environmental, Inc.

Collection Date: 9/18/2016 1:30:00 PM

Project: Bethel Junction

Lab ID: 1609223-003

Matrix: Soil

Client Sample ID: SB-26-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
n-Propylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromobenzene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,3,5-Trimethylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
2-Chlorotoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
4-Chlorotoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
tert-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,3-Trichloropropane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,4-Trichlorobenzene	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
sec-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
4-Isopropyltoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:09:02 PM
1,3-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,4-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
n-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dibromo-3-chloropropane	ND	0.515	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,4-Trimethylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Hexachlorobutadiene	ND	0.103		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Naphthalene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,3-Trichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Surr: Dibromofluoromethane	90.7	56.5-129		%Rec	1	9/21/2016 12:30:48 AM
Surr: Toluene-d8	99.8	64.3-131		%Rec	1	9/21/2016 12:30:48 AM
Surr: 1-Bromo-4-fluorobenzene	95.1	63.1-141		%Rec	1	9/21/2016 12:30:48 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	8.86	0.500		wt%	1	9/21/2016 9:43:49 AM
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Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14880	SampType:	LCS	Units:	mg/Kg	Prep Date:	9/20/2016	RunNo:	31874		
Client ID:	LCSS	Batch ID:	14880	Analysis Date:	9/20/2016	SeqNo:	602343				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.96	0.0600	1.000	0	196	34.5	141				S
Chloromethane	1.36	0.0600	1.000	0	136	38.8	132				S
Vinyl chloride	1.23	0.00200	1.000	0	123	44	142				
Bromomethane	0.941	0.0900	1.000	0	94.1	40.9	157				
Trichlorofluoromethane (CFC-11)	1.06	0.0500	1.000	0	106	42.9	147				Q
Chloroethane	0.867	0.0600	1.000	0	86.7	37.1	144				Q
1,1-Dichloroethene	1.15	0.0500	1.000	0	115	49.7	142				
Methylene chloride	1.05	0.0200	1.000	0	105	46.3	140				
trans-1,2-Dichloroethene	1.15	0.0200	1.000	0	115	68	130				
Methyl tert-butyl ether (MTBE)	0.950	0.0500	1.000	0	95.0	59.1	138				
1,1-Dichloroethane	1.03	0.0200	1.000	0	103	61.9	137				
2,2-Dichloropropane	2.18	0.0500	1.000	0	218	28.1	149				S
cis-1,2-Dichloroethene	1.13	0.0200	1.000	0	113	71.3	135				
Chloroform	1.04	0.0200	1.000	0	104	67.5	129				
1,1,1-Trichloroethane (TCA)	1.01	0.0200	1.000	0	101	69	132				
1,1-Dichloropropene	1.13	0.0200	1.000	0	113	72.7	131				
Carbon tetrachloride	1.05	0.0200	1.000	0	105	63.4	137				
1,2-Dichloroethane (EDC)	0.942	0.0300	1.000	0	94.2	61.9	136				
Benzene	1.07	0.0200	1.000	0	107	64.3	133				
Trichloroethene (TCE)	1.10	0.0200	1.000	0	110	65.5	137				
1,2-Dichloropropane	1.03	0.0200	1.000	0	103	63.2	142				
Bromodichloromethane	0.943	0.0200	1.000	0	94.3	73.2	131				
Dibromomethane	0.952	0.0400	1.000	0	95.2	70	130				
cis-1,3-Dichloropropene	1.10	0.0200	1.000	0	110	59.1	143				
Toluene	1.11	0.0200	1.000	0	111	67.3	138				
trans-1,3-Dichloropropylene	1.08	0.0300	1.000	0	108	49.2	149				
1,1,2-Trichloroethane	0.941	0.0300	1.000	0	94.1	74.5	129				
1,3-Dichloropropane	0.964	0.0500	1.000	0	96.4	70	130				
Tetrachloroethene (PCE)	1.12	0.0200	1.000	0	112	52.7	150				
Dibromochloromethane	0.901	0.0300	1.000	0	90.1	70.6	144				
1,2-Dibromoethane (EDB)	0.896	0.00500	1.000	0	89.6	70	130				

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	LCS-14880	SampType:	LCS	Units:	mg/Kg	Prep Date:	9/20/2016	RunNo:	31874		
Client ID:	LCSS	Batch ID:	14880	Analysis Date:	9/20/2016	SeqNo:	602343				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.02	0.0200	1.000	0	102	76.1	123				
1,1,1,2-Tetrachloroethane	0.926	0.0300	1.000	0	92.6	65.9	141				
Ethylbenzene	1.04	0.0300	1.000	0	104	74	129				
m,p-Xylene	2.13	0.0200	2.000	0	107	70	124				
o-Xylene	1.05	0.0200	1.000	0	105	72.7	124				
Styrene	1.02	0.0200	1.000	0	102	76.8	130				
Isopropylbenzene	1.10	0.0800	1.000	0	110	70	130				
Bromoform	0.764	0.0200	1.000	0	76.4	67	154				Q
1,1,2,2-Tetrachloroethane	0.796	0.0200	1.000	0	79.6	60	130				
n-Propylbenzene	1.13	0.0200	1.000	0	113	74.8	125				
Bromobenzene	0.994	0.0300	1.000	0	99.4	49.2	144				
1,3,5-Trimethylbenzene	1.09	0.0200	1.000	0	109	74.6	123				
2-Chlorotoluene	1.05	0.0200	1.000	0	105	76.7	129				
4-Chlorotoluene	1.05	0.0200	1.000	0	105	77.5	125				
tert-Butylbenzene	1.11	0.0200	1.000	0	111	66.2	130				
1,2,3-Trichloropropane	0.870	0.0200	1.000	0	87.1	67.9	136				
1,2,4-Trichlorobenzene	0.955	0.0500	1.000	0	95.5	62.6	143				
sec-Butylbenzene	1.15	0.0200	1.000	0	115	75.6	133				
4-Isopropyltoluene	1.13	0.0200	1.000	0	113	76.8	131				
1,3-Dichlorobenzene	1.07	0.0200	1.000	0	107	72.8	128				
1,4-Dichlorobenzene	1.03	0.0200	1.000	0	103	72.6	126				
n-Butylbenzene	1.19	0.0200	1.000	0	119	65.3	136				
1,2-Dichlorobenzene	0.970	0.0200	1.000	0	97.0	72.8	126				
1,2-Dibromo-3-chloropropane	0.686	0.500	1.000	0	68.6	61.2	139				Q
1,2,4-Trimethylbenzene	1.07	0.0200	1.000	0	107	77.5	129				
Hexachlorobutadiene	1.20	0.100	1.000	0	120	42	151				
Naphthalene	0.824	0.0300	1.000	0	82.4	62.3	134				
1,2,3-Trichlorobenzene	0.925	0.0200	1.000	0	92.5	54.8	143				
Surr: Dibromofluoromethane	1.22		1.250		97.2	56.5	129				
Surr: Toluene-d8	1.28		1.250		103	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Work Order: 1609223
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID LCS-14880	SampType: LCS	Units: mg/Kg	Prep Date: 9/20/2016	RunNo: 31874							
Client ID: LCSS	Batch ID: 14880		Analysis Date: 9/20/2016	SeqNo: 602343							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

- S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
- Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID MB-14880	SampType: MBLK	Units: mg/Kg	Prep Date: 9/20/2016	RunNo: 31874							
Client ID: MBLKS	Batch ID: 14880		Analysis Date: 9/20/2016	SeqNo: 602344							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0600									
Chloromethane	ND	0.0600									
Vinyl chloride	ND	0.00200									
Bromomethane	ND	0.0900									
Trichlorofluoromethane (CFC-11)	ND	0.0500									Q
Chloroethane	ND	0.0600									Q
1,1-Dichloroethene	ND	0.0500									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
2,2-Dichloropropane	ND	0.0500									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0200									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0200									
1,2-Dichloroethane (EDC)	ND	0.0300									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0400									



Work Order: 1609223
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-14880	SampType: MBLK	Units: mg/Kg	Prep Date: 9/20/2016	RunNo: 31874
Client ID: MBLKS	Batch ID: 14880		Analysis Date: 9/20/2016	SeqNo: 602344

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0300									
1,1,2-Trichloroethane	ND	0.0300									
1,3-Dichloropropane	ND	0.0500									
Tetrachloroethene (PCE)	ND	0.0200									
Dibromochloromethane	ND	0.0300									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0200									
1,1,1,2-Tetrachloroethane	ND	0.0300									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Styrene	ND	0.0200									
Isopropylbenzene	ND	0.0800									
Bromoform	ND	0.0200									Q
1,1,1,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0200									
Bromobenzene	ND	0.0300									
1,3,5-Trimethylbenzene	ND	0.0200									
2-Chlorotoluene	ND	0.0200									
4-Chlorotoluene	ND	0.0200									
tert-Butylbenzene	ND	0.0200									
1,2,3-Trichloropropane	ND	0.0200									
1,2,4-Trichlorobenzene	ND	0.0500									
sec-Butylbenzene	ND	0.0200									
4-Isopropyltoluene	ND	0.0200									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0200									
1,2-Dichlorobenzene	ND	0.0200									

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID MB-14880	SampType: MBLK	Units: mg/Kg	Prep Date: 9/20/2016	RunNo: 31874							
Client ID: MBLKS	Batch ID: 14880		Analysis Date: 9/20/2016	SeqNo: 602344							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dibromo-3-chloropropane	ND	0.500									Q
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.100									
Naphthalene	ND	0.0300									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.22		1.250		97.9	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.2	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.18		1.250		94.4	63.1	141				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID 1609227-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 9/20/2016	RunNo: 31874							
Client ID: BATCH	Batch ID: 14880		Analysis Date: 9/21/2016	SeqNo: 602333							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0592						0		30	
Chloromethane	ND	0.0592						0		30	
Vinyl chloride	ND	0.00197						0		30	
Bromomethane	ND	0.0888						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0493						0		30	Q
Chloroethane	ND	0.0592						0		30	Q
1,1-Dichloroethene	ND	0.0493						0		30	
Methylene chloride	ND	0.0197						0		30	
trans-1,2-Dichloroethene	ND	0.0197						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0493						0		30	
1,1-Dichloroethane	ND	0.0197						0		30	
2,2-Dichloropropane	ND	0.0493						0		30	
cis-1,2-Dichloroethene	ND	0.0197						0		30	
Chloroform	0.0202	0.0197						0.02022	0	30	
1,1,1-Trichloroethane (TCA)	ND	0.0197						0		30	
1,1-Dichloropropene	ND	0.0197						0		30	



Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1609227-001BDUP	SampType: DUP	Units: mg/Kg-dry	Prep Date: 9/20/2016	RunNo: 31874
Client ID: BATCH	Batch ID: 14880		Analysis Date: 9/21/2016	SeqNo: 602333

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	ND	0.0197						0		30	
1,2-Dichloroethane (EDC)	ND	0.0296						0		30	
Benzene	ND	0.0197						0		30	
Trichloroethene (TCE)	ND	0.0197						0		30	
1,2-Dichloropropane	ND	0.0197						0		30	
Bromodichloromethane	ND	0.0197						0		30	
Dibromomethane	ND	0.0395						0		30	
cis-1,3-Dichloropropene	ND	0.0197						0		30	
Toluene	0.0345	0.0197						0.03354	2.90	30	
trans-1,3-Dichloropropylene	ND	0.0296						0		30	
1,1,2-Trichloroethane	ND	0.0296						0		30	
1,3-Dichloropropane	ND	0.0493						0		30	
Tetrachloroethene (PCE)	ND	0.0197						0		30	
Dibromochloromethane	ND	0.0296						0		30	
1,2-Dibromoethane (EDB)	ND	0.00493						0		30	
Chlorobenzene	ND	0.0197						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0296						0		30	
Ethylbenzene	ND	0.0296						0		30	
m,p-Xylene	0.0750	0.0197						0.06758	10.4	30	
o-Xylene	0.0247	0.0197						0.02220	10.5	30	
Styrene	ND	0.0197						0		30	
Isopropylbenzene	ND	0.0789						0		30	
Bromoform	ND	0.0197						0		30	Q
1,1,2,2-Tetrachloroethane	ND	0.0197						0		30	
n-Propylbenzene	ND	0.0197						0		30	
Bromobenzene	ND	0.0296						0		30	
1,3,5-Trimethylbenzene	0.0242	0.0197						0.02318	4.17	30	
2-Chlorotoluene	ND	0.0197						0		30	
4-Chlorotoluene	ND	0.0197						0		30	
tert-Butylbenzene	ND	0.0197						0		30	
1,2,3-Trichloropropane	ND	0.0197						0		30	

Work Order: 1609223
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1609227-001BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874	Client ID:	BATCH	Batch ID:	14880	Analysis Date:	9/21/2016	SeqNo:	602333
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
1,2,4-Trichlorobenzene	ND	0.0493						0		30							
sec-Butylbenzene	ND	0.0197						0		30							
4-Isopropyltoluene	0.102	0.0197						0.1228	18.9	30							
1,3-Dichlorobenzene	ND	0.0197						0		30							
1,4-Dichlorobenzene	ND	0.0197						0		30							
n-Butylbenzene	ND	0.0197						0		30							
1,2-Dichlorobenzene	ND	0.0197						0		30							
1,2-Dibromo-3-chloropropane	ND	0.493						0		30	Q						
1,2,4-Trimethylbenzene	0.0400	0.0197						0.03847	3.77	30							
Hexachlorobutadiene	ND	0.0986						0		30							
Naphthalene	ND	0.0296						0		30							
1,2,3-Trichlorobenzene	ND	0.0197						0		30							
Surr: Dibromofluoromethane	1.10		1.233		89.3	56.5	129		0								
Surr: Toluene-d8	1.24		1.233		100	64.3	131		0								
Surr: 1-Bromo-4-fluorobenzene	1.19		1.233		96.9	63.1	141		0								

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	1609228-003BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874	Client ID:	BATCH	Batch ID:	14880	Analysis Date:	9/21/2016	SeqNo:	602336
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
Dichlorodifluoromethane (CFC-12)	2.36	0.0632	1.054	0	224	43.5	121				S						
Chloromethane	1.51	0.0632	1.054	0	144	45	130				S						
Vinyl chloride	1.38	0.00211	1.054	0	131	51.2	146										
Bromomethane	0.926	0.0949	1.054	0	87.8	21.3	120										
Trichlorofluoromethane (CFC-11)	0.888	0.0527	1.054	0	84.2	35	131				Q						
Chloroethane	0.977	0.0632	1.054	0	92.7	43.8	117				Q						
1,1-Dichloroethene	1.22	0.0527	1.054	0	116	61.9	141										
Methylene chloride	1.15	0.0211	1.054	0	109	54.7	142										
trans-1,2-Dichloroethene	1.21	0.0211	1.054	0	115	52	136										

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID: 1609228-003BMS	SampType: MS	Units: mg/Kg-dry	Prep Date: 9/20/2016	RunNo: 31874
Client ID: BATCH	Batch ID: 14880		Analysis Date: 9/21/2016	SeqNo: 602336

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.15	0.0527	1.054	0	109	54.4	132				
1,1-Dichloroethane	1.16	0.0211	1.054	0	110	51.8	141				
2,2-Dichloropropane	1.75	0.0527	1.054	0	166	36	123				S
cis-1,2-Dichloroethene	1.13	0.0211	1.054	0	107	58.6	136				
Chloroform	1.14	0.0211	1.054	0.01581	106	53.2	129				
1,1,1-Trichloroethane (TCA)	1.13	0.0211	1.054	0	107	58.3	145				
1,1-Dichloropropene	1.21	0.0211	1.054	0	115	55.1	138				
Carbon tetrachloride	1.23	0.0211	1.054	0	117	53.3	144				
1,2-Dichloroethane (EDC)	1.04	0.0316	1.054	0	98.8	51.3	139				
Benzene	1.17	0.0211	1.054	0	111	63.5	133				
Trichloroethene (TCE)	1.18	0.0211	1.054	0	112	68.6	132				
1,2-Dichloropropane	1.12	0.0211	1.054	0	106	59	136				
Bromodichloromethane	0.950	0.0211	1.054	0	90.1	50.7	141				
Dibromomethane	1.00	0.0422	1.054	0	95.2	50.6	137				
cis-1,3-Dichloropropene	1.10	0.0211	1.054	0	104	50.4	138				
Toluene	1.23	0.0211	1.054	0.02266	115	63.4	132				
trans-1,3-Dichloropropylene	1.11	0.0316	1.054	0	106	44.1	147				
1,1,2-Trichloroethane	1.02	0.0316	1.054	0	97.0	51.6	137				
1,3-Dichloropropane	1.05	0.0527	1.054	0	99.7	53.1	134				
Tetrachloroethene (PCE)	1.16	0.0211	1.054	0	110	35.6	158				
Dibromochloromethane	0.883	0.0316	1.054	0	83.8	55.3	140				
1,2-Dibromoethane (EDB)	0.946	0.00527	1.054	0	89.7	50.4	136				
Chlorobenzene	1.09	0.0211	1.054	0	104	60	133				
1,1,1,2-Tetrachloroethane	0.960	0.0316	1.054	0	91.1	53.1	142				
Ethylbenzene	1.26	0.0316	1.054	0.1302	108	54.5	134				
m,p-Xylene	2.84	0.0211	2.108	0.5350	109	53.1	132				
o-Xylene	1.15	0.0211	1.054	0.02161	107	53.3	139				
Styrene	1.09	0.0211	1.054	0	103	51.1	132				
Isopropylbenzene	1.23	0.0843	1.054	0.05534	111	58.9	138				
Bromoform	0.760	0.0211	1.054	0	72.1	57.9	130				Q
1,1,2,2-Tetrachloroethane	0.866	0.0211	1.054	0	82.2	51.9	131				

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1609228-003BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874	Client ID:	BATCH	Batch ID:	14880	Analysis Date:	9/21/2016	SeqNo:	602336
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
n-Propylbenzene	1.51	0.0211	1.054	0.2962	115	53.6	140										
Bromobenzene	1.08	0.0316	1.054	0	102	54.2	140										
1,3,5-Trimethylbenzene	2.16	0.0211	1.054	0.9271	117	51.8	136										
2-Chlorotoluene	1.21	0.0211	1.054	0	115	51.6	136										
4-Chlorotoluene	1.21	0.0211	1.054	0	115	50.1	139										
tert-Butylbenzene	1.19	0.0211	1.054	0	113	50.5	135										
1,2,3-Trichloropropane	0.956	0.0211	1.054	0	90.6	50.5	131										
1,2,4-Trichlorobenzene	1.11	0.0527	1.054	0	106	50.8	130										
sec-Butylbenzene	1.30	0.0211	1.054	0	123	52.6	141										
4-Isopropyltoluene	1.34	0.0211	1.054	0.1418	113	52.9	134										
1,3-Dichlorobenzene	1.12	0.0211	1.054	0	107	52.6	131										
1,4-Dichlorobenzene	1.08	0.0211	1.054	0	102	52.9	129										
n-Butylbenzene	1.90	0.0211	1.054	0	180	52.6	130				S						
1,2-Dichlorobenzene	1.08	0.0211	1.054	0	103	55.8	129										
1,2-Dibromo-3-chloropropane	1.20	0.527	1.054	0	114	40.5	131				Q						
1,2,4-Trimethylbenzene	4.03	0.0211	1.054	2.705	126	50.6	137										
Hexachlorobutadiene	1.34	0.105	1.054	0	127	40.6	158										
Naphthalene	1.88	0.0316	1.054	0.8169	101	52.3	124										
1,2,3-Trichlorobenzene	1.05	0.0211	1.054	0	99.7	54.4	124										
Surr: Dibromofluoromethane	1.28		1.318		96.8	56.5	129										
Surr: Toluene-d8	1.34		1.318		101	64.3	131										
Surr: 1-Bromo-4-fluorobenzene	1.34		1.318		102	63.1	141										

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results (Please refer to LCS)
 Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample ID	1609228-003BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874	Client ID:	BATCH	Batch ID:	14880	Analysis Date:	9/21/2016	SeqNo:	602337
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual						
Dichlorodifluoromethane (CFC-12)	2.48	0.0632	1.054	0	235	43.5	121	2.363	4.87	30	S						

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1609228-003BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874		
Client ID:	BATCH	Batch ID:	14880	Analysis Date:	9/21/2016	SeqNo:	602337				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	1.58	0.0632	1.054	0	150	45	130	1.513	4.59	30	S
Vinyl chloride	1.44	0.00211	1.054	0	137	51.2	146	1.376	4.75	30	
Bromomethane	0.964	0.0949	1.054	0	91.5	21.3	120	0.9260	4.07	30	
Trichlorofluoromethane (CFC-11)	0.871	0.0527	1.054	0	82.6	35	131	0.8875	1.86	30	Q
Chloroethane	0.995	0.0632	1.054	0	94.4	43.8	117	0.9771	1.82	30	Q
1,1-Dichloroethene	1.27	0.0527	1.054	0	121	61.9	141	1.218	4.48	30	
Methylene chloride	1.17	0.0211	1.054	0	111	54.7	142	1.154	1.00	30	
trans-1,2-Dichloroethene	1.23	0.0211	1.054	0	117	52	136	1.209	1.64	30	
Methyl tert-butyl ether (MTBE)	1.15	0.0527	1.054	0	109	54.4	132	1.148	0.184	30	
1,1-Dichloroethane	1.19	0.0211	1.054	0	113	51.8	141	1.156	3.14	30	
2,2-Dichloropropane	1.80	0.0527	1.054	0	170	36	123	1.749	2.65	30	S
cis-1,2-Dichloroethene	1.17	0.0211	1.054	0	111	58.6	136	1.133	3.11	30	
Chloroform	1.12	0.0211	1.054	0.01581	104	53.2	129	1.135	1.69	30	
1,1,1-Trichloroethane (TCA)	1.15	0.0211	1.054	0	109	58.3	145	1.131	1.30	30	
1,1-Dichloropropene	1.22	0.0211	1.054	0	116	55.1	138	1.209	1.08	30	
Carbon tetrachloride	1.20	0.0211	1.054	0	114	53.3	144	1.234	3.03	30	
1,2-Dichloroethane (EDC)	1.01	0.0316	1.054	0	96.1	51.3	139	1.042	2.77	30	
Benzene	1.17	0.0211	1.054	0	111	63.5	133	1.168	0.225	30	
Trichloroethene (TCE)	1.18	0.0211	1.054	0	112	68.6	132	1.178	0.268	30	
1,2-Dichloropropane	1.11	0.0211	1.054	0	106	59	136	1.116	0.284	30	
Bromodichloromethane	0.964	0.0211	1.054	0	91.4	50.7	141	0.9503	1.43	30	
Dibromomethane	0.975	0.0422	1.054	0	92.5	50.6	137	1.004	2.93	30	
cis-1,3-Dichloropropene	1.13	0.0211	1.054	0	107	50.4	138	1.100	2.60	30	
Toluene	1.22	0.0211	1.054	0.02266	113	63.4	132	1.232	1.03	30	
trans-1,3-Dichloropropylene	1.14	0.0316	1.054	0	109	44.1	147	1.113	2.80	30	
1,1,2-Trichloroethane	0.989	0.0316	1.054	0	93.8	51.6	137	1.022	3.35	30	
1,3-Dichloropropane	1.04	0.0527	1.054	0	98.5	53.1	134	1.051	1.21	30	
Tetrachloroethene (PCE)	1.19	0.0211	1.054	0	113	35.6	158	1.161	2.38	30	
Dibromochloromethane	0.885	0.0316	1.054	0	83.9	55.3	140	0.8833	0.179	30	
1,2-Dibromoethane (EDB)	0.958	0.00527	1.054	0	90.9	50.4	136	0.9461	1.27	30	
Chlorobenzene	1.11	0.0211	1.054	0	105	60	133	1.092	1.44	30	

Work Order: 1609223
 CLIENT: PES Environmental, Inc.
 Project: Bethel Junction

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260C

Sample ID	1609228-003BMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 9/20/2016	RunNo: 31874						
Client ID:	BATCH	Batch ID: 14880	Analysis Date: 9/21/2016	SeqNo: 602337							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.988	0.0316	1.054	0	93.7	53.1	142	0.9603	2.81	30	
Ethylbenzene	1.29	0.0316	1.054	0.1302	110	54.5	134	1.265	2.27	30	
m,p-Xylene	2.88	0.0211	2.108	0.5350	111	53.1	132	2.837	1.64	30	
o-Xylene	1.16	0.0211	1.054	0.02161	108	53.3	139	1.148	0.595	30	
Styrene	1.11	0.0211	1.054	0	105	51.1	132	1.089	1.58	30	
Isopropylbenzene	1.26	0.0843	1.054	0.05534	114	58.9	138	1.228	2.42	30	
Bromoform	0.778	0.0211	1.054	0	73.8	57.9	130	0.7600	2.33	30	Q
1,1,1,2,2-Tetrachloroethane	0.840	0.0211	1.054	0	79.7	51.9	131	0.8665	3.09	30	
n-Propylbenzene	1.54	0.0211	1.054	0.2962	118	53.6	140	1.509	2.31	30	
Bromobenzene	1.09	0.0316	1.054	0	103	54.2	140	1.076	0.927	30	
1,3,5-Trimethylbenzene	2.16	0.0211	1.054	0.9271	117	51.8	136	2.158	0.0489	30	
2-Chlorotoluene	1.22	0.0211	1.054	0	116	51.6	136	1.212	0.909	30	
4-Chlorotoluene	1.23	0.0211	1.054	0	116	50.1	139	1.210	1.26	30	
tert-Butylbenzene	1.21	0.0211	1.054	0	114	50.5	135	1.191	1.28	30	
1,2,3-Trichloropropane	0.959	0.0211	1.054	0	91.0	50.5	131	0.9555	0.385	30	
1,2,4-Trichlorobenzene	1.12	0.0527	1.054	0	106	50.8	130	1.113	0.755	30	
sec-Butylbenzene	1.32	0.0211	1.054	0	125	52.6	141	1.298	1.77	30	
4-Isopropyltoluene	1.35	0.0211	1.054	0.1418	115	52.9	134	1.338	1.02	30	
1,3-Dichlorobenzene	1.13	0.0211	1.054	0	107	52.6	131	1.123	0.515	30	
1,4-Dichlorobenzene	1.08	0.0211	1.054	0	103	52.9	129	1.076	0.489	30	
n-Butylbenzene	1.92	0.0211	1.054	0	182	52.6	130	1.900	1.08	30	S
1,2-Dichlorobenzene	1.09	0.0211	1.054	0	103	55.8	129	1.083	0.389	30	
1,2-Dibromo-3-chloropropane	1.18	0.527	1.054	0	112	40.5	131	1.199	1.24	30	Q
1,2,4-Trimethylbenzene	3.99	0.0211	1.054	2.705	122	50.6	137	4.033	1.08	30	
Hexachlorobutadiene	1.35	0.105	1.054	0	128	40.6	158	1.335	1.22	30	
Naphthalene	1.86	0.0316	1.054	0.8169	99.3	52.3	124	1.881	0.901	30	
1,2,3-Trichlorobenzene	1.04	0.0211	1.054	0	98.9	54.4	124	1.051	0.805	30	
Surr: Dibromofluoromethane	1.29		1.318		98.0	56.5	129		0		
Surr: Toluene-d8	1.34		1.318		101	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.34		1.318		102	63.1	141		0		

Work Order: 1609223
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1609228-003BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	9/20/2016	RunNo:	31874		
Client ID:	BATCH	Batch ID:	14880			Analysis Date:	9/21/2016	SeqNo:	602337		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

- S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results (Please refer to LCS)
- Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).



Work Order: 1609223
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT
Sample Moisture (Percent Moisture)

Sample ID 1609258-010ADUP	SampType: DUP	Units: wt%			Prep Date: 9/21/2016	RunNo: 31870					
Client ID: BATCH	Batch ID: R31870				Analysis Date: 9/21/2016	SeqNo: 602199					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.7	0.500						14.67	0.472	20	

Client Name: **PES**
 Logged by: **Clare Griggs**

 Work Order Number: **1609223**
 Date Received: **9/19/2016 8:13:00 AM**
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
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items 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 there 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:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	7.0
Sample	8.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

ANALYTICAL

Chain of Custody Record and Laboratory Services Agreement

3600 Fremont Ave N.
Seattle, WA 98103

Tel: 206-352-3790
Fax: 206-352-7178

Date: 9/18/16

Laboratory Project No (Internal):

11009002

Page: 1 of 1

Client: PES Environmental, Inc.
Address: 1215 4th Ave. Suite 1350
City, State, Zip: Seattle, WA 98161
Telephone: (206) 524-3980 Fax: (206) 524-3385

Project Name: Bethel Studios
Project No: 1816.030.003
Location: Port Orchard WA
Report To (PM): Brian O'Neal
PM Email: boneal@pescor.com
Collected by: C. DeBer

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCS (EPA 8260 / 624)	GV/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 / 625)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (C)***	EDB (8011)	Comments
1 SB-24-3	9/18/16	1030	S														
2 SB-25-3	9/18/16	1000	S														
3 SB-26-3	9/18/16	1330	S														
4																	
5																	
6																	
7																	
8																	
9																	
10																	

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: Return to Client Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Chris DeBer 9/19/16 813 Date/Time
 Relinquished Chris DeBer 9/19/16 813 Date/Time
 Received [Signature] 9/19/16 813 Date/Time
 Received [Signature] 9/19/16 813 Date/Time

TAT → SameDay NextDay 2 Day 3 Day STD

*Please coordinate with the lab in advance

MEMORANDUM

TO: Project File
FROM: Jessie Compeau
SUBJECT: Bethel Junction, Soil Sample Data Review – September 18, 2016 Sampling Event
Fremont Lab Package 1609223

DATE: October 3, 2016
PROJECT: 1246.030.03.001

Three (3) soil samples were collected as part of a Phase 2 Investigation at the Bethel Junction in Port Orchard, Washington, on September 18, 2016. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Project samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C. The results were reported in Fremont Lab Package 1609223.

The quality assurance review of the data is summarized below.

DATA QUALIFICATIONS

Guidelines established by the USEPA for review of analytical data were used to validate the data. Fremont Analytical control limit criteria were also used to assess the quality of the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the laboratory report and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2016).

DATA VALIDATION

Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols. Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition at a cooler temperature of 7.0 degrees Centigrade (°C). Samples in the cooler were recorded at a temperature of 8.9°C slightly above the recommended preservation temperature of 6.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Holding Times

USEPA Method 8260C (VOCs):

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days from the data of sample collection. All holding time criteria were met.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. These data were not provided nor requested for this project however Fremont indicated within the laboratory report that initial and/or continuing calibration criteria for VOC soil data were not met for trichlorofluoromethane (CFC-11), chloroethane, bromoform, and 1,2-dibromo-3-chloropropane. Fremont was contacted for additional information. **All associated soil sample results (analyzed on September 20 2016) for trichlorofluoromethane (CFC-11), chloroethane, bromoform, and 1,2-dibromo-3-chloropropane are estimated (UJ) because continuing calibration and recoveries were slightly below laboratory control limits (69-76% recovery). Fremont laboratory control limits are as stringent if not more stringent than EPA recommended acceptance criteria.**

Method Blank Results

USEPA Method 8260C (VOCs):

Laboratory method blank for soil was included with the analytical batch per method requirement. The target analytes were not detected in the method blank for soil at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

Trip Blank Results

USEPA Method 8260C (VOCs):

A trip blank was not collected.

Field, Rinsate, or Equipment Blank Results

USEPA Method 8260C (VOCs):

Field, rinsate, or equipment blanks were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C (VOCs):

Laboratory duplicate analyses was performed on a non-client soil sample within the analytical batch. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Field Duplicate Analyses

USEPA Method 8260C (VOCs):

Soil field duplicate samples were not collected. Refer to the laboratory duplicate result for precision data.

Surrogate Recoveries

USEPA Method 8260C (VOCs):

The surrogate recovery results for the samples, laboratory duplicates, laboratory control samples,

matrix spikes, and the method blank were within the laboratory surrogate control limits for all of the analyses.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260C (VOCs):

Matrix spike and matrix spike duplicate (MS/MSD) analysis was performed on a non-client soil sample within the analytical batch. The MS percent recoveries (%Rs) for all 8260C target analytes were within the laboratory control criteria with the following exceptions:

MS/MSD % recoveries for dichlorodifluoromethane (CFC-12), chloromethane, 2,2-dichloropropane and n-butylbenzene were elevated and above laboratory control limit criteria. No action was taken since these compounds were not detected in the associated samples.

Laboratory Control Samples

USEPA Method 8260C (VOCs):

A laboratory control sample (LCS) sample for soil was analyzed by USEPA Method 8260C. The LCS %Rs for the control analytes (VOCs) were within the laboratory control criteria for soil with the following exceptions:

LCS % recoveries for dichlorodifluoromethane (CFC-12), chloromethane, and 2,2-dichloropropane were elevated and above laboratory control limit criteria. No action was taken since these compounds were not detected in the associated samples.

Quantitation Limits

Results of all analyses were reported based on standard laboratory MRLs. The reported MRLs are considered appropriate for this project. No data qualifiers were warranted based upon standard or dilution-elevated detection limits.

Completeness

The samples were collected and analyzed as requested. The results in all cases were reported based upon standard Method Reporting Limits (MRLs). Data completeness is 100%.

Data Assessment

The laboratory data reported for this project were reviewed based on the criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2016)

Data qualifiers were assigned and laboratory report pages with qualifiers are attached. All data are judged to be acceptable for their intended use.



Analytical Report

WO#: 1609223

Date Reported: 9/26/2016

Client: PES Environmental, Inc.

Collection Date: 9/18/2016 10:30:00 AM

Project: Bethel Junction

Lab ID: 1609223-001

Matrix: Soil

Client Sample ID: SB-24-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0773		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloromethane	ND	0.0773		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Vinyl chloride	ND	0.00258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromomethane	ND	0.116		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Trichlorofluoromethane (CFC-11)	ND	0.0644	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloroethane	ND	0.0773	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloroethene	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Methylene chloride	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
trans-1,2-Dichloroethene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Methyl tert-butyl ether (MTBE)	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloroethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
2,2-Dichloropropane	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
cis-1,2-Dichloroethene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chloroform	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,1-Trichloroethane (TCA)	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1-Dichloropropene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Carbon tetrachloride	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichloroethane (EDC)	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Benzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Trichloroethene (TCE)	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichloropropane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromodichloromethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Dibromomethane	ND	0.0515		mg/Kg-dry	1	9/20/2016 11:32:31 PM
cis-1,3-Dichloropropene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Toluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
trans-1,3-Dichloropropylene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,2-Trichloroethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,3-Dichloropropane	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Tetrachloroethene (PCE)	0.0329	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Dibromochloromethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dibromoethane (EDB)	ND	0.00644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Chlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,1,1,2-Tetrachloroethane	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Ethylbenzene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
m,p-Xylene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
o-Xylene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Styrene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Isopropylbenzene	ND	0.103		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromoform	ND	0.0258	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM

Original

gc
10/3/16



Analytical Report

WO#: 1609223

Date Reported: 9/26/2016

Client: PES Environmental, Inc.

Collection Date: 9/18/2016 10:30:00 AM

Project: Bethel Junction

Lab ID: 1609223-001

Matrix: Soil

Client Sample ID: SB-24-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
n-Propylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Bromobenzene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,3,5-Trimethylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
2-Chlorotoluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
4-Chlorotoluene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
tert-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,3-Trichloropropane	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,4-Trichlorobenzene	ND	0.0644		mg/Kg-dry	1	9/20/2016 11:32:31 PM
sec-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
4-Isopropyltoluene	ND	0.0258		mg/Kg-dry	1	9/21/2016 11:10:25 AM
1,3-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,4-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
n-Butylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2-Dibromo-3-chloropropane	ND	0.644	Q	mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,4-Trimethylbenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Hexachlorobutadiene	ND	0.129		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Naphthalene	ND	0.0387		mg/Kg-dry	1	9/20/2016 11:32:31 PM
1,2,3-Trichlorobenzene	ND	0.0258		mg/Kg-dry	1	9/20/2016 11:32:31 PM
Surr: Dibromofluoromethane	89.3	56.5-129		%Rec	1	9/20/2016 11:32:31 PM
Surr: Toluene-d8	100	64.3-131		%Rec	1	9/20/2016 11:32:31 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	63.1-141		%Rec	1	9/20/2016 11:32:31 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	9.80	0.500		wt%	1	9/21/2016 9:43:49 AM
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JC
10/3/16



Client: PES Environmental, Inc.

Collection Date: 9/18/2016 12:00:00 PM

Project: Bethel Junction

Lab ID: 1609223-002

Matrix: Soil

Client Sample ID: SB-25-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0793		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloromethane	ND	0.0793		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Vinyl chloride	ND	0.00264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromomethane	ND	0.119		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Trichlorofluoromethane (CFC-11)	ND	0.0661	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloroethane	ND	0.0793	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloroethene	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Methylene chloride	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
trans-1,2-Dichloroethene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Methyl tert-butyl ether (MTBE)	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloroethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
2,2-Dichloropropane	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
cis-1,2-Dichloroethene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chloroform	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,1-Trichloroethane (TCA)	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1-Dichloropropene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Carbon tetrachloride	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichloroethane (EDC)	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Benzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Trichloroethene (TCE)	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichloropropane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromodichloromethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Dibromomethane	ND	0.0528		mg/Kg-dry	1	9/21/2016 12:01:37 AM
cis-1,3-Dichloropropene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Toluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
trans-1,3-Dichloropropylene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,2-Trichloroethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,3-Dichloropropane	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Tetrachloroethene (PCE)	0.0462	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Dibromochloromethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dibromoethane (EDB)	ND	0.00661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Chlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,1,1,2-Tetrachloroethane	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Ethylbenzene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
m,p-Xylene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
o-Xylene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Styrene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Isopropylbenzene	ND	0.106		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromoform	ND	0.0264	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM

Original

QC
10/3/16



Analytical Report

WO#: 1609223

Date Reported: 9/26/2016

Client: PES Environmental, Inc.

Collection Date: 9/18/2016 12:00:00 PM

Project: Bethel Junction

Lab ID: 1609223-002

Matrix: Soil

Client Sample ID: SB-25-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
n-Propylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Bromobenzene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,3,5-Trimethylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
2-Chlorotoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
4-Chlorotoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
tert-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,3-Trichloropropane	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,4-Trichlorobenzene	ND	0.0661		mg/Kg-dry	1	9/21/2016 12:01:37 AM
sec-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
4-Isopropyltoluene	ND	0.0264		mg/Kg-dry	1	9/21/2016 11:39:46 AM
1,3-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,4-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
n-Butylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2-Dibromo-3-chloropropane	ND	0.661	Q	mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,4-Trimethylbenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Hexachlorobutadiene	ND	0.132		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Naphthalene	ND	0.0396		mg/Kg-dry	1	9/21/2016 12:01:37 AM
1,2,3-Trichlorobenzene	ND	0.0264		mg/Kg-dry	1	9/21/2016 12:01:37 AM
Surr: Dibromofluoromethane	89.1	56.5-129		%Rec	1	9/21/2016 12:01:37 AM
Surr: Toluene-d8	98.6	64.3-131		%Rec	1	9/21/2016 12:01:37 AM
Surr: 1-Bromo-4-fluorobenzene	94.9	63.1-141		%Rec	1	9/21/2016 12:01:37 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	3.62	0.500		wt%	1	9/21/2016 9:43:49 AM
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Handwritten signature and date: Jc 10/3/16



Analytical Report

WO#: 1609223

Date Reported: 9/26/2016

Client: PES Environmental, Inc.

Collection Date: 9/18/2016 1:30:00 PM

Project: Bethel Junction

Lab ID: 1609223-003

Matrix: Soil

Client Sample ID: SB-26-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

Dichlorodifluoromethane (CFC-12)	ND	0.0618		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloromethane	ND	0.0618		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Vinyl chloride	ND	0.00206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromomethane	ND	0.0928		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Trichlorofluoromethane (CFC-11)	ND	0.0515	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloroethane	ND	0.0618	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloroethene	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Methylene chloride	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
trans-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Methyl tert-butyl ether (MTBE)	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloroethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
2,2-Dichloropropane	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
cis-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chloroform	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,1-Trichloroethane (TCA)	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Carbon tetrachloride	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichloroethane (EDC)	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Benzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Trichloroethene (TCE)	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichloropropane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromodichloromethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Dibromomethane	ND	0.0412		mg/Kg-dry	1	9/21/2016 12:30:48 AM
cis-1,3-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Toluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
trans-1,3-Dichloropropylene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,2-Trichloroethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,3-Dichloropropane	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Tetrachloroethene (PCE)	0.0330	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Dibromochloromethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dibromoethane (EDB)	ND	0.00515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Chlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,1,1,2-Tetrachloroethane	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Ethylbenzene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
m,p-Xylene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
o-Xylene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Styrene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Isopropylbenzene	ND	0.0825		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromoform	ND	0.0206	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM

Original

JC
10/3/16



Analytical Report

WO#: 1609223

Date Reported: 9/26/2016

Client: PES Environmental, Inc.

Collection Date: 9/18/2016 1:30:00 PM

Project: Bethel Junction

Lab ID: 1609223-003

Matrix: Soil

Client Sample ID: SB-26-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260C

Batch ID: 14880

Analyst: EM

1,1,2,2-Tetrachloroethane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
n-Propylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Bromobenzene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,3,5-Trimethylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
2-Chlorotoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
4-Chlorotoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
tert-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,3-Trichloropropane	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,4-Trichlorobenzene	ND	0.0515		mg/Kg-dry	1	9/21/2016 12:30:48 AM
sec-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
4-Isopropyltoluene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:09:02 PM
1,3-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,4-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
n-Butylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2-Dibromo-3-chloropropane	ND	0.515	Q	mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,4-Trimethylbenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Hexachlorobutadiene	ND	0.103		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Naphthalene	ND	0.0309		mg/Kg-dry	1	9/21/2016 12:30:48 AM
1,2,3-Trichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/21/2016 12:30:48 AM
Surr: Dibromofluoromethane	90.7	56.5-129		%Rec	1	9/21/2016 12:30:48 AM
Surr: Toluene-d8	99.8	64.3-131		%Rec	1	9/21/2016 12:30:48 AM
Surr: 1-Bromo-4-fluorobenzene	95.1	63.1-141		%Rec	1	9/21/2016 12:30:48 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF).

Sample Moisture (Percent Moisture)

Batch ID: R31870

Analyst: BB

Percent Moisture	8.86	0.500		wt%	1	9/21/2016 9:43:49 AM
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JC
10/3/16

APPENDIX D

FIELD SAMPLING FORMS AND BUILDING SURVEY FORMS

PES GROUNDWATER SAMPLING PROTOCOLS

Facility: <i>Bethel Junction Phoenix</i>	Well I.D.: <i>SB-10</i>
Project No.: <i>1246-03a-02</i>	Date: <i>6/25/15</i>

Site Description Monitoring Well Extraction Well Borehole Spring/Creek Pond/Lagoon Outfall Other: *temp*

Air Temp: *70's* °C °F Weather: *sunbms*

Well Locked? yes no Damaged/Repairs Needed:

TOC MP Description of MP (e.g., well monument at grade surface):

TOC/MP Stickup: ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other: *3/4"*

Water Level Data Measurement Units: ft m

<input checked="" type="checkbox"/> E-Tape, # <i>244244</i> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge ¹ Initial	Pre-Purge ² Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	___:___						
Depth to Water							
Depth to Bottom							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

¹First round of water levels; ²Water level prior to purging

Field Water Quality Data Purge Depth: Top Mid Bottom Grab Bailer Pump Description: *Peri*

Casing Volume: [____(TD) - ____ (WL)] • [____ (Well ID)]² • [____ (Conversion Factor)] = ____ gal liters
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging

Cumulative Vol. Purged (Liters)	Depth to Water	Time (hh:mm)	pH (Temp. Corrected? <input type="checkbox"/>)	Conductivity <input type="checkbox"/> SC <input type="checkbox"/> EC (µS/cm)	Temp <input type="checkbox"/> °C <input type="checkbox"/> °F	D. O (mg/L)	ORP (mV)	Turbidity <input type="checkbox"/> NTU
<p><i>• No parameters collected due to low recharge rate.</i></p> <p><i>• Pumped dry after 2.5 40ml ³VOAs. Let sit 45 min re-collected a 3rd VOA (discarded the water & bottle from the 1/2 VOA) marked the 3rd VOA as "use last" for lab.</i></p>								
Pump Rate (ml/min)	<i>50-80 ml/min</i>		Color/Tint/Odor					
Meter Used	<i>gray cloudy</i>							

Sample Data Sample Depth: *13-13.5'* Grab Bailer Pump Description: *Peri Pump.*

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	# of Bottles (total to lab)	Metals Filtered	Bottles (type)	Preservative	Notes
<i>SB-10-W</i>	<i>PO</i>	<i>6/25/15</i>	<i>1110</i>	<i>3</i>	<i>Y N</i>	<i>VOA</i>	<i>Ⓟ N</i>	<i>went dry during sampling.</i>
					<i>Y N</i>		<i>Y N</i>	
					<i>Y N</i>		<i>Y N</i>	

Sampler's Name (print) *Chris DeBoer* Signature *Chris DeBoer*

PES GROUNDWATER SAMPLING PROTOCOLS

Facility: <u>Behl Junction Phase II</u>	Well I.D.: <u>SB-4 = SB-11</u>
Project No.: <u>1246.030.02</u>	Date: <u>6/25/15</u>

Site Description Monitoring Well Extraction Well Borehole Spring/Creek Pond/Lagoon Outfall Other: temp

Air Temp: 70's °C °F Weather: indoors

Well Locked? yes no Damaged/Repairs Needed:

TOC MP Description of MP (e.g., well monument at grade surface):

TOC/MP Stickup: ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other: 3/4"

Water Level Data Measurement Units: ft m

<input checked="" type="checkbox"/> E-Tape, # <u>224244</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge Initial	Pre-Purge Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm, 24-hr clock)	<u>49:00</u>					<u>1423</u>	
Depth to Water						<u>13.25</u>	
Depth to Bottom							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

¹First round of water levels; ²Water level prior to purging

Field Water Quality Data Purge Depth: Top Mid Bottom Grab Bailer Pump Description: Peri

Casing Volume: [____(TD) - ____ (WL)] * [____ (Well ID)] ² * [____ (Conversion Factor)] = ____ gal <input type="checkbox"/> liters							Dry While Purging <input type="checkbox"/>	
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches								
Cumulative Vol. Purged (Liters)	Depth to Water	Time (hh:mm)	pH (Temp. Corrected? <input type="checkbox"/>)	Conductivity <input type="checkbox"/> SC <input type="checkbox"/> EC (µS/cm)	Temp °C °F	D. O. (mg/L)	ORP (mV)	Turbidity <input type="checkbox"/> NTU
	<u>NM</u>	<u>12:14</u>	<u>6.37</u>	<u>10</u>	<u>30.4</u>	<u>3.14</u>	<u>-69.5</u>	<u>-</u>
	↓	<u>12:17</u>	<u>6.81</u>	<u>856</u>	<u>23.6</u>	<u>1.63</u>	<u>-109.9</u>	<u>21000</u>
	↓	<u>12:20</u>	<u>6.83</u>	<u>871</u>	<u>20.3</u>	<u>0.73</u>	<u>-171.4</u>	<u>-</u>
	↓	<u>12:23</u>	<u>6.81</u>	<u>865</u>	<u>20.6</u>	<u>0.52</u>	<u>-273.3</u>	<u>21,000 close</u>
<u><1L</u>	<u>ATL</u>	<u>12:26</u>	<u>6.80</u>	<u>866</u>	<u>20.4</u>	<u>-</u>	<u>-333.1</u>	<u>dry</u>
<u>Pumped Dry, let recharge.</u>								
		<u>14:00</u>						<u>at sampling 385</u>
<u>Pumped Dry after VOAs, during HOPE water filtering for fluoride analysis.</u>								
Pump Rate (ml/min)	<u>50-80</u>		Color/Tint/Odor					
Meter Used	<u>YSI Pro Plus</u>		<u>cloudy</u>					

Sample Data Sample Depth: 14-14.5' Grab Bailer Pump Description: Peri

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	# of Bottles (total to lab)	Metals Filtered	Bottles (type)	Preservative	Notes
<u>SB-11-W</u>	<u>P0</u>	<u>6/25/15</u>	<u>1400</u>	<u>3</u>	<u>Y N</u>	<u>VOA</u>	<u>Y N</u>	<u>HCl</u>
<u>SB-11-W</u>		<u>6/25/15</u>	<u>1400</u>	<u>1</u>	<u>Y N</u>	<u>HOPE</u>	<u>Y N</u>	<u>for fluoride</u>
					<u>Y N</u>		<u>Y N</u>	

Sampler's Name (print) Chris Debrae Signature Chris Debrae

PES GROUNDWATER SAMPLING PROTOCOLS

Facility: <u>Bethel Junction</u>	Well I.D.: <u>SB-15</u>
Project No.: <u>1246.030.02</u>	Date: <u>7-9-15</u>

Site Description Monitoring Well Extraction Well Borehole Spring/Creek Pond/Lagoon Outfall Other: temp

Air Temp: °C °F Weather: indoors

Well Locked? yes no Damaged/Repairs Needed:

TOC MP Description of MP (e.g., well monument at grade surface):

TOC/MP Stickup: ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other: 3/4"

Water Level Data Measurement Units: ft m

<input checked="" type="checkbox"/> E-Tape, # <u>1246030</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge ¹ Initial	Pre-Purge ² Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>12:53</u>						
Depth to Water	<u>12.4</u>						
Depth to Bottom							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

¹First round of water levels; ²Water level prior to purging

Field Water Quality Data Purge Depth: Top Mid Bottom Grab Bailer Pump Description: Peri

Casing Volume: [____(TD) - ____ (WL)] * [____ (Well ID)] * [____ (Conversion Factor)] = ____ gal liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging

Cumulative Vol. Purged (Liters)	Depth to Water	Time (hh:mm)	pH (Temp. Corrected? <input type="checkbox"/>)	Conductivity <input type="checkbox"/> SC <input type="checkbox"/> EC (µS/cm)	Temp <input type="checkbox"/> °C <input type="checkbox"/> °F	D. O (mg/L)	ORP (mV)	Turbidity <input type="checkbox"/> NTU
<u>1</u>		<u>13:17</u>	<u>6.23</u>	<u>-100</u>	<u>20.1</u>	<u>3.27</u>	<u>-5.3</u>	<u>1</u>
<u>800mL</u>		<u>13:27</u>	<u>6.34</u>	<u>-123</u>	<u>20.2</u>	<u>1.76</u>	<u>-7.8</u>	<u>↓</u>
<u>890mL</u>		<u>13:28</u>	<u>6.41</u>	<u>-143</u>	<u>20.2</u>	<u>1.98</u>	<u>-13.2</u>	<u>7/1000</u>
<u>recharge monitoring measurements on back of this form.</u>								
Pump Rate (ml/min) <u>50-80</u>			Color/Tint/Odor <u>gray / cloudy</u>					
Meter Used <u>YSI Pro Plus</u>								

Sample Data Sample Depth: 14.5-15' Grab Bailer Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	# of Bottles (total to lab)	Metals Filtered	Bottles (type)	Preservative	Notes
<u>SB-15-W</u>	<u>P0</u>	<u>7/9/15</u>	<u>1400</u>	<u>4</u>	<u>Y N</u>		<u>⊗ N</u>	
					<u>Y N</u>		<u>Y N</u>	
					<u>Y N</u>		<u>Y N</u>	

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

PES GROUNDWATER SAMPLING PROTOCOLS

Facility: <u>Bethel Junction</u>	Well I.D.: <u>SB-17</u>
Project No.: <u>1246.030.02</u>	Date: <u>7-9-15</u>

Site Description Monitoring Well Extraction Well Borehole Spring/Creek Pond/Lagoon Outfall Other: temp

Air Temp: <input type="checkbox"/> °C <input type="checkbox"/> °F Weather: <u>indoor</u>
Well Locked? <input type="checkbox"/> yes <input type="checkbox"/> no Damaged/Repairs Needed:
<input type="checkbox"/> TOC <input type="checkbox"/> MP Description of MP (e.g., well monument at grade surface):
TOC/MP Stickup: <input type="checkbox"/> ft <input type="checkbox"/> m above/below ground Well Inside Diameter (ID): <input type="checkbox"/> 2-inch <input type="checkbox"/> 4-inch Other: <u>3/4"</u>

Water Level Data Measurement Units: ft m

<input checked="" type="checkbox"/> E-Tape, # <u>824244</u> <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Pre-Purge ¹ Initial	Pre-Purge ² Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm, 24-hr clock)	<u>14:00</u>						
Depth to Water	<u>12.5</u>						
Depth to Bottom							
Water Level (WL)							
Product Thickness							
Product Recovery <input type="checkbox"/> gallons <input type="checkbox"/> liters							

¹First round of water levels; ²Water level prior to purging

Field Water Quality Data Purge Depth: Top Mid Bottom Grab Bailer Pump Description: NA

Casing Volume: [____(TD) - ____ (WL)] * [____ (Well ID)] ² * [____ (Conversion Factor)] = ____ gal <input type="checkbox"/> liters Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches							Dry While Purging <input type="checkbox"/>	
Cumulative Vol. Purged (Liters)	Depth to Water	Time (hh:mm)	pH (Temp. Corrected? <input type="checkbox"/>)	Conductivity <input type="checkbox"/> SC <input type="checkbox"/> EC (µS/cm)	Temp °C °F	D. O (mg/L)	ORP (mV)	Turbidity <input type="checkbox"/> NTU
<u>~200ml</u> Parameters not measured due to low recharge rate. Well pumped dry when filling HOPE bottle.								
Pump Rate (ml/min) <u>50-80</u>			Color/Tint/Odor <u>brown / gray, cloudy</u>					
Meter Used								

Sample Data Sample Depth: 13-13.5' Grab Bailer Pump Description: Aristic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	# of Bottles (total to lab)	Metals Filtered	Bottles (type)	Preservative	Notes
<u>SB-17-W</u>	<u>P0</u>	<u>7/9/15</u>	<u>1445</u>	<u>4</u>	<u>Y N</u>	<u>VOA</u>	<u>Ø N</u>	
					<u>Y N</u>	<u>HOPE</u>	<u>Y (N)</u>	
					<u>Y N</u>		<u>Y N</u>	

Sampler's Name (print) <u>Chris DeBoer</u>	Signature <u>Chris DeBoer</u>
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VAPOR INTRUSION BUILDING INSPECTION CHECKLIST

Property Name: Bethel Junction Project Number: 1246.030.02

Location/Suite: Former Hallmark Suite

Provide Current Condition or Status of Interior of Tenant Space (e.g., occupied, vacant, interior walls or other structures). Attach Sketch.

vacant @ ^{three} back rooms + large open front space, carpeted w/ drop ceiling.

FLOORING AND SLAB

Describe current floor covering(s) throughout the tenant space – note on sketch and photograph each type/area.

carpet in the front room - linoleum in the three back rooms

Where concrete slab is exposed, inspect for cracks, holes, presence of moisture, or other damage. Also, note any differences in floor elevations that may indicate differential settlement of the slab. Describe below and note locations on sketch and photograph.

No indications of settling, slabs not visible, ^{24" 10" x 8"} ~~24" x 24"~~ rectangle exposed in slab in back room

Note location and condition of any penetrations through slab, including gaps between the feather (e.g., pipe) and slab. Identify on sketch and photograph.

Plumbing (sinks, toilets, water supply): toilet & sink in middle back room, some electrical pipe (conduits & wires?) penetrations,

Floor Drains/Sumps: sewer clean out in back room

Other utilities: none seen.

Internal Structural Connections (e.g., posts) or equipment bolted to floor: bolts (4), in SE room

WALLS, WALL/SLAB AND WALL/CEILING CONNECTIONS

Take photos of all connections and identify locations of gaps/issues on sketch.

North Wall

Interior or Exterior Wall? Wall Construction and coating: Glass w/ metal framing

What is on other side of wall? front sidewalk

Wall penetrations (doors, windows, vents, utilities – including above drop ceilings): double doors that do have a crack between them. Front wall has CMU component in middle area (structural?) visible above drop ceiling

Describe connection of wall to building roof/ceiling (look above drop ceilings), noting any gaps, or openings. Make sure to document conditions at both ends of the wall (in the corners) and at least one location in the middle: no gaps seen. reflective cover over insulation prevents clear view

Describe connection of wall to slab/floor, noting whether concrete floor slab extends (or appears to extend) continuously beneath the wall or terminates against a footing or grade beam. Where edge or slab is observable inspect for gaps and document width of gaps. May need to pull back carpet to inspect. can't see slab, no footing (likely), sidewalk on other side

West Wall

Interior or Exterior Wall? Wall Construction and coating: 2x6 framed drywall

What is on other side of wall? Dry Cleaner build

Wall penetrations (doors, windows, vents, utilities – including above drop ceilings): plumbing runs to the dry cleaner boiler goes through the wall, sprinkler water line run through the wall. Structural beam is E-W. If seen at east & west extent.

Describe connection of wall to building roof/ceiling (look above drop ceilings), noting any gaps, or openings. Make sure to document conditions at both ends of the wall (in the corners) and at least one location in the middle: no gaps seen. Reflective insulation obstructs view. Corners in photos.

Describe connection of wall to slab/floor, noting whether concrete floor slab extends (or appears to extend) continuously beneath the wall or terminates against a footing or grade beam. Where edge or slab is observable inspect for gaps and document width of gaps. May need to pull back carpet to inspect. grade beam likely (photo), slab not visible. Per facilities manager, continuous slab likely. no gaps visible, can't pull back carpet.

South Wall

Interior or Exterior Wall? Wall Construction and coating: not clear, dry wall inside, wood facade outside.

What is on other side of wall? back parking lot.

Wall penetrations (doors, windows, vents, utilities – including above drop ceilings): one pipe penetrates into the wall, but not airtight visible outside. Outside has to lights mounted into the wall above the 2 doors.

Describe connection of wall to building roof/ceiling (look above drop ceilings), noting any gaps, or openings. Make sure to document conditions at both ends of the wall (in the corners) and at least one location in the middle: no gaps visible, reflective covered insulation obstructs view.

Describe connection of wall to slab/floor, noting whether concrete floor slab extends (or appears to extend) continuously beneath the wall or terminates against a footing or grade beam. Where edge or slab is observable inspect for gaps and document width of gaps. May need to pull back carpet to inspect. appears to be grade beam, slab not visible, stairwalk on other side

East Wall

Interior or Exterior Wall? Wall Construction and coating: 2x6" framed drywall

What is on other side of wall? Big lots store

Wall penetrations (doors, windows, vents, utilities – including above drop ceilings): none seen structural beam?

Describe connection of wall to building roof/ceiling (look above drop ceilings), noting any gaps, or openings. Make sure to document conditions at both ends of the wall (in the corners) and at least one location in the middle: no gaps seen. chryslation obstructs view adjacent building is taller than assessed suite.

Describe connection of wall to slab/floor, noting whether concrete floor slab extends (or appears to extend) continuously beneath the wall or terminates against a footing or grade beam. Where edge or slab is observable inspect for gaps and document width of gaps. May need to pull back carpet to inspect. not visible unable to pull back carpet.

HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) SYSTEMS

Note location and number of HVAC Units: Two seen on roof

Does the HVAC System service more than one suite? no.

Note location and number of other vents (restroom/kitchen): only HVAC vents seen.

Note location and number of HVAC units for adjacent/nearby suites if separate: unknown for Biglots suite (many), one for Amij's Dry Cleaners.

MISCELLANEOUS

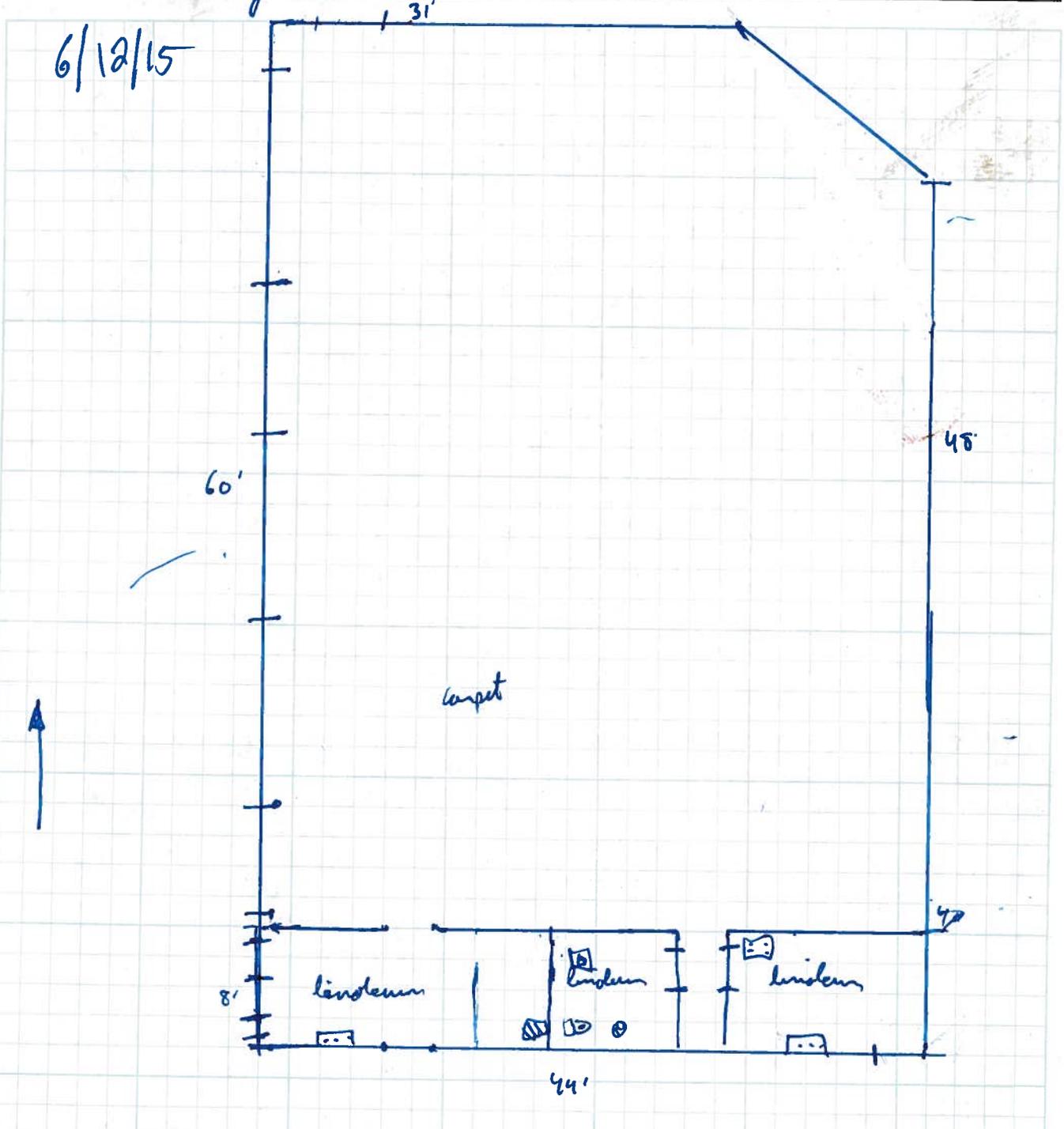
Note any other conditions or factors that may be relevant to assessing vapor intrusion: _____

The @ an earlier APS utility locate w/ A3 indicated the only power ran E-W adjacent to the S wall (a few inches away). This @ this connects the utility @ fuse boxes & likely (per APS) extends through all the suites, as it was located from wall to wall.



SHEET	1	OF	1
JOB NO.	1246.030.000.02		
FILE NAME			
COMPUTED BY		DATE	
CHECKED BY		DATE	

PROJECT	Bethel Junction
SUBJECT	Building Sketch



- 6/12/15
- 31'
- 60'
- 48'
- 48'
- carpet
- 8'
- 44'
- lockers
- lockers
- lockers
- 1:50 scale
- pipe penetrations
- hole in slab
 - toilet
 - cleanout
 - sink
 - slab pipe penetrations
 - bolts in floor

PES GROUNDWATER SAMPLING PROTOCOLS

Facility: <u>Bethel Junction</u>	Location I.D. : <u>SB-23</u>
Project No.: <u>1246.030.03</u>	Date: <u>7/18/16</u>

Location Description Monitoring Well Extraction Well Borehole Spring/Creek Pond/Lagoon Outfall Other: temp

Air Temp: 30 °C °F Weather: Indoors

Well Locked? yes no NA Damaged/Repairs Needed: NA

TOC MP Description of MP (e.g., well monument at grade surface): floor surface

TOC/MP Stickup: ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other: 3/4-inch

Water Level Data Measurement Units: ft m

E-Tape, # <u>2091204</u>	Pre-Purge ¹ Initial	Pre-Purge ² Confirmation	Purging Start	During Purging	Purging End	After Sampling	Remarks
Time (hh:mm; 24-hr clock)	<u>9:50</u>						
Depth to Water	<u>12.1</u>						
Depth to Bottom							
Water Level (WL)							
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

¹First round of water levels; ²Water level prior to purging

Field Water Quality Data Purge Depth: Top Mid Bottom Grab Bailer Pump Description: Peri

Casing Volume: [____(TD) - ____ (WL)] * [____(Well ID)]² * [____(Conversion Factor)] = ____ gal liters
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging

Cumulative Vol. Purged (Liters)	Depth to Water	Time (hh:mm)	pH (Temp. Corrected? <input type="checkbox"/>)	Conductivity <input type="checkbox"/> SC <input type="checkbox"/> EC (µS/cm)	Temp <input type="checkbox"/> °C <input type="checkbox"/> °F	D. O (mg/L)	ORP (mV)	Turbidity <input type="checkbox"/> NTU
<u>1.4</u>		<u>10:06</u>	<u>6.14</u>	<u>1038</u>	<u>18.6</u>	<u>3.23</u>	<u>-89.9</u>	<u>>1000</u>
<u>2.65</u>		<u>10:10</u>	<u>6.31</u>	<u>1002</u>	<u>18.2</u>	<u>2.05</u>	<u>-101.5</u>	
<u>2.7</u>		<u>10:12</u>	<u>6.40</u>	<u>976</u>	<u>18.2</u>	<u>1.72</u>	<u>-109.1</u>	
<u>sampled 3x Vials (40mL) before purging</u>								
Pump Rate (ml/min) <u>50-80</u>			Color/Tint/Odor <u>cloudy</u>					
Meter Used <u>YSI Pro Plus</u>								

Sample Data Sample Depth: 2 1/4 ft Grab Bailer Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	# of Bottles (total to lab)	Metals Filtered	Bottles (type)	Preservative	Notes
<u>SB-23-071816</u>	<u>P0</u>	<u>7/18/16</u>	<u>1000</u>	<u>3</u>	<u>Y N</u>	<u>vial</u>	<u>Y N</u>	<u>HCl</u>
					<u>Y N</u>		<u>Y N</u>	
					<u>Y N</u>		<u>Y N</u>	

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

PES Environmental Inc.

SOIL VAPOR EXTRACTION TEST				Date:	8-8-16	
BETHEL JUNCTION SHOPPING CENTER				Time:		
Project Number: 1246.030.03.002				Field Operator:	KWS	
BASELINE						
Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	—	—		— 0	—	—
Blower	—			— 0	—	
Discharge Stack	—	—	—	—	—	—
VP-4	845			0		4.8
VP-5	840			0		5.2
VP-6	825			0		1.1
VP-7	820			0		11.5
VP-8	816			0		6.2
VP-9	810			0		18.1
Dilution Status:	NA		Sample Collected:		No	
NOTES:						
MAX VAC 17 @ 918 Latched VAC TO 10						

Baseline

Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	▲	2350		10	67.8	0.3
Blower				10	66.5	
Discharge Stack		3800	—	0	77.3	0.7
VP-4				0.08		2.4
VP-5				0.05		3.2
VP-6				0		2.3
VP-7				1.1		3.4
VP-8				0.15		2.9
VP-9	920			1.1		3.1
Dilution Status:	N/A down to 10.4		Sample Collected:			
NOTES:						

2nd

PES Environmental Inc.

SOIL VAPOR EXTRACTION TEST				Date:	8-8-16		
BETHEL JUNCTION SHOPPING CENTER				Time:			
Project Number: 1246.030.03.002				Field Operator:	KWS		
Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)	
SVE Well Header	3:40 ↑	2375		10	63.6	0.8	
Blower				10	60.7		
Discharge Stack		3600	—	0.2	81.3	1.3	
VP-4				0.04		2.0	
VP-5				0.06		3.5	
VP-6				0.1		2.3	
VP-7				1.0		3.3	
VP-8				0.14		3.5	
VP-9		950			1.0		2.8
Dilution Status:		Half of Max Vac		Sample Collected:		NO	
NOTES:							

Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)	
SVE Well Header	4:44 ↑	2475		10	65.6	1.0	
Blower				10	66.9		
Discharge Stack		4025	—	0	80.7	0.9	
VP-4				0.03		2.7	
VP-5				0.05		2.5	
VP-6				0.02		1.6	
VP-7				1.0		3.3	
VP-8				0.14		3.2	
VP-9		1020			1.0		2.3
Dilution Status:		HALF OF Max Vac		Sample Collected:		NO	
NOTES:							

PES Environmental Inc.

SOIL VAPOR EXTRACTION TEST				Date:	8-8-16	
BETHEL JUNCTION SHOPPING CENTER				Time:		
Project Number: 1246.030.03.002				Field Operator:	KWS	
Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	↑	2475		10	69.7	2.1
Blower				10	75.0	
Discharge Stack		3850	✓	0.12	88.9	1.3
VP-4				0.03		2.5
VP-5				0.02		2.5
VP-6				0.02		1.2
VP-7				1.0		2.5
VP-8				0.02		2.6
VP-9		1050			1.0	
Dilution Status:	Half of Max		Sample Collected:		No	
NOTES:						

KWS

Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	↑	3000		17	89.8	1.9
Blower				17	70.6	
Discharge Stack		3300	✓	✓	95.5	2.1
VP-4				0		2.7
VP-5				0.06		1.5
VP-6				0.02		1.3
VP-7				1.5		3.0
VP-8				0.1		2.8
VP-9		1125			1.4	
Dilution Status:	CLOSED / MAX UAC		Sample Collected:		No	
NOTES:						
STARTED SECOND STEP / CLOSED DILUTION @ 1122						

YSL DATE 2

PES Environmental Inc.

SOIL VAPOR EXTRACTION TEST				Date:	8-8-16	
BETHEL JUNCTION SHOPPING CENTER				Time:		
Project Number: 1246.030.03.002				Field Operator:	KWS	
Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	↑	4500		17	75.9	1.7
Blower				17	85.2	
Discharge Stack		3350	—	0.2	103.6	2.0
VP-4				0.04		2.0
VP-5				0.07		1.9
VP-6				0.02		0.8
VP-7				1.7		2.3
VP-8				0.3		2.1
VP-9		1200			1.7	
Dilution Status:	CLOSED/FULL VAC			Sample Collected:	No	
NOTES:						

2ND STEP 2

Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	↑	4500		17	78.2	1.5
Blower				17	83.2	
Discharge Stack		3400	—	0.2	100.7	1.5
VP-4				0		1.8
VP-5				0.08		1.8
VP-6				0.02		1.2
VP-7				1.7		1.6
VP-8				0.22		2.8
VP-9		1230			1.8	
Dilution Status:	CLOSED/FULL VAC			Sample Collected:		
NOTES:						
ONLY 1 SPOT TAKEN IN SAUCE ON SMOKE TEST						

3RD STEP 2

PES Environmental Inc.

SOIL VAPOR EXTRACTION TEST				Date:	8-8-16	
BETHEL JUNCTION SHOPPING CENTER				Time:		
Project Number: 1246.030.03.002				Field Operator:	KWS	
Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header	▲	4475		17	73.3	1.5
Blower				17	99.6	
Discharge Stack		3350		0.12	103.6	1.5
VP-4				0.04		1.2
VP-5				0.06		1.3
VP-6				0.02		1.1
VP-7				1.8		2.1
VP-8				0.2		2.3
VP-9		1330			1.8	
Dilution Status:	CLOSED / FULL VAC		Sample Collected:		YES <input checked="" type="radio"/> 1345	
NOTES:						

STEP 2

Monitoring Point	Time	Air Flow Velocity (ft/min)	Pres. (in.w.c.)	Vacuum/Pres. (in.w.c.)	Temp. (deg F)	PID (ppm)
SVE Well Header						
Blower						
Discharge Stack						
VP-4						
VP-5						
VP-6						
VP-7						
VP-8						
VP-9						
Dilution Status:			Sample Collected:			
NOTES:						

APPENDIX E

GEOTECHNICAL REPORTS AND HYDRAULIC CONDUCTIVITY CALCULATIONS



Analytical Resources, Incorporated
Analytical Chemists and Consultants

1 August 2016

Bill Haldeman
PES Environmental, Inc.
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Project: Bethel Junction, 1246.030.03
ARI Job No: BDO9

Dear Bill:

Please find enclosed the original chain of custody record and the final results for the samples from the project referenced above. Six soil samples were received on July 19, 2016.

The samples were analyzed for Grain Size as requested. These analyses were sub-contracted to MTC in Tukwila, WA.

An electronic copy of these reports will be kept on file with ARI. Should you have any questions regarding these results, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file BDO9

MDH/mdh



Cooler Receipt Form

ARI Client: PES Env.

Project Name: Botheff Junction

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: BDO9

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) Time: 244

If cooler temperature is out of compliance fill out form O0070F Temp Gun ID#: D005276

Cooler Accepted by: JM Date: 7-19-10 Time: 1210

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: NA

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 7-19-10 Time: 1210

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

<p>Small Air Bubbles ~2mm</p>	<p>Peabubbles' 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>
-----------------------------------	-------------------------------	--

- Small → "sm" (< 2 mm)
- Peabubbles → "pb" (2 to < 4 mm)
- Large → "lg" (4 to < 6 mm)
- Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: BDO9
Client: PES Environmental, Inc.
Project Event: 1246.030.03
Project Name: Bothell Junction

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SB-18-5to8	BDO9A	16-10841	Soil	07/17/16 13:15	07/19/16 12:10
2. SB-22-5to8	BDO9B	16-10842	Soil	07/18/16 11:15	07/19/16 12:10
3. SB-19-5to8	BDO9C	16-10843	Soil	07/17/16 12:35	07/19/16 12:10
4. SB-21-5to8	BDO9D	16-10844	Soil	07/17/16 14:30	07/19/16 12:10
5. SB-20-4to7	BDO9E	16-10845	Soil	07/17/16 11:50	07/19/16 12:10
6. SB-23-5to8	BDO9F	16-10846	Soil	07/18/16 09:25	07/19/16 12:10

Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Project: Bethel Junction	Date Received: July 21, 2016
Project #: BD09	Sampled By: Others
Client: Analytical Resources, Inc.	Date Tested: August 1, 2016
Source: Multiple	Tested By: B. Goble, J. Benny, K. O'Connell
MTC Sample#: Multiple	

CASE NARRATIVE

1. Six samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
2. One sample from another job was chosen for triplicate analysis.
3. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
4. A standard milkshake mixer type device was used to disperse the fine fraction sample for one minute.
5. The data is provided in summary tables and plots.
6. There were no noted anomalies in this project.

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Reviewed by: 

Corporate ~ 777 Chrysler Drive • Burlington, WA 98233 • Phone (360) 755-1990 • Fax (360) 755-1980
Regional Offices: Olympia ~ 360.534.9777 Bellingham ~ 360.647.6111 Silverdale ~ 360.698.6787 Tukwila ~ 206.241.1974
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Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Project: Bethel Junction

Project #: BD09

Date Received: July 21, 2016

Date Tested: August 1, 2016

Client: Analytical Resources, Inc.

Sampled by: Others

Tested by: B. Goble, J. Benny, K. O'Connell

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3	
T16-1207	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.3	96.3	92.6	64.1	25.7	11.0	5.9	3.8	2.9	2.1	2.1	1.7	1.7	0.4	0.4
	100.0	100.0	100.0	100.0	100.0	98.5	98.5	97.5	96.2	92.9	65.2	26.0	10.8	5.5	3.4	2.9	2.1	1.7	1.3	0.4	0.4	0.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.8	97.2	93.5	65.1	26.3	10.6	5.5	3.4	3.0	2.5	1.7	1.7	0.4	0.4	0.4
SB-18-5to8	100.0	100.0	100.0	100.0	100.0	86.3	80.3	67.0	52.9	45.9	33.3	17.7	8.9	5.4	4.2	3.4	2.6	2.1	1.8	0.8	0.8	0.8
SB-22-5to8	100.0	100.0	100.0	100.0	100.0	97.3	94.1	92.9	90.9	88.3	83.7	73.2	54.6	34.7	21.3	16.9	11.9	9.4	8.1	4.4	3.1	3.1
SB-19-5to8	100.0	100.0	100.0	91.7	87.1	84.8	80.6	72.1	66.0	60.8	51.5	31.6	17.0	9.4	6.0	4.7	3.3	2.7	2.0	1.0	1.0	1.0
SB-21-5to8	100.0	100.0	100.0	100.0	100.0	100.0	99.9	96.2	92.2	88.9	82.9	70.6	53.3	35.2	22.8	17.5	13.7	12.2	9.1	5.3	3.8	3.8
SB-20-4to7	100.0	100.0	100.0	100.0	100.0	100.0	98.0	97.7	96.2	94.8	92.1	84.4	69.3	47.5	25.6	20.0	14.4	12.0	9.6	5.6	4.0	4.0
SB-23-5to8	100.0	100.0	100.0	100.0	100.0	98.6	95.6	90.8	87.3	83.6	77.4	65.7	49.9	33.0	20.1	14.8	10.7	9.4	7.4	4.7	3.4	3.4

Testing performed according to ASTM D421/D422
Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by:

E. Goble

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Materials Testing & Consulting, Inc.

Geotechnical Engineering • Special Inspection • Materials Testing • Environmental Consulting



Project: Bethel Junction
 Project #: BD09
 Date Received: July 21, 2016
 Date Tested: August 1, 2016

Client: Analytical Resources, Inc.

Sampled by: Others

Tested by: B. Goble, J. Benny, K. O'Connell

Percent Retained in Each Size Fraction

Description	% Coarse Gravel				% Gravel			% Coarse Sand 4750-2000	% Medium Sand			% Fine Sand			% Very Coarse Silt 75-32	% Coarse Silt 32-22	% Medium Silt 22-13	% Fine Silt 9-7	% Very Fine Silt 7-3.2	% Clay 3.2-1.3 <1.3
	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8"-4750		2000-850	850-425	425-250	250-150	150-75	75-32						
Particle Size (microns)	0.0	0.0	0.0	0.0	0.0	0.0	2.7	1.0	3.6	28.5	14.8	5.1	2.1	0.8	0.8	0.4	1.3	0.4	0.4	
T16-1207	0.0	0.0	0.0	0.0	1.5	0.0	1.1	1.2	3.4	27.7	15.2	5.3	2.1	0.4	0.8	0.4	0.6	0.0	0.4	
SB-18-5to8	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.5	3.7	28.4	15.7	5.2	2.1	0.4	0.4	0.8	0.0	1.3	0.0	0.4
SB-22-5to8	0.0	0.0	0.0	0.0	13.7	5.9	13.3	14.1	7.0	12.6	15.7	8.8	1.1	0.8	0.8	0.5	0.3	1.1	0.0	0.8
SB-19-5to8	0.0	0.0	0.0	0.0	2.7	3.2	1.2	1.9	2.6	4.7	10.5	18.6	13.4	4.4	5.0	2.5	1.3	3.8	1.3	3.1
SB-21-5to8	0.0	0.0	0.0	0.0	4.6	2.3	4.2	6.0	5.2	9.3	14.7	7.6	3.4	1.3	1.3	0.7	1.0	0.0	1.0	3.8
SB-20-4to7	0.0	0.0	0.0	0.0	0.0	0.0	3.8	4.0	3.3	5.9	12.3	18.1	12.4	5.3	3.8	1.5	3.0	3.8	1.5	3.8
SB-23-5to8	0.0	0.0	0.0	0.0	0.0	2.0	0.4	1.5	1.5	2.7	7.7	15.1	21.9	5.6	5.6	2.4	2.4	4.0	1.6	4.0
	0.0	0.0	0.0	0.0	1.4	3.0	4.8	3.5	3.8	6.1	11.7	15.8	17.0	5.4	4.0	1.3	2.0	2.7	1.3	3.4

Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: E. Goble

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Project: Bethel Junction
Project #: BD09
Date Received: July 21, 2016
Date Tested: August 1, 2016
Client: Analytical Resources, Inc.
Sampled by: Others
Tested by: B. Goble, J. Beamy, K. O'Connell

Sample ID	Relative Standard Deviation, By Size																					
	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3	
T16-1207	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.3	96.3	92.6	64.1	25.7	11.0	5.9	3.8	2.9	2.1	2.1	1.7	1.7	0.4	0.4
AVE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.5	96.2	92.9	65.2	26.0	10.8	5.5	3.4	2.9	2.1	1.7	1.3	1.3	0.4	0.4
STDEV	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.8	97.2	93.5	65.1	26.3	10.6	5.5	3.4	3.0	2.5	1.7	1.7	1.7	0.4	0.4
%RSD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.8	96.6	93.0	64.8	26.0	10.8	5.6	3.5	2.9	2.2	1.8	1.5	1.5	0.4	0.4
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.4	0.5	0.2	0.1	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.5	0.4	0.8	0.9	1.4	3.5	5.4	0.5	9.3	10.6	13.1	13.1	0.5	0.5

This Triplicate applies to the Batch Containing the Following Samples

Sample ID	Date Sampled	Date Set up	Date Started	Date Complete	Data Qualifiers
T16-1207	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
SB-18-5to8	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
SB-19-5to8	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
SB-20-4to7	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
	7/17/2016	7/25/2016	7/27/2016	7/29/2016	
SB-23-5to8	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
	7/18/2016	7/25/2016	7/27/2016	7/29/2016	
	7/18/2016	7/25/2016	7/27/2016	7/29/2016	

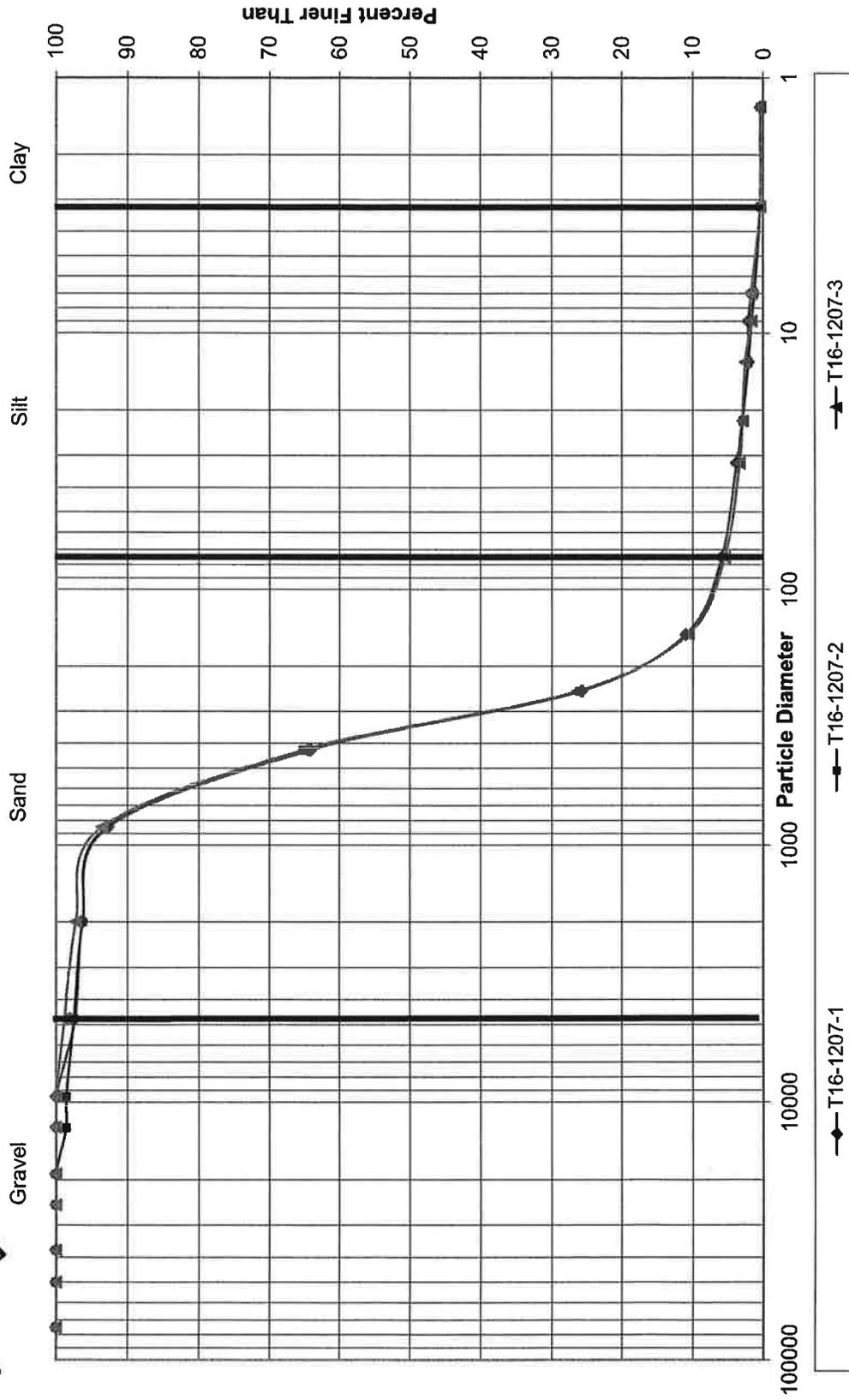
Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: E. Goble

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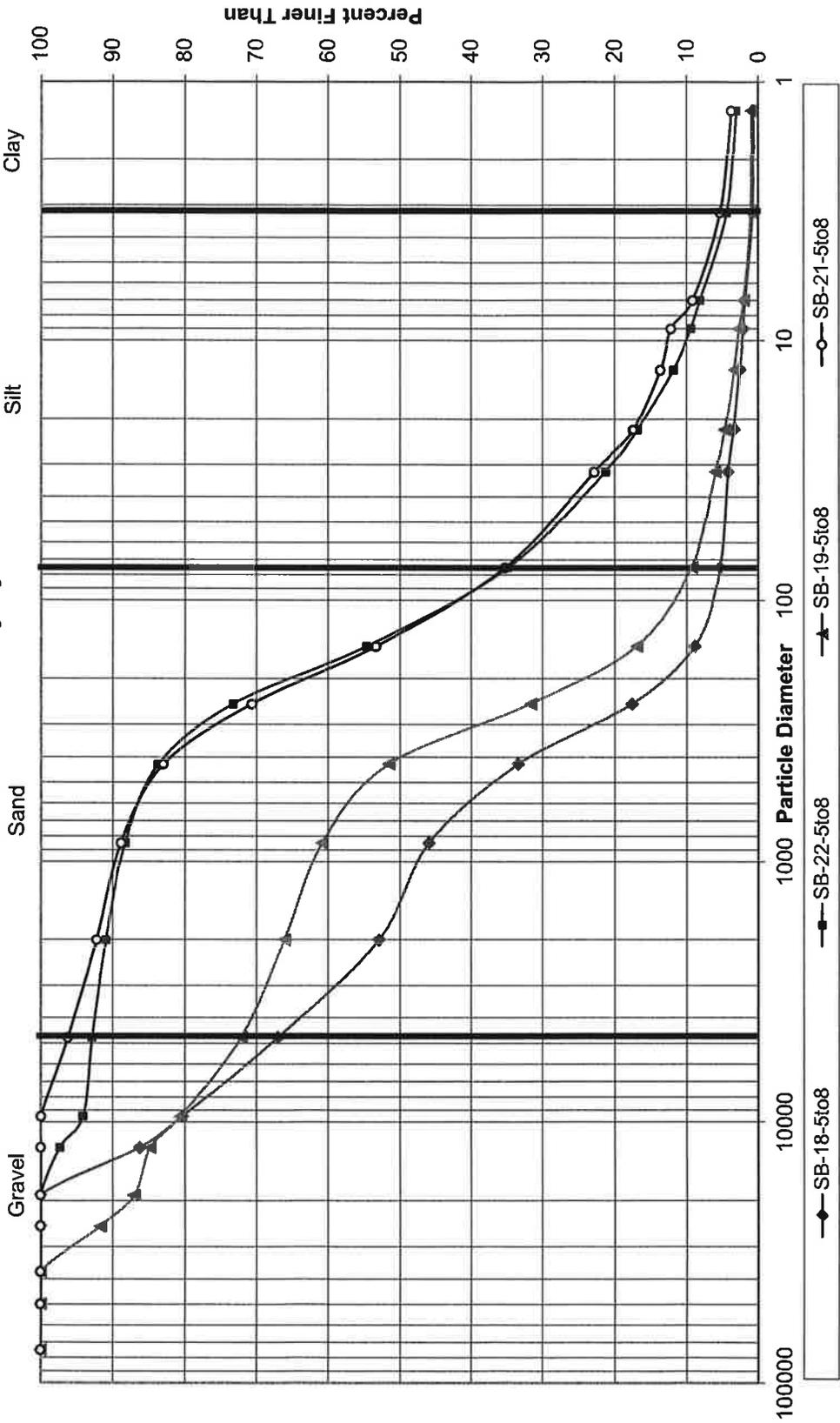


Grain Size Distribution by Hydrometer



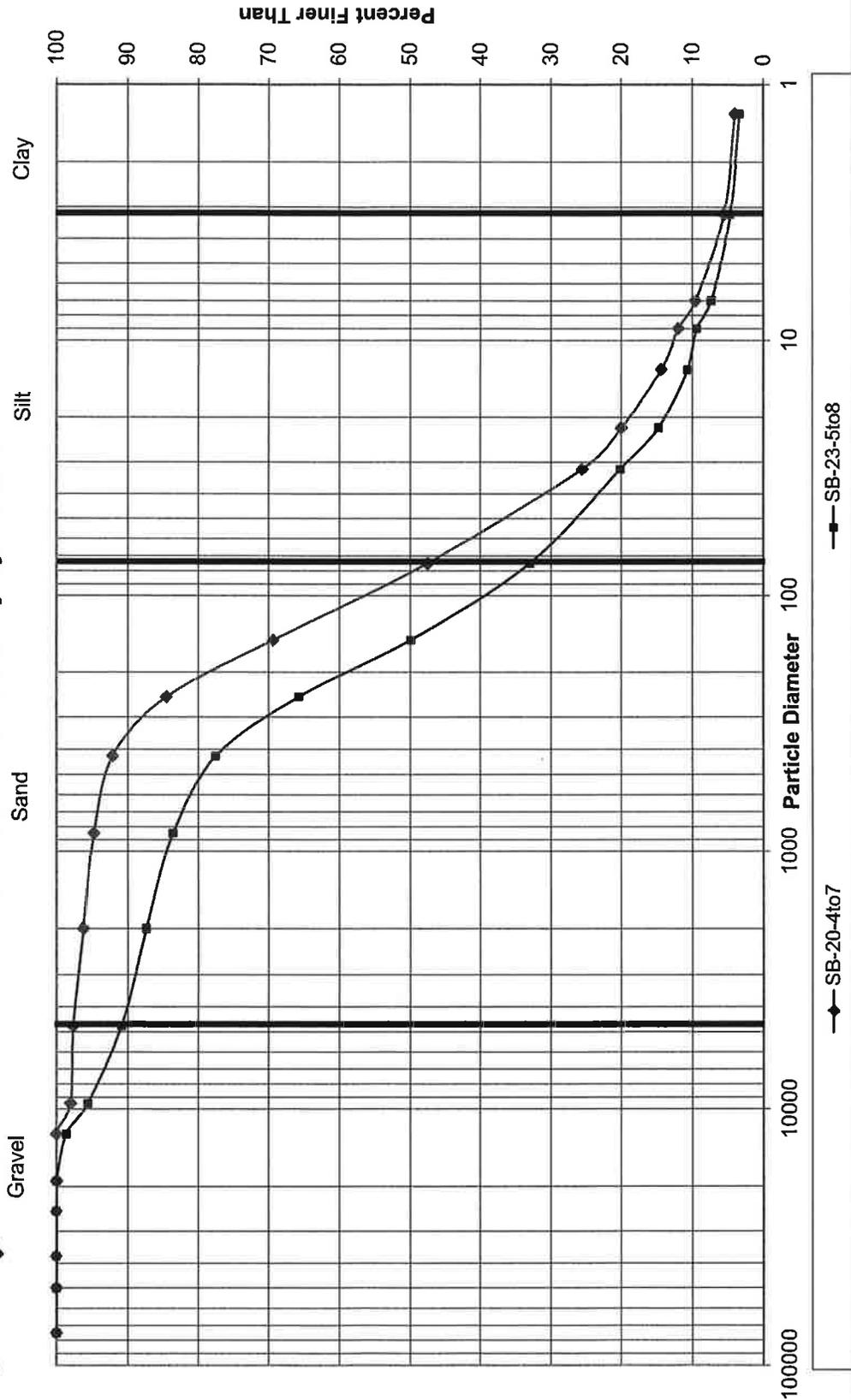


Grain Size Distribution by Hydrometer





Grain Size Distribution by Hydrometer



SUBCONTRACTOR ANALYSIS REQUEST
CUSTODY TRANSFER 07/19/16



ARI Project: BDO9

Laboratory: Materials Testing & Consulting, InARI Client: PES Environmental, Inc.
 Lab Contact: Harold Benny
 Lab Address: 4611 S. 134th Pl
 Tukwila, WA 98168
 Phone: 360-255-9802
 Fax:

Project ID: ~~Chris DeBoer~~ **BETHEL JUNCTION**
 ARI PM: Mark Harris
 Phone: 206-695-6210
 Fax: 206-695-6201
 Email: subdata@arilabs.com

Analytical Protocol: In-house
 Special Instructions:

Requested Turn Around:
 Email Results (Y/N): **Yes**

Limits of Liability. Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
16-10841-BDO9A	SB-18-5to8	07/17/16 13:15	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					
16-10842-BDO9B	SB-22-5to8	07/18/16 11:15	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					
16-10843-BDO9C	SB-19-5to8	07/18/16 12:35	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					
16-10844-BDO9D	SB-21-5to8	07/17/16 14:30	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					
16-10845-BDO9E	SB-20-4to7	07/17/16 11:50	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					
16-10846-BDO9F	SB-23-5to8	07/18/16 09:25	Soil	1	ASTM D422 SUB GSASTM
Special Instructions: None					

4611 S. 134th Pl
 Tukwila, WA 98168

4.2°C

Carrier	ARR	Airbill	Date
Relinquished by	Company	ARR	Date 7-20-16
Time			1605
Received by	Company	MTI	Date 7/21/16
Time			1135



Analytical Resources, Incorporated
Analytical Chemists and Consultants

2 July 2015

Kelly Rankich
PES Environmental, Inc.
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Project: Bethel Junction, 1246.030.02
ARI Job No: AHX6

Dear Kelly:

Please find enclosed the original chain of custody record and the final results for the samples from the project referenced above. Two soil samples were received on June 16, 2015.

The samples were analyzed for Grain Size as requested. These analyses were sub-contracted to MTC in Tukwila, WA.

An electronic copy of these reports will be kept on file with ARI. Should you have any questions regarding these results, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file AHX6

MDH/mdh



Cooler Receipt Form

ARI Client: PES Environmental
 COC No(s): _____ NA
 Assigned ARI Job No: _____ AH X 6

Project Name: gettel Junction
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) _____ 23.3
 Time: 1610 _____
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90077952

Cooler Accepted by: CA Date: 6/16/15 Time: 1610

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI..... NA
 Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 6-17-15 Time: 754

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>SB-7-12</u>	<u>SB-7-13</u>		

Additional Notes, Discrepancies, & Resolutions:

By: TS Date: 6-17-15

<p>Small Air Bubbles - 2mm</p>	<p>Peabubbles 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>	<p>Small → "sm" (< 2 mm)</p> <p>Peabubbles → "pb" (2 to < 4 mm)</p> <p>Large → "lg" (4 to < 6 mm)</p> <p>Headspace → "hs" (> 6 mm)</p>
------------------------------------	------------------------------	--	---



Cooler Temperature Compliance Form

Cooler#:	Temperature(°C):			
Sample ID	Bottle Count	Bottle Type		
<i>All samples received above 6°C</i>				

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Cooler#:	Temperature(°C):	
Sample ID	Bottle Count	Bottle Type

Completed by: A Date: 8/16/15 Time: 1605

Sample ID Cross Reference Report



ARI Job No: AHX6
Client: PES Environmental, Inc.
Project Event: 1246.030.02
Project Name: Bethel Junction

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SB-7-10	AHX6A	15-11338	Soil	06/12/15 10:30	06/16/15 16:10
2. SB-7-13	AHX6B	15-11339	Soil	06/12/15 15:40	06/16/15 16:10

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Project: Bethel Junction
Project #: AHX6
Client: Analytical Resources, Inc.
Source: SB-7-10, SB-7-13
MTC Sample#: T15-0983, T15-0984

Date Received: June 17, 2015
Sampled By: Others
Date Tested: June 29, 2015
Tested By: A. Urban

CASE NARRATIVE

1. Two samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
2. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
3. A standard milkshake mixer type device was used to disperse the fine fraction sample for one minute.
4. One sample from this job was chosen for triplicate analysis.
5. The data is provided in summary tables and plots.
6. There were no noted anomalies in this project.

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Reviewed by: 

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Project: Bethel Junction
 Project #: AHXG
 Date Received: June 17, 2015
 Date Tested: June 29, 2015

Client: Analytical Resources, Inc.

Sampled by: Others
 Tested by: A. Urhan

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
SB-7-13	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.8	95.4	92.8	87.4	74.7	58.8	41.6	22.9	18.3	15.2	12.2	12.2	7.6	4.6
SB-7-10	100.0	100.0	100.0	100.0	100.0	98.8	98.1	96.9	94.6	92.9	87.5	74.5	58.4	41.2	23.9	19.4	14.9	11.9	10.4	7.5	4.5
	100.0	100.0	100.0	100.0	100.0	100.0	98.9	97.3	95.7	93.9	89.8	79.0	62.7	49.5	22.3	15.9	14.3	11.2	11.2	8.0	4.8

Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: 

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Project: Bethel Junction
Project #: AEX6
Date Received: June 17, 2015
Date Tested: June 29, 2015
Client: Analytical Resources, Inc.
Sampled by: Others
Tested by: A. Urban

Sample ID	Relative Standard Deviation, By Size																					
	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3	
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.8	95.4	92.8	87.4	74.7	58.8	41.6	22.9	18.3	15.2	12.2	12.2	7.6	4.6	4.6
100.0	100.0	100.0	100.0	100.0	100.0	96.4	96.4	95.8	93.5	91.0	85.7	73.5	58.1	45.2	22.6	18.1	15.1	12.1	12.1	7.5	4.5	4.5
100.0	100.0	100.0	100.0	100.0	100.0	98.8	98.8	96.9	94.6	92.9	87.5	74.5	58.4	41.2	23.9	19.4	14.9	11.9	10.4	7.5	4.5	4.5
AVE	100.0	100.0	100.0	100.0	100.0	98.4	98.2	96.9	94.5	92.2	86.9	74.3	58.4	42.6	23.1	18.6	15.1	12.1	11.6	7.5	4.5	4.5
STDEV	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.8	0.8	0.9	0.9	0.6	0.3	1.8	0.6	0.6	0.1	0.1	0.8	0.1	0.0	0.0
%RSD	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.9	0.8	1.0	1.0	0.7	0.5	4.2	2.4	3.1	0.9	0.9	6.8	0.9	0.0	0.0

This Triplicate applies to the Batch Containing the Following Samples

Sample ID	Date Sampled	Date Set Up	Date Started	Date Complete	Data Qualifiers
SB-7-10	6/12/2015	6/18/2015	6/22/2015	6/29/2015	
	6/12/2015	6/18/2015	6/22/2015	6/29/2015	
SB-7-10	6/12/2015	6/18/2015	6/22/2015	6/29/2015	
	6/12/2015	6/18/2015	6/22/2015	6/29/2015	

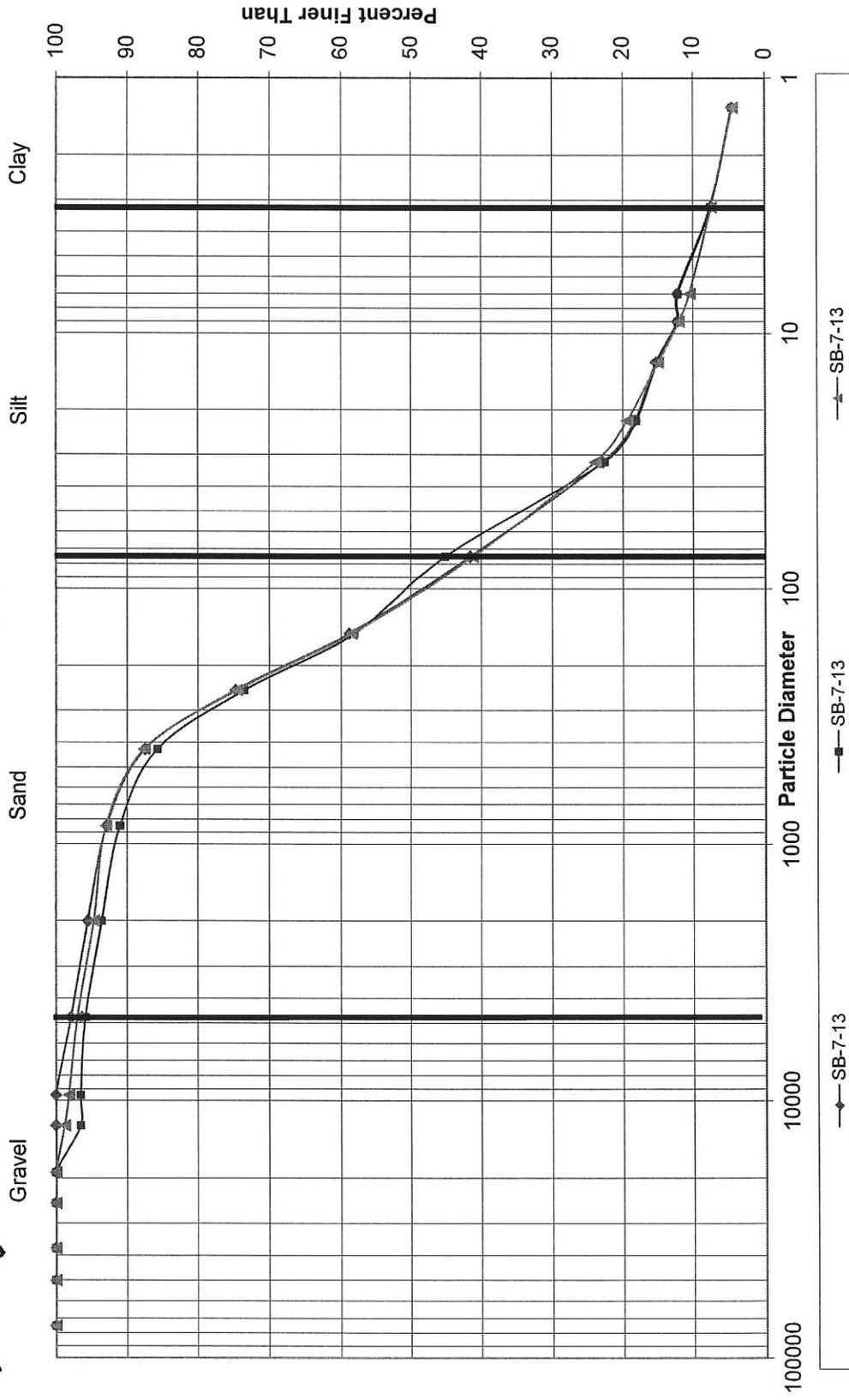
Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by:

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Grain Size Distribution by Hydrometer





Analytical Resources, Incorporated
Analytical Chemists and Consultants

6 July 2015

Kelly Rankich
PES Environmental, Inc.
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Project: Bethel Junction, 1246.030.02
ARI Job No: AIL4

Dear Kelly:

Please find enclosed the original chain of custody record and the final results for the samples from the project referenced above. Four soil samples were received on June 29, 2015.

The samples were analyzed for Grain Size as requested. These analyses were sub-contracted to MTC in Tukwila, WA.

An electronic copy of these reports will be kept on file with ARI. Should you have any questions regarding these results, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in blue ink that reads "Mark D. Harris".

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: file AIL4

MDH/mdh



Cooler Receipt Form

ARI Client: PESE

Project Name: Bethel Tutor

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: ATL4

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) _____

Time: 0850 _____ 23.2 _____

If cooler temperature is out of compliance fill out form 00070F _____ Temp Gun ID#: D009565

Cooler Accepted by: CA Date: 6/29/15 Time: 0850

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA _____

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: CA Date: 6/29/15 Time: 1128

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)



Laboratory: Materials Testing & Consulting, InARI Client: PES Environmental, Inc.
 Lab Contact: Harold Benny Project ID: Bethel Interior
 Lab Address: 4611 S. 134th Pl ARI PM: Mark Harris
 Tukwila, WA 98168 Phone: 206-695-6210
 Phone: 360-255-9802 Fax: 206-695-6201
 Fax: Email: subdata@arilabs.com

Analytical Protocol: In-house Requested Turn Around: **07/14/15**
 Special Instructions: Email Results (Y/N): **Yes**

Limits of Liability. Subcontractor is expected to perform all requested services in accordance with appropriate methodology following Standard Operating Procedures that meet standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the negotiated amount for said services. The agreement by the Subcontractor to perform services requested by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Subcontractor.

ARI ID	Client ID/ Add'l ID	Sampled	Matrix	Bottles	Analyses
15-11867-AIL4A	SB-11-2	06/25/15 09:50	Soil	1	GS BY Sieve & Hydro
Special Instructions: None					
15-11868-AIL4B	SB-10-3	06/25/15 10:50	Soil	1	GS By Sieve & Hydro
Special Instructions: None					
15-11869-AIL4C	SB-12-3	06/25/15 11:55	Soil	1	GS By Sieve & Hydro
Special Instructions: None					
15-11870-AIL4D	SB-13-3	06/25/15 13:35	Soil	1	GS By Sieve & Hydro
Special Instructions: None					

Carrier	Airbill	Date	
Relinquished by <i>[Signature]</i>	Company ARM	Date 6/29/15	Time 1208
Received by <i>[Signature]</i>	Company MTC	Date 6.29.15	Time 1208

Sample ID Cross Reference Report



ARI Job No: AIL4
Client: PES Environmental, Inc.
Project Event: 1246.030.02
Project Name: Bethel Interior

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SB-11-2	AIL4A	15-11867	Soil	06/25/15 09:50	06/29/15 08:50
2. SB-10-3	AIL4B	15-11868	Soil	06/25/15 10:50	06/29/15 08:50
3. SB-12-3	AIL4C	15-11869	Soil	06/25/15 11:55	06/29/15 08:50
4. SB-13-3	AIL4D	15-11870	Soil	06/25/15 13:35	06/29/15 08:50

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Project: Bethel Interior	Date Received: June 29, 2015
Project #: AIL4	Sampled By: Others
Client: Analytical Resources, Inc.	Date Tested: July 6, 2015
Source: Multiple	Tested By: A. Urban
MTC Sample#: T15-1049 - T15-1052	

CASE NARRATIVE

1. Four samples were submitted for grain size distribution according to ASTM D422. The samples were prepared according to ASTM D421.
2. An assumed specific gravity of 2.65 was used in the hydrometer calculations.
3. A standard milkshake mixer type device was used to disperse the fine fraction sample for one minute.
4. One sample from this job was chosen for triplicate analysis.
5. The data is provided in summary tables and plots.
6. There were no noted anomalies in this project.

All results apply only to actual locations and materials tested. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

Reviewed by: *E. G. H. H. H.*

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Project: Bethel Interior
 Project #: ALL4
 Date Received: June 29, 2015
 Date Tested: July 6, 2015

Client: Analytical Resources, Inc.

Sampled by: Others
 Tested by: A. Urban

Percent Finer (Passing) Than the Indicated Size

Sieve Size (microns)	3"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4 (4750)	#10 (2000)	#20 (850)	#40 (425)	#60 (250)	#100 (150)	#200 (75)	32	22	13	9	7	3.2	1.3
SB-11-2	100.0	100.0	100.0	100.0	100.0	100.0	97.1	95.3	93.1	90.9	86.6	76.5	56.8	35.5	20.6	17.3	14.0	12.4	9.9	7.4	4.9
	100.0	100.0	100.0	100.0	100.0	100.0	98.9	97.7	95.5	92.8	88.1	77.7	58.2	37.3	21.9	17.7	14.3	12.6	10.1	7.6	5.0
	100.0	100.0	100.0	100.0	100.0	97.6	96.9	95.3	92.6	90.1	85.6	75.2	54.9	33.9	21.2	17.1	13.8	12.2	9.8	6.5	4.9
SB-10-3	100.0	100.0	100.0	100.0	100.0	100.0	98.5	97.0	93.9	90.8	85.4	73.7	57.7	40.0	22.5	18.3	14.2	11.7	9.2	6.7	4.2
SB-12-3	100.0	100.0	100.0	100.0	94.4	92.0	90.2	87.2	83.5	79.5	73.1	61.5	47.1	31.2	18.2	14.6	10.9	8.8	7.3	4.4	2.9
SB-13-3	100.0	100.0	100.0	100.0	100.0	99.1	97.5	95.2	91.5	88.2	81.8	68.8	52.9	36.3	20.0	16.0	12.0	10.4	8.8	5.6	3.2

Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: *[Signature]*

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Project: Bethel Interior
 Project #: AIL4
 Date Received: June 29, 2015
 Date Tested: July 6, 2015

Client: Analytical Resources, Inc.

Sampled by: Others
 Tested by: A. Urban

Percent Retained in Each Size Fraction

Description	% Coarse Gravel					% Gravel			% Coarse Sand		% Medium Sand			% Fine Sand			% Very Coarse Silt	% Coarse Silt	% Medium Silt	% Fine Silt	% Fine Silt	% Very Fine Silt	% Clay
	3-2"	2-1 1/2"	1 1/2"-1"	1-3/4"	3/4-1/2"	1/2-3/8"	3/8"-4/750	4/750-2000	2000-850	850-425	425-250	250-150	150-75	75-32	32-22	22-13							
SB-11-2	0.0	0.0	0.0	0.0	0.0	2.9	1.7	2.2	2.2	4.3	10.1	19.7	21.3	14.9	3.3	3.3	1.6	2.5	2.5	2.5	4.9		
SB-10-3	0.0	0.0	0.0	0.0	2.4	0.7	1.7	2.7	2.5	4.5	10.4	20.3	21.0	12.8	4.1	3.3	1.6	2.4	3.3	1.6	4.9		
SB-12-3	0.0	0.0	0.0	0.0	0.0	1.5	1.5	3.1	3.1	5.4	11.7	16.0	17.7	17.5	4.2	4.2	2.5	2.5	2.5	2.5	4.2		
SB-13-3	0.0	0.0	0.0	0.0	5.6	2.4	1.7	3.7	4.0	6.4	11.6	14.4	15.9	13.0	3.6	3.6	2.2	1.5	2.9	1.5	2.9		
	0.0	0.0	0.0	0.0	0.9	1.6	2.3	3.7	3.3	6.4	13.0	15.9	16.7	16.2	4.0	4.0	1.6	1.6	3.2	2.4	3.2		

Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by: EJ [Signature]

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Project: Bethel Interior
 Project #: AIL4
 Date Received: June 29, 2015
 Date Tested: July 6, 2015
 Client: Analytical Resources, Inc.
 Sampled by: Olhars
 Tested by: A. Urban

Sample ID	Relative Standard Deviation, By Size																					
	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	32	22	13	9	7	3.2	1.3	
SB-11-2	100.0	100.0	100.0	100.0	100.0	100.0	97.1	95.3	93.1	90.9	86.6	76.5	56.8	35.5	20.6	17.3	14.0	12.4	9.9	7.4	4.9	4.9
AVE	100.0	100.0	100.0	100.0	100.0	97.6	96.9	95.3	92.6	90.1	85.6	75.2	54.9	33.9	21.2	17.1	13.8	12.2	9.8	6.5	4.9	4.9
STDEV	0.0	0.0	0.0	0.0	0.0	1.1	0.9	1.1	1.3	1.1	1.0	1.0	1.3	1.4	0.5	0.2	0.2	0.2	0.1	0.5	0.1	0.1
%RSD	0.0	0.0	0.0	0.0	0.0	1.1	0.9	1.2	1.3	1.2	1.2	1.4	2.4	3.8	2.4	1.4	1.4	1.4	1.4	6.6	1.4	1.4

This Triplicate applies to the Batch Containing the Following Samples

Sample ID	Date Sampled	Date Set Up	Date Started	Date Complete	Data Qualifiers
SB-11-2	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
SB-10-3	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
SB-13-3	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	
	6/25/2015	6/29/2015	7/1/2015	7/6/2015	

Testing performed according to ASTM D421/D422
 Organics were not removed prior to analysis. The grain size distribution reported is the "apparent grain size distribution".

Reviewed by:

Corporate - 777 Chrysler Drive • Burlington, WA 98233 • Phone (360) 755-1990 • Fax (360) 755-1980
 Bellingham - 360.647.6111 Silverdale - 360.698.6787 Tukwila - 206.241.1974
 Regional Offices: Olympia - 360.534.9777
 Visit our website: www.mtc-inc.net



Grain Size Distribution by Hydrometer

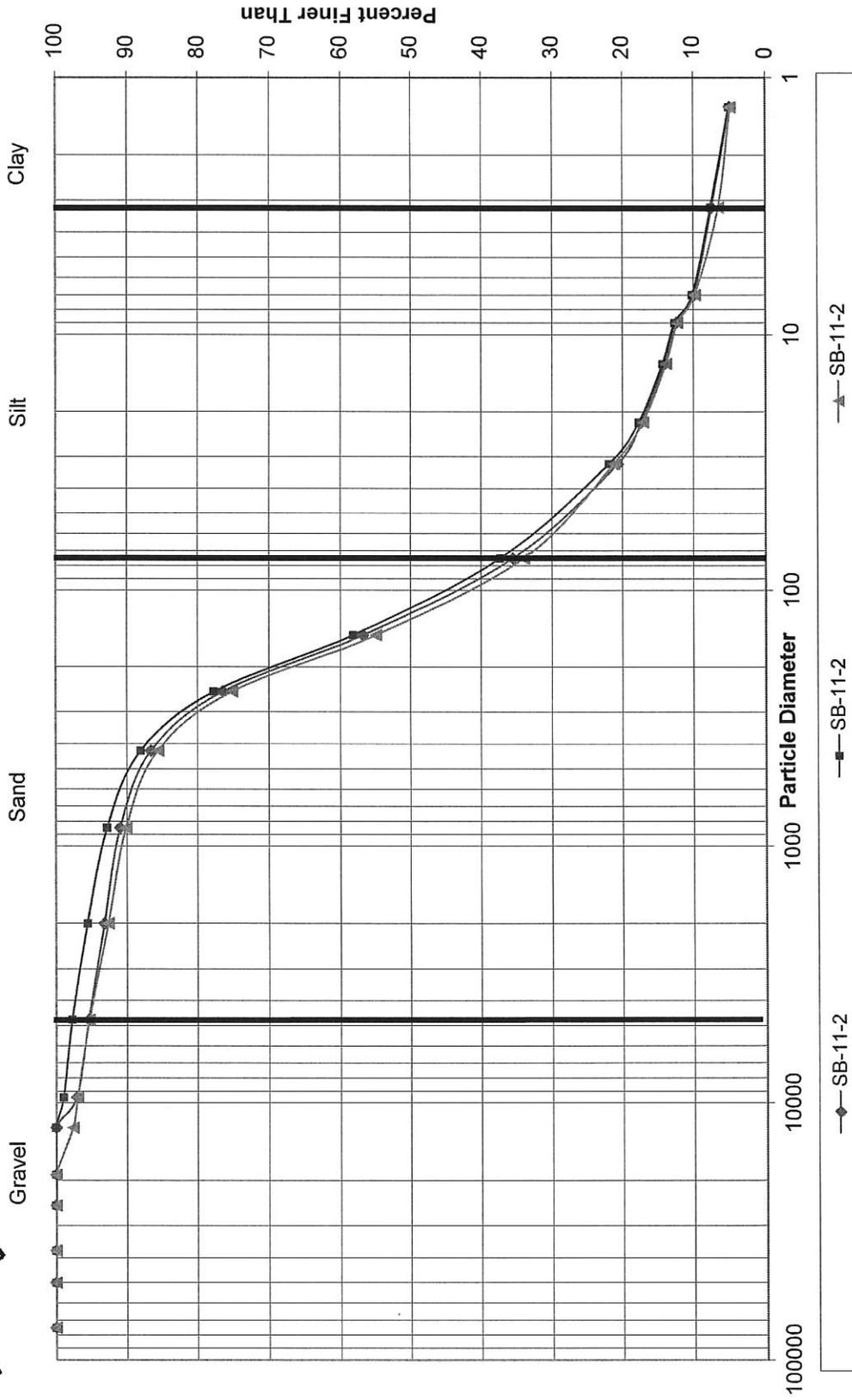


Table E-1

**Estimated Hydraulic Conductivity Based On Grain Size Analyses
Phase II Subsurface Investigation
Bethel Junction Shopping Center, Port Orchard, Washington**

Particle Type	Screen Size (microns)	Screen Size (cm)	SB-7-10		SB-7-13		SB-7-13 (duplicate)	
			Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$
Coarse Gravel	2"	5.08	0.000	—	0.000	—	0.000	—
	1½"	3.81	0.000	0.00000	0.000	0.00000	0.000	0.00000
	1"	2.54	0.000	0.00000	0.000	0.00000	0.000	0.00000
	¾"	1.905	0.000	0.00000	0.000	0.00000	0.000	0.00000
Fine Gravel	½"	1.27	0.000	0.00000	0.000	0.00000	0.036	0.02407
	⅜"	0.9525	0.011	0.01028	0.000	0.00000	0.000	0.00000
	4,750 (No. 4)	0.4750	0.016	0.02541	0.022	0.03494	0.006	0.00953
Coarse Sand	2,000 (No. 10)	0.2000	0.016	0.05631	0.024	0.08447	0.023	0.08095
Medium Sand	850 (No. 20)	0.0850	0.018	0.14950	0.026	0.21595	0.025	0.20764
	425 (No. 40)	0.0425	0.041	0.72679	0.054	0.95723	0.053	0.93951
Fine Sand	250 (No. 60)	0.0250	0.108	3.47360	0.127	4.08470	0.122	3.92389
	150 (No. 100)	0.0150	0.163	8.80330	0.159	8.58727	0.154	8.31723
	75 (No. 200)	0.0075	0.132	13.23645	0.172	17.24750	0.129	12.93562
Silt and Clay	32	0.0032	0.272	59.90732	0.187	41.18628	0.226	49.77594
	22	0.0022	0.064	24.85180	0.046	17.86223	0.045	17.47392
	13	0.0013	0.016	9.88519	0.031	19.15255	0.030	18.53473
	9	0.0009	0.031	29.48182	0.030	28.53079	0.030	28.53079
	7	0.0007	0.000	0.00000	0.000	0.00000	0.000	0.00000
	3.2	0.00032	0.032	72.30463	0.046	103.93791	0.046	103.93791
	1.3	0.00013	0.080	423.85089	0.076	402.65835	0.075	397.36021
Sum			1.00	646.763	1.00	644.540	1.00	642.052
Estimated Maximum k (cm/sec)				2.27E-04		2.29E-04		2.31E-04
Estimated Median k (cm/sec)				9.75E-05		9.82E-05		9.89E-05
Estimated Minimum k (cm/sec)				3.23E-05		3.25E-05		3.27E-05
% Gravel			2.7		2.2		4.2	
% Sand			47.8		56.2		50.6	
% Silt and Clay			49.5		41.6		45.2	

- Notes:
1. Kozeny-Carman Equation:

$$k = [\Theta^3 / (1 - \Theta)^2] * (1.99 \times 10^4) / \{ (\sum [f_i / (d_{li}^{0.404} \times d_{si}^{0.595})])^2 * SF^2 \}$$

where Θ = total porosity
 1.99×10^4 = constant incorporating unit weight and viscosity of water and the empirical Kozeny-Carmon coefficient (1/cm-sec)
 f_i = fraction of particles retained on the smaller sieve of adjacent sieve pairs (dimensionless)
 d_{li} = diameter of larger sieve in pair (cm)
 d_{si} = diameter of smaller sieve in pair (cm)
SF = grain shape factor (dimensionless)
 2. Frac retained = fraction (by weight) retained on screen
 3. Estimated shape factors:

Rounded	6.1
Median	6.25
Worn	6.4
 4. Estimated porosities:

Maximum	0.40
Median	0.33
Minimum	0.25

Table E-1

**Estimated Hydraulic Conductivity Based On Grain Size Analyses
Phase II Subsurface Investigation
Bethel Junction Shopping Center, Port Orchard, Washington**

Particle Type	Screen Size (microns)	SB-7-13 (triplicate)		SB-10-3		SB-11-2	
		Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$
Coarse Gravel	2"	0.000	—	0.000	—	0.000	—
	1½"	0.000	0.00000	0.000	0.00000	0.000	0.00000
	1"	0.000	0.00000	0.000	0.00000	0.000	0.00000
	¾"	0.000	0.00000	0.000	0.00000	0.000	0.00000
Fine Gravel	½"	0.012	0.00802	0.000	0.00000	0.000	0.00000
	⅜"	0.007	0.00654	0.015	0.01402	0.029	0.02710
	4,750 (No. 4)	0.012	0.01906	0.015	0.02382	0.017	0.02700
Coarse Sand	2,000 (No. 10)	0.023	0.08095	0.031	0.10911	0.022	0.07743
Medium Sand	850 (No. 20)	0.017	0.14120	0.031	0.25748	0.022	0.18273
	425 (No. 40)	0.054	0.95723	0.054	0.95723	0.043	0.76224
Fine Sand	250 (No. 60)	0.130	4.18119	0.117	3.76307	0.101	3.24846
	150 (No. 100)	0.161	8.69528	0.160	8.64128	0.197	10.63957
	75 (No. 200)	0.172	17.24750	0.177	17.74888	0.213	21.35882
Silt and Clay	32	0.173	38.10282	0.175	38.54331	0.149	32.81688
	22	0.045	17.47392	0.042	16.30900	0.033	12.81421
	13	0.045	27.80209	0.042	25.94862	0.033	20.38820
	9	0.030	28.53079	0.025	23.77566	0.016	15.21642
	7	0.015	19.21958	0.025	32.03264	0.025	32.03264
	3.2	0.029	65.52607	0.025	56.48800	0.025	56.48800
	1.3	0.075	397.36021	0.067	354.97512	0.074	392.06207
Estimated Maximum		1.00	625.352	1.00	579.587	1.00	598.142
Estimated Median			2.43E-04		2.83E-04		2.66E-04
Estimated Minimum			1.04E-04		1.21E-04		1.14E-04
		3.1	3.45E-05	3.0	4.02E-05	4.6	3.77E-05
		55.7		57.0		59.8	
	% Si	41.2		40.1		35.5	

Notes:

- Kozeny-Carman Equation:

$$k = [\Theta^3 / (1-\Theta)^2] * (1.99 \times 10^4) / \{ (\sum [f_i / (d_{li}^{0.404} \times d_{si}^{0.595})])^2 * SF^2 \}$$
 where Θ = total porosity
 1.99×10^4 = constant incorporating unit weight and viscosity of water and the empirical Kozeny-Carmon coefficient (1/cm-sec)
 f_i = fraction of particles retained on the smaller sieve of adjacent sieve pairs (dimensionless)
 d_{li} = diameter of larger sieve in pair (cm)
 d_{si} = diameter of smaller sieve in pair (cm)
 SF = grain shape factor (dimensionless)
- Frac retained = fraction (by weight) retained on screen
- Estimated shape factors:

Rounded	6.1
Median	6.25
Worn	6.4
- Estimated porosities:

Maximum	0.40
Median	0.33
Minimum	0.25

Table E-1

**Estimated Hydraulic Conductivity Based On Grain Size Analyses
Phase II Subsurface Investigation
Bethel Junction Shopping Center, Port Orchard, Washington**

Particle Type	Screen Size (microns)	SB-11-2 (duplicate)		SB-11-2 (triplicate)		SB-12-3	
		Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$	Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$
Coarse Gravel	2"	0.000	—	0.000	—	0.000	—
	1½"	0.000	0.00000	0.000	0.00000	0.000	0.00000
	1"	0.000	0.00000	0.000	0.00000	0.000	0.00000
	¾"	0.000	0.00000	0.000	0.00000	0.056	0.02619
Fine Gravel	½"	0.000	0.00000	0.024	0.01605	0.024	0.01605
	⅜"	0.011	0.01028	0.007	0.00654	0.017	0.01589
	4,750 (No. 4)	0.012	0.01906	0.017	0.02700	0.031	0.04923
Coarse Sand	2,000 (No. 10)	0.022	0.07743	0.027	0.09503	0.037	0.13023
Medium Sand	850 (No. 20)	0.027	0.22426	0.025	0.20764	0.040	0.33223
	425 (No. 40)	0.047	0.83315	0.045	0.79769	0.064	1.13450
Fine Sand	250 (No. 60)	0.103	3.31279	0.104	3.34495	0.116	3.73091
	150 (No. 100)	0.195	10.53156	0.203	10.96362	0.144	7.77715
	75 (No. 200)	0.209	20.95772	0.210	21.05799	0.159	15.94391
Silt and Clay	32	0.154	33.91812	0.128	28.19168	0.130	28.63218
	22	0.042	16.30900	0.041	15.92069	0.036	13.97914
	13	0.034	21.00602	0.033	20.38820	0.036	22.24167
	9	0.017	16.16745	0.016	15.21642	0.022	20.92258
	7	0.025	32.03264	0.024	30.75133	0.015	19.21958
	3.2	0.025	56.48800	0.033	74.56415	0.029	65.52607
	1.3	0.075	397.36021	0.065	344.37885	0.044	233.11799
Estimated Maximum		1.00	609.248	1.00	565.928	1.00	432.795
Estimated Median			2.56E-04		2.97E-04		5.08E-04
Estimated Minimum			1.10E-04		1.27E-04		2.18E-04
		2.3	3.64E-05	4.8	4.21E-05	12.8	7.20E-05
		60.3		61.4		56.0	
	% Si	37.2		34.0		31.2	

Notes:

1. Kozeny-Carman Equation:

$$k = [\Theta^3 / (1-\Theta)^2] * (1.99 \times 10^4) / \{ (\sum [f_i / (d_{li}^{0.404} \times d_{si}^{0.595})])^2 * SF^2 \}$$

where Θ = total porosity
 1.99×10^4 = constant incorporating unit weight and viscosity of water and the empirical Kozeny-Carman coefficient (1/cm-sec)
 f_i = fraction of particles retained on the smaller sieve of adjacent sieve pairs (dimensionless)
 d_{li} = diameter of larger sieve in pair (cm)
 d_{si} = diameter of smaller sieve in pair (cm)
SF = grain shape factor (dimensionless)
2. Frac retained = fraction (by weight) retained on screen
3. Estimated shape factors:

Rounded	6.1
Median	6.25
Worn	6.4
4. Estimated porosities:

Maximum	0.40
Median	0.33
Minimum	0.25

Table E-1

**Estimated Hydraulic Conductivity Based On Grain Size Analyses
Phase II Subsurface Investigation
Bethel Junction Shopping Center, Port Orchard, Washington**

Particle Type	Screen Size (microns)	SB-13-3	
		Frac Retained	$f_i / (d_{li}^{0.404} \times d_{si}^{0.595})$
Coarse Gravel	2"	0.000	—
	1½"	0.000	0.00000
	1"	0.000	0.00000
	¾"	0.000	0.00000
Fine Gravel	½"	0.009	0.00602
	⅜"	0.016	0.01495
	4,750 (No. 4)	0.023	0.03653
Coarse Sand	2,000 (No. 10)	0.037	0.13023
Medium Sand	850 (No. 20)	0.033	0.27409
	425 (No. 40)	0.064	1.13450
Fine Sand	250 (No. 60)	0.130	4.18119
	150 (No. 100)	0.159	8.58727
	75 (No. 200)	0.167	16.74612
Silt and Clay	32	0.162	35.68010
	22	0.040	15.53238
	13	0.040	24.71297
	9	0.016	15.21642
	7	0.016	20.50089
	3.2	0.032	72.30463
	1.3	0.056	296.69562
Estimated Maximum		1.00	511.754
Estimated Median			3.63E-04
Estimated Minimum			1.56E-04
		4.8	5.15E-05
		59.0	
	% Si	36.2	

APPENDIX F
TERRESTRIAL ECOLOGICAL EVALUATION



Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Amys Cleaners

Facility/Site Address: 3377 Bethel Road SE Suite 105

Facility/Site No: 28514228

VCP Project No.: NW0568

Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Kelly Rankich

Title: Project Engineer

Organization: PES Environmental, Inc

Mailing address: 1215 4th Ave Suite 1350

City: Seattle

State: WA

Zip code: 98161

Phone: (206) 529-3980

Fax: (206) 529-3985

E-mail: krankich@pesenv.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

- Yes *If you answered "YES," then answer **Question 2**.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- All soil contamination is, or will be,* at least 15 feet below the surface.
- All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 2** below.*
- No or Unknown *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

- Yes *If you answered "YES," then answer **Question 3** below.*
- No *If you answered "NO," then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

- Yes *If you answered "YES," then answer **Question 4** below.*
- No *If you answered "NO," then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

- Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

Exposure Analysis: WAC 173-340-7492(2)(a)

- Area of soil contamination at the Site is not more than 350 square feet.
- Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

- No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

1. Was there a problem? See WAC 173-340-7493(2).

- Yes *If you answered "YES," then answer **Question 2** below.*
- No *If you answered "NO," then identify the reason here and then skip to **Question 5** below:*
- No issues were identified during the problem formulation step.
 - While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? See WAC 173-340-7493(3).

- Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?

Check all that apply. See WAC 173-340-7493(3).

- Literature surveys.
- Soil bioassays.
- Wildlife exposure model.
- Biomarkers.
- Site-specific field studies.
- Weight of evidence.
- Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- Confirmed there was no problem.
- Confirmed there was a problem and established site-specific cleanup levels.

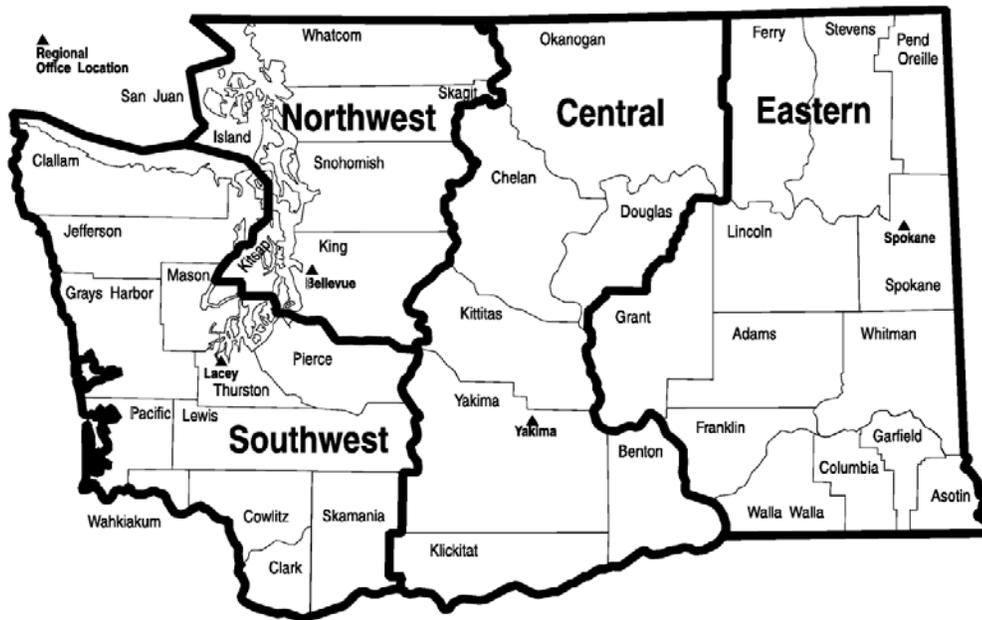
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

- Yes If so, please identify the Ecology staff who approved those steps:
- No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

<p>Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452</p>	<p>Central Region: Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009</p>
<p>Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775</p>	<p>Eastern Region: Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295</p>



APPENDIX G

SOIL VAPOR EXTRACTION SYSTEM DESIGN MEMORANDUM

MEMORANDUM

TO: John Waters
Gerrity Retail Fund 2, Inc.

FROM: Matt Dahl and Brian O'Neal
PES Environmental, Inc.

DATE: March 16, 2017

SUBJECT: Soil Vapor Extraction System Design
Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

PROJECT NO.: 1246.030.003



PES Environmental, Inc. (PES) has prepared this technical memorandum to present the engineering design for the soil vapor extraction (SVE) system at the Bethel Junction Shopping Center property located at 3377 Bethel Road SE in Port Orchard, Washington (Property, Plate 1). Gerrity Retail Fund 2, Inc. (Gerrity) retained PES to prepare this SVE system design to remediate subsurface contamination of volatile organic compounds (VOCs) associated with operation of Amy's Cleaners in Suite #105 (Plate 2). The design has been prepared in accordance with the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) to address the requirements of Washington Administrative Code (WAC) 173-340-400(4).

The remedial design is based on the findings presented in the December 2015 *Limited Phase II Assessment and Focused Cleanup Action Evaluation*¹, and in the March 2017 *Cleanup Action Plan*². The overall objective of the cleanup action will be to obtain a No Further Action determination from Ecology, without any activity and use limitations (e.g., restrictive covenant. A No Further Action determination has previously been issued by Ecology for VOC impacts associated with the dry cleaners, which includes ongoing management requirements and use limitations due to remaining residual VOCs in soil. A restrictive covenant is currently recorded for the property.

This design document includes layouts and design details for well construction, manifolds and process piping, and SVE system process equipment. The drawings are schematics, and as such do not show all potential construction conditions. Modifications to this design may occur due to minor interferences and structural obstructions as a component of the construction work.

The following information is attached to this memorandum:

- Design drawings (Plates 1 – 7); and

¹ PES Environmental, Inc., 2015. *Limited Phase II Assessment and Focused Cleanup Action Evaluation, Bethel Junction Shopping Center, Port Orchard, Washington*. December 23.

² PES Environmental, Inc., 2017. *Cleanup Action Plan, Bethel Junction Shopping Center, Port Orchard, Washington*. March.

- Attachment A provides key design calculations.

BACKGROUND

The Property was developed into the Bethel Junction shopping center in 1989, and Amy's Cleaners (Suite #105) has operated in its current commercial space since 1989. Since the shopping center was constructed, site uses include a variety of commercial businesses including a sporting goods store, a grocery store, retail stores, beauty salons, and restaurants. Adjacent to Amy's Cleaners is an empty unit to the east (Suite #103), which formerly housed a greeting card store and The UPS Store to the west (Suite #107).

The original dry cleaner unit (DCU) in Amy's Cleaners operated between 1989 and 2002 and used a tetrachloroethene ("PCE")-based dry cleaning solvent. In 2002, the PCE-based DCU was replaced by a new DCU that utilizes a petroleum hydrocarbon solvent.

The Property is currently covered with buildings or pavement.

Lithology and Hydrogeology

The geologic materials encountered during drilling and installation of the borings and monitoring wells at the Property included sand, silty sand with gravel, silty sand, sandy silt, and sandy clay. Sand was found in most borings between the bottom of the asphalt and a maximum depth of 11 feet (ft) below ground surface (bgs). Silty sand was found in every boring drilled at the Property and is the primary lithology encountered during the subsurface investigations. The silty sand at the base of many of the borings appeared to be consistent with glacial till.

The maximum depth of the subsurface investigations conducted at the Property was 27 ft bgs. Although thin zones of wet soil were noted in most borings between 8 and 14 ft bgs, groundwater was not found in all of the borings with wet soil. In the temporary wells with water at the Amy's Cleaners suite, the depth to groundwater ranged from 7.25 to 25.5 ft bgs. During investigations performed in 2015 and 2016, groundwater, when present, was generally measured between 12 and 14 ft bgs. Based on the lack of groundwater in many of the borings, the varying depths of groundwater in the borings that encountered it, and the low permeability of the silty sand, it is likely that groundwater in the silty sand unit exists in perched lenses that are not laterally extensive.

Contaminant Sources

Spills and releases to the ground surface from the operation of the former PCE-based DCU, primarily in the vicinity of the DCU is the primary source of contamination. Contaminants include PCE and PCE-degradation products trichloroethene (TCE), cis-1,2-dichloroethene (cDCE), trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC).

Extent of Impacted Soil and Groundwater

Impacted soil exceeds Ecology MTCA cleanup levels (CULs) is limited in area to the central portion of the dry cleaners suite, along the western portion of Suite #103, and along the eastern portion of Suite #107. VOCs exceeding CULs in soil are limited to PCE and TCE. The majority of impacted soil is within the upper 3 ft, and the deepest soil exceeding CULs is at 6 ft. None of the

9 ft or deeper samples had PCE and TCE exceeding CULs, and most were below laboratory method reporting limits. Based on available data, the estimated areal extent of soil requiring cleanup is shown on Plate 3.

Impacted shallow perched groundwater exceeding CULs is limited to three borings immediately surrounding the DCU, and within the assumed area of soil contamination. VOCs exceeding CULs in shallow perched groundwater are limited to cDCE and VC.

SVE TECHNOLOGY DESCRIPTION

SVE is a well-established *in situ* remediation technology that removes VOCs from the unsaturated zone by applying a vacuum to induce airflow from the impacted zone into a collection well or network of collection wells. VOCs already in the vapor phase are readily removed, and VOCs in the liquid phase (i.e., typically sorbed onto soil particles) are partitioned into the vapor phase as the air stream flows through zones of contamination. SVE may also remove VOCs from the upper few feet of groundwater, although it is generally ineffective at removing VOCs located deeper below the water table.

At this site, the sand and silty sand vadose zone is expected to be suitable for application of SVE technology; however, VOC removal efficiency can be affected by soil heterogeneity. More permeable backfill within the existing sanitary sewer trench (estimated 3 to 6 ft depth) may also limit the lateral extent of the shallow SVE capture zone (CZ). The limited mass of VOCs in soil and groundwater at this site will allow the collected soil vapors to be discharged directly to the atmosphere without treatment.

SUMMARY OF SVE PILOT TEST

As described in the *Cleanup Action Plan*, a pilot test was conducted utilizing existing horizontal SVE well HSVE-1 on August 8, 2016. The SVE pilot test was performed by inducing a vacuum on HSVE-1, collecting vacuum and flow rate data at the test well and at nearby vapor monitoring probes, and evaluating the data to determine full-scale design parameters for a final SVE system.

The pilot test was operated for a period of 4.5 hours over two increasing steps of vacuum and flow rates. The first step of the pilot test was operated at an average flow rate of 48 standard cubic feet per minute (scfm) and 10 inches of water column (in.w.c.) vacuum. The second step was operated at an average flow rate of 86 scfm and 17 in.w.c. vacuum. Based on conditions at the end of the pilot test, the total VOC discharge rate (at 86 scfm) was approximately 0.65 pounds per year (lb/yr) total VOCs, including 0.45 lb/yr PCE and 0.006 lb/yr VC. It is anticipated that the pilot test conditions will approximate the maximum discharge conditions for the SVE system.

SVE Capture Zone Evaluation

The data collected from the pilot test was used to develop a design SVE CZ using recommended design parameters from the US Army Corps of Engineers (USACE)³. CZ design calculations are included in Attachment A and include the following steps:

³ US Army Corps of Engineers (USACE), 2002. *Engineering and Design, Soil Vapor Extraction and Bioventing. No. 1110-1-4001*. May 30.

1. Determine a potential vacuum radius of influence (ROI) based on pilot test data, and check to see if the SVE pore gas velocity is at or above the recommended USACE threshold velocity. At this site, the ROI is defined as the horizontal distance from well HSVE-1 where the field-measured vacuum response is 1 percent of the vacuum applied at the pilot test well.
2. Calculate the estimated radius of a three dimensional CZ using the minimum (Step 1) pilot test SVE flow rate and a minimum 0.01 centimeter per second (cm/s) SVE pore gas velocity at the perimeter of the CZ. At this site, the CZ is defined as a cylinder, which extends from the base of the concrete slab to average groundwater depth, and the SVE flow is assumed to be horizontal through the perimeter of the CZ and distributed evenly across the entire depth of the CZ. Site conditions included in the calculation include silty sand soil type and an assumed average 12 ft groundwater depth.
3. Calculate the estimated soil pore volume (PV) exchange rate using the Step 1 pilot test SVE flow rate, and determine whether the exchange rate is within the USACE recommended range of at least 2 to 4 PV exchanges per day.

As shown on the attached calculations, a design SVE CZ of 20 ft radius and 12 ft height was developed using Step 1 pilot test flow rate (48 scfm) and vacuum (10 in.w.c.) results in an average pore gas velocity of 0.06 cm/s and a soil PV exchanger rate of 14 PV/day. These estimates substantially exceed USACE recommendations of 0.001 to 0.01 cm/s pore gas velocity and 2 to 4 soil PV exchanges per day for HSVE-1.

Extraction Well Recommendation

Based on the extent of impacted soil and due the presence of the north/south running sanitary sewer line beneath Amy's Cleaners, PES recommends installing a second horizontal SVE well beneath The UPS Store (Suite #107) to provide adequate SVE coverage over the area requiring remediation. In this configuration, the existing well (HSVE-1) would remediate soil east of the sanitary sewer line while the new well (HSVE-2, refer to Plate 3) would address soils to the west of the sanitary line.

SUMMARY OF REMEDIAL APPROACH

Based on the observed distribution of VOCs, the evaluation of cleanup options described in the *Cleanup Action Plan* and SVE pilot testing, the preferred remedial approach for the site consists of: (1) SVE to remediate shallow soil and groundwater contamination; and (2) confirmation sampling to document the remedial effectiveness and compliance with CULs.

A two-well SVE system will be implemented to treat vadose zone soil and shallow groundwater beneath Suites #103, #105, and #107 as shown on Plate 3. This system will include two horizontal SVE wells in the vadose zone. The overall remediation objective is to reduce the mass of PCE and degradation products in soil and groundwater to below their applicable CULs. The SVE system is expected to operate for 6 to 12 months, and it will be operated until PCE and other chlorinated VOC concentrations in SVE discharge vapors reach asymptotic levels. Shutdown and rebound testing will likely be performed to optimize system operations, and to determine timing for shutting down the SVE system.

SOIL VAPOR EXTRACTION SYSTEM DESIGN

The SVE system includes two horizontal SVE wells (existing HSVE-1 and new HSVE-2) and interconnecting piping, piping manifold, moisture knockout, condensate storage, blower, vertical vapor discharge stack, and a fenced equipment enclosure. The SVE wells are screened in the vadose zone above the shallow perched groundwater. Layout and details for the SVE system are shown on Plates 4 through 7.

The two-well SVE system is designed to operate at a total flow rate of 85 scfm at 25 in.w.c. vacuum. The actual operational flow rates and vacuums at each well will be determined through startup testing and operation. Horizontal SVE well spacing is based on the 20 ft CZ developed in the pilot test, and the estimated SVE CZ is shown on Plate 3.

The SVE system includes a moisture knockout tank that includes storage for SVE condensate that drops out of the soil vapor stream as it cools. Knockout water will be removed from the knockout during routine operations and maintenance (O&M) visits, transferred to a drum for sampling, waste profiling, and off-site disposal. Representative SVE system design calculations for horizontal well screen design, blower selection, and condensate generation are included in Attachment A.

Extracted soil vapors will be discharged directly to atmosphere. Based on the expected mass transfer of PCE and vinyl chloride from soil and groundwater, the SVE system is exempt from vapor treatment per Puget Sound Clean Air Agency (PSCAA) Regulation I, Article 6, Section 6.03(C)(94) and the Ecology toxic pollutant source control regulations WAC 173-460. Vapor sampling at the end of the SVE pilot indicate estimated mass discharge rates of 0.65 lb/yr total VOCs, including 0.45 lb/yr PCE and 0.006 lb/yr VC. PSCAA regulations exempt soil and groundwater remediation projects discharging less than 15 lb/yr of VC, less than 500 lb/yr of PCE, and less than 1,000 lb/yr toxic air contaminants in total. VOC discharges that are below Ecology's *de minimus* threshold emission values (WAC 173-460-150) by definition do not pose a threat to human health or the environment. The *de minimus* emission threshold values for PCE and vinyl chloride are 1.62 lb/yr and 0.123 lb/yr, respectively.

If actual SVE effluent concentrations are higher than anticipated, and result in mass discharge rates in excess of the regulated values, vapor treatment with granular activated carbon may be implemented.

Soil Vapor Extraction Wells and Vapor Monitoring Probes

The SVE system will consist of two horizontal SVE wells (Plate 4). HSVE-1 was installed in July 2015 beneath Suite #103, is 3.5 ft deep, and consists of 20 ft of 0.020-inch slotted screen beneath the suite and approximately 16 ft of blank 4-inch diameter Schedule 40 PVC casing that terminates inside an 8-inch diameter monitoring well monument located just beyond the southern edge of the concrete walkway behind Suite #103. The well is installed in a 4 ft deep trench that is backfilled with 2 ft of pea gravel, compacted fill, and 4 inches of concrete.

HSVE-2 will be installed using a horizontal drilling machine beneath Suite #107. The well will be installed via an entry pit located approximately 20 ft south of Suite #107, and consist of 30 ft of blank 3-inch diameter Schedule 80 PVC casing, 50 ft of 0.012-inch slotted screen, and a natural filter pack. The well screen will be installed approximately 6 ft bgs.

Two new vapor monitoring probes (VP-10 and VP-11) will be installed in Suite #105 for the purpose of monitoring SVE system influence. Vapor probe construction will be consistent with existing VP-4 through VP-7 and a 6-inch long stainless steel screen installed at 3 ft bgs, Teflon tubing, sand filter pack, hydrated bentonite seal, and 6-inch diameter monument set in concrete. Vapor probe locations are shown on Plate 4.

Piping and Manifolds

Extracted soil vapors will be conveyed through lateral pipes, an above-ground manifold and header pipe, moisture knockout, blower, and discharge stack. Schedule 40 PVC will be used for all piping.

Manifold and Header Piping. The header consists of a 4-inch diameter pipe that is routed from the knockout to the 4-inch diameter manifold. The 2-inch diameter lateral pipes from HSVE-1 and HSVE-2 connect to the manifold inside the fenced equipment enclosure, and each lateral includes a 2-inch PVC ball valve for shut-off and flow control, a PVC labcock valve for sampling and vacuum monitoring, and threaded plug for flow monitoring. The manifold includes a 2-inch PVC ball valve which can be used to provide dilution air to the blower if necessary, and the header will include a vacuum gauge. The header will connect to the knockout using reinforced flexible hose. Manifold and header layout and piping schematic are shown on Plates 5 and 7.

Below Ground Piping and Trenching. 2-inch diameter lateral pipes to HSVE-1 and HSVE-2 will be routed below grade in a common trench at least 18 inches below grade. Lateral pipes will be installed with an approximate 2 percent slope towards the well casing to prevent condensate from accumulating in the lateral pipe. The trench will be backfilled with bedding sand, 6-inch thick aggregate base course, and paved with 4 inches of asphalt to match existing grade. One inch minimum of sand will be maintained around all pipes. Trench alignment is shown on Plate 4 and trench construction detail is shown on Plate 5.

HSVE-1 Tie-In to Lateral Pipe. Connection of HSVE-1 to the 2-inch lateral pipe will include excavating to expose the 4-inch well casing, removing the existing 4-inch diameter access riser and 8-inch well monument, connecting the 2-inch lateral pipe to the 4-inch well casing using standard PVC fittings, installing a new 2-inch diameter access riser, installing a cement bentonite grout seal around the well casing and lateral pipes, backfilling, and paving to match existing asphalt grade. The access riser will include a compression style locking well cap and will be terminated inside an 8-inch diameter flush-with-grade traffic rated monitoring well monument. The seal around the well casing and lateral pipe will be approximately 2 ft long and extend to the full depth of the existing HSVE-1 trench to prevent soil vapors from short circuiting through the trench backfill. Tie-in detail is shown on Plate 6.

HSVE-2 Tie-In to Lateral Pipe. Connection of HSVE-2 to the 2-inch lateral pipe excavating to expose the 3-inch well casing, removing a short section of well casing, connecting the 2-inch lateral pipe to the 3-inch well casing using standard PVC fitting, installing a new 2-inch diameter access riser, installing a cement bentonite grout seal around the well casing, backfilling, and paving to match existing asphalt grade. The access riser will include a compression style locking well cap and will be terminated inside an 8-inch diameter flush-with-grade traffic rated monitoring well monument. The seal around the well casing will be approximately 1 ft long and extend 6 inches around the casing to prevent soil vapors from short circuiting through the trench backfill. Tie-in detail is shown on Plate 6.

The depth of HSVE-2 is expected to be roughly 2 ft below grade at the tie-in point depending on exact location of the lateral trench during construction. The blank well casing between the tie-in and the drilling entry pit will be capped at both ends and filled with cement bentonite grout. The entry pit itself will be backfilled with compactable fill, 6 inches of base course, and paved with 4 inches of asphalt to match existing grade.

Discharge Pipe and Stack. The blower discharge includes a few feet of 2-inch diameter galvanized pipe to dissipate heat from the blower, and 4-inch diameter Schedule 40 PVC stack pipe mounted to the Safeway building wall and extending 5 ft above the top of the Safeway building. A tee fitting will be installed at the end of the stack. The stack will be located to allow for a 10-ft minimum setback from building intake fans. The discharge stack will include a PVC labcock valve for sampling and a threaded plug for flow monitoring. Discharge pipe and stack layout and piping schematic are shown on Plates 5 and 7.

Mechanical Equipment

The SVE blower and moisture knockout drum will be installed inside the fenced enclosure located behind Suite #107 at the approximate location shown on Plate 4. The equipment layout is shown on Plate 5 and a schematic of the entire SVE system is shown on Plate 7.

Blower. SVE airflow and vacuum will be generated by a Rotron EN454 regenerative blower capable of delivering 85 scfm at approximately 25 in.w.c. vacuum in order to provide at least 10 in.w.c. vacuum at the horizontal SVE wells. The blower will be fitted with an inlet particulate filter, inlet silencer, and housed in a weather resistant noise enclosure rated to reduce the noise levels within 3 ft of the enclosure to approximately 65 decibels. The noise enclosure will include an air cooling fan and sound dampened air vents. The blower inlet line will include a high vacuum alarm switch to disable the SVE blower and notify the operator of the high vacuum condition.

Knockout Drum. A 55-gallon knockout drum will be used to remove moisture droplets from vapor stream and temporarily store accumulated condensate during the period between operations and maintenance site visits. The knockout will provide approximately 35 gallons of condensate storage, include a vacuum relief valve, drain valve, and will be mounted on an elevated stand. The knockout will also include a high level alarm float switch to disable the SVE blower and notify the operator of the high condensate level condition. The knockout drum will be protected from freezing using heat trace and insulation.

Condensate accumulation will occur when ambient temperatures drop below the soil vapor temperature, and is generally expected from mid-October through mid-April. Condensate accumulation in SVE systems is typically greatest in December and January when ambient temperatures are at their lowest, and the moisture knockout drum sizing is based on the following temperature related factors:

- An average daily cold weather condensate accumulation rate of 1.7 gallons per day is estimated based on average soil vapor temperature of 51°F and average ambient air temperature of 40°F;
- The storage volume in the knockout drum is design to hold at least 2 weeks of water during the coldest months with an approximate 1.5 safety factor.

Controls and Power Supply

A NEMA 3R outdoor rated control panel including will be located inside the remediation equipment enclosure. The panel will provide automatic control of system components and operating parameters. The control panel will be fabricated by a UL 508 shop and meet national and local electric codes. The control panel will include a blank exterior door with an internal swing door for operator access to controls. The blower motor will have a motor starter with thermal overload and circuit breaker wiring protection, a Hand/Off/Auto (HOA) switch, and a red run-light. Alarm indicator lights with first-fault lockout will be provided. The internal swing door will also include a system power selector switch (On/Off) and hour meter for the blower. All lights, selector switches, push buttons, hour meters, and other panel face-mounted devices will be labeled with white letters engraved on black metal labels. The control panel will include a convenience outlet for the heat trace.

The control panel will include a remote telemetry system to notify the operator of alarm conditions including power interruption, blower shut-off, high liquid level in the knockout drum, and high vacuum at the blower inlet. The telemetry will consist of a cellular modem with SMS (text message) or web based communication.

The blower will require single phase 230 voltage alternating current at 60 hertz frequency.

CONSTRUCTION

Construction tasks include permitting, site preparation, well installation, trenching and piping, equipment installation, and testing.

Preconstruction

Prior to construction, PES will prepare construction bid packages for drilling and for installation of the SVE system, prepare an equipment bid package for fabrication of the SVE system, solicit subcontractor bids, coordinate with the electrical and telephone utilities, and contracting.

Permitting

The only permit anticipated is a local electric permit. The relatively limited volume of excavation and trenching is not expected to trigger a grading permit with the City of Port Orchard, Washington. As described earlier, an air discharge permit will not be required.

Site Preparation

Underground utility locations will be cleared prior to any drilling or trenching activities. At least five days prior to any subsurface work, a One-Call ticket will be submitted to mark the locations of utilities in the public right-of-way. A private locating company will also be contracted to mark the locations of utilities outside of the right-of-way near the horizontal SVE well, trench, and vapor monitoring probe locations. Buried utilities, foundations, and footings will be marked with horizontal location and depth both inside and outside the buildings. Ground penetrating radar may be needed to locate utilities beneath the building slab. Potholing to identify exact locations of buried utilities or structures may also be performed if needed.

The horizontal boring is expected to pass at least 2 to 3 ft below existing buried utilities inside and south of Suite #107. If deeper utilities are discovered, the entry pit for HSVE-2 may need to be relocated further south so that the borehole may be deeper when it passes underneath the buried utilities.

The trenching contractor will be expected to field locate and pothole to verify the exact location of existing utilities, and will be expected to protect the utilities and repair if damaged.

Horizontal SVE Well Installation

HSVE-2 will be installed by a Washington-licensed driller using a horizontal directional drill rig, mud mixing system, ancillary pumps, and other support equipment. The drill rig will be set up in the parking and loading area behind Suite #107, and drilling will be to the north. Water for drilling will be supplied from the tap behind Amy's Cleaners (Suite #105). Drilling fluid will be mixed onsite using a small mud system, and the drilling fluid will be captured in the entry pit and conveyed to a watertight roll-off box. The waste stream will be slurry consisting of drilling fluid, water, and drill cuttings. Less than one cubic yard of drill cuttings and less than 1,000 gallons of mud and development water is expected based on the use of a biodegradable polymer based drilling fluid. Access to Suite #107 along the well bore alignment will be required during drilling and well development work.

The driller will be required to obtain an Ecology variance from WAC 173-160-442 and WAC 173-160-444 for the driller to use the biopolymer drilling fluid. Biodegradable polymer drilling fluid is the preferred drilling fluid for this SVE well application to minimize generation of a borehole wall cake. If Ecology does not approve the variance, a bentonite drilling fluid will be utilized and additional volume of mud and development water may be generated.

The drill bit for the pilot bore will be guided using a walk-over navigation system which utilizes a transmitter (sonde) in the drill head for communication with the operator. The navigation system may be unable to prevent deviation in the drilling path if a rock or a pocket of very loose material is encountered, and in some cases, the drill bit may need to be pulled back and the bore path corrected. Field conditions at the time of drilling may require that the 4.5 to 5-inch diameter pilot borehole be reamed to a larger diameter. If reaming is required, the borehole will be forward reamed to an approximate diameter of 6 inches. Following completion of the borehole, the drill string will be removed from the bore and the casing and the well screen will be advanced into the bore hole.

A two-step well development process is required to prepare the well screen for SVE operations. The first step includes flushing clean water from inside of the well casing, through the screen, and circulating the water back through the well annulus to the entry pit so that fine grained drill cuttings and residual drilling mud will be removed from the bore and well screen. The second step includes jetting the screened interval with a high-pressure jetting tool to further remove silt, sand, and/or drill cuttings from the screen slots.

Following well development, the driller will seal the borehole from up-hole of the screened section back to the entry pit to prevent short circuiting along the well casing. The seal will include pushing a packer down the borehole annulus to approximately 20 ft from the entry pit, and sealing the borehole annulus with bentonite grout using a tremie pipe. The completed well will be temporarily

capped and the entry pit will be backfilled and temporarily patched with asphalt. Final repair and paving of the entry pit will be completed during SVE system construction.

Vapor Monitoring Probe Installation

Vapor monitoring probes VP-10 and VP-11 will be installed inside Suite #105 by a Washington-licensed driller using a direct push drill rig. The work will include concrete coring, drilling to a depth of 3.5 ft bgs, installing a 6-inch long 0.010-slot stainless steel screen at 3 ft bgs, sand filter pack, hydrated bentonite seal, and completion with a 6-inch monument set in concrete.

Trenching and Piping

Trenches for the lateral well piping will be constructed a minimum of 12-inches wide and excavated to a minimum depth of three inches deeper than the bottom of the lowest installed pipe. The SVE pipes will be buried at least 18-inches deep, covered with a minimum of 8-inches of compacted sand overlain by compacted backfill and paved to match the existing ground surface. Buried electric utility conduit, if required, will be buried a minimum of 30 inches below grade.

Below ground lateral piping will be pressure tested with air prior to backfilling. Testing criteria will include maintaining 50 pounds per square inch (psi) of pressure for 15 minutes with less than 1 psi of pressure drop.

Above ground piping will be secured to supports using pipe clamps at 5 ft maximum intervals.

Remediation Equipment Installation

The remediation equipment consists of the SVE blower, moisture knockout, and control panel. The blower assembly will be mounted and installed inside weather resistant noise enclosure. The equipment may be provided separately and mounted on the existing asphalt, or may be combined onto a single skid. The equipment will be installed inside a 6-ft tall chain link fence enclosure with green privacy slats. The enclosure will be constructed adjacent to the Safeway building wall to the west. Several 4-ft tall fixed steel bollards will be installed on north, south, and east sides of the enclosure for protection. The bollards will be constructed of 4-inch diameter steel pipe, filled with concrete, and painted yellow for visibility.

PES will coordinate a power drop for the remediation equipment with the electrical utility, Puget Sound Energy (PSE). Adequate power is expected to be available from one of the transformers located south of Suite #103 pending application to PSE. Existing electrical conduit behind the Bethel Junction shopping center is below ground. However, due to the temporary nature of this project, PSE and the City may allow temporary routing of the electric conduit above ground along the building wall.

The contractor will be responsible for field wiring from the transformer to the electric meter base, from the meter base to the control panel, and install field interconnections between equipment as specified by the equipment manufacturer. PSE will install the electric meter.

PES will coordinate procurement of cellular service.

Equipment Shakedown and Testing

Equipment shakedown and testing will be performed to ensure automation and safety controls are fully functional. The SVE wells will be isolated during equipment shakedown. System shakedown activities will include checking motors for proper rotation, voltage, and amperages, verifying instrument signals, verifying analog and discrete signals to control system, testing system operation with clean water and ambient air, and setting valves to proper pre-start positions. Testing will also include verifying SVE system alarms and alarm notification systems.

OPERATION AND MAINTENANCE

A brief project-specific O&M plan will be developed to describe startup procedures, guidelines for overall system operation, manufacturers recommendations for equipment maintenance, preventative maintenance schedule, and forms. Initial operation will include SVE baseline monitoring of vapor monitoring probes for background VOC concentrations and pressures, and system startup and balancing. Relatively frequent O&M inspections and monitoring will be required during the first 3 to 4 weeks of operation to optimize SVE system performance. After system operation is stabilized, O&M will typically be conducted on a monthly basis, and preventative maintenance performed in accordance with equipment manufacturer's guidelines. Due to expected increased condensate generation rates during cold weather (typically in December and January); supplemental mid-monthly O&M visits are anticipated during these periods.

The SVE system is expected to operate from between 6 to 12 months, and it will be operated until PCE and other chlorinated VOC concentrations in SVE discharge vapors reach asymptotic levels based on stack sample results. As soil gas concentrations decline, it may be necessary to perform shutdown and rebound testing to help optimize system operations and to determine when the system should be completely shut down. This testing includes temporarily shutting down the SVE system for a period of time (e.g., one month), restarting the system, and field monitoring the VOC concentration response at individual SVE wells during restart. A rapid and strong VOC concentration rebound response would typically suggest nearby sources, and weak rebound may suggest little remaining contaminant mass.

Performance Monitoring and Sampling

Performance monitoring will be performed periodically to assess whether changes in system performance are needed to optimize contaminant removal efficiency. Performance monitoring will include monitoring VOC concentrations in each horizontal SVE well, stack emissions monitoring, and monitoring vacuum and VOC concentrations at the vapor monitoring probes. Stack samples will be collected monthly and will be analyzed for halogenated VOCs by EPA Method TO-15 to verify compliance with PSCAA and Ecology toxic pollutant source discharge regulations.

RESIDUALS

Drill cuttings, trench spoils, development water, and SVE condensate water generated during system construction and O&M activities will be contained in segregated approved waste containers (55-gallon drums, roll-off containers, etc.). Waste containers will be clearly labeled with a description of contents and the accumulation date. The waste will be sampled, profiled, and properly disposed of at an approved facility.

REPORTING

The following reports will be prepared:

- The site specific health and safety plan will be updated prior to construction and operation of the SVE system.
- A draft O&M Plan will be prepared prior to SVE system startup, and finalized shortly after the startup period is complete.
- Quarterly progress reports will prepared in a manner suitable for submission to Ecology. Progress reports will include a summary of work performed over the reporting period, serve as updates on the progress of remedial actions at the Site, and document that the remedial actions are performing as designed.

SCHEDULE

It is anticipated that approximately 4 to 5 months will be required to construct and start up the SVE system, including pre-construction bidding, coordination, subcontracting, and procurement (2.5 to 3 months), construction and testing (3 to 4 weeks), and SVE system startup (3 to 4 weeks). As noted above, SVE system O&M is expected to last for 6 to 12 months.

Enclosures:

Plate 1 – Site Location Map

Plate 2 – Site Map

Plate 3 – SVE Capture Zone

Plate 4 – Site Layout

Plate 5 – Equipment Layout and Details

Plate 6 - Horizontal SVE Well Access and Tie-In Details

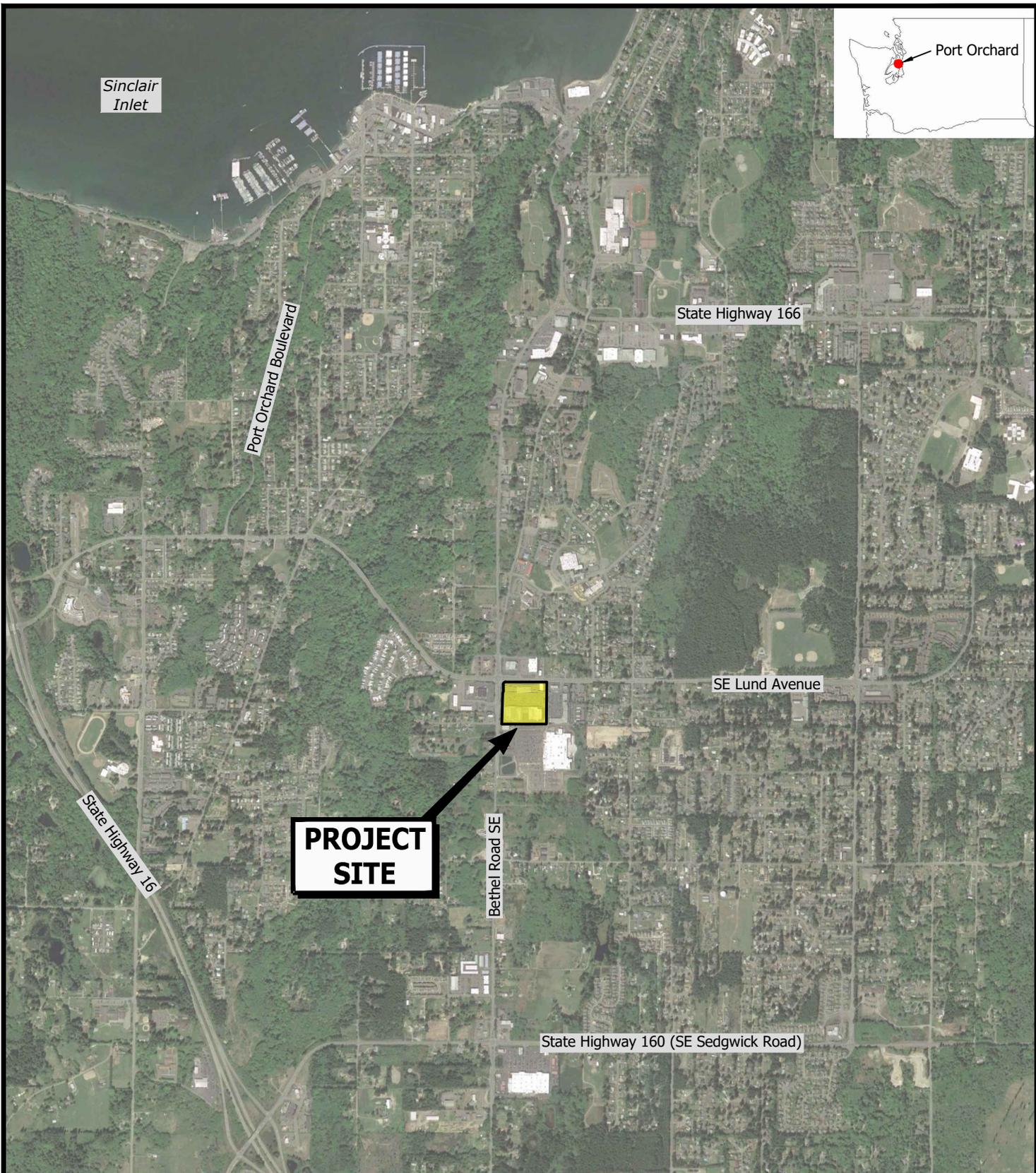
Plate 7 – Process and Instrumentation Diagram

Attachment A – Calculations

PLATES

ATTACHMENT A
CALCULATIONS

ILLUSTRATIONS



Sinclair Inlet

Port Orchard Boulevard

State Highway 166

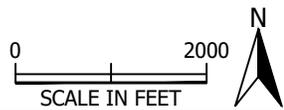
SE Lund Avenue

State Highway 16

PROJECT SITE

Bethel Road SE

State Highway 160 (SE Sedgwick Road)



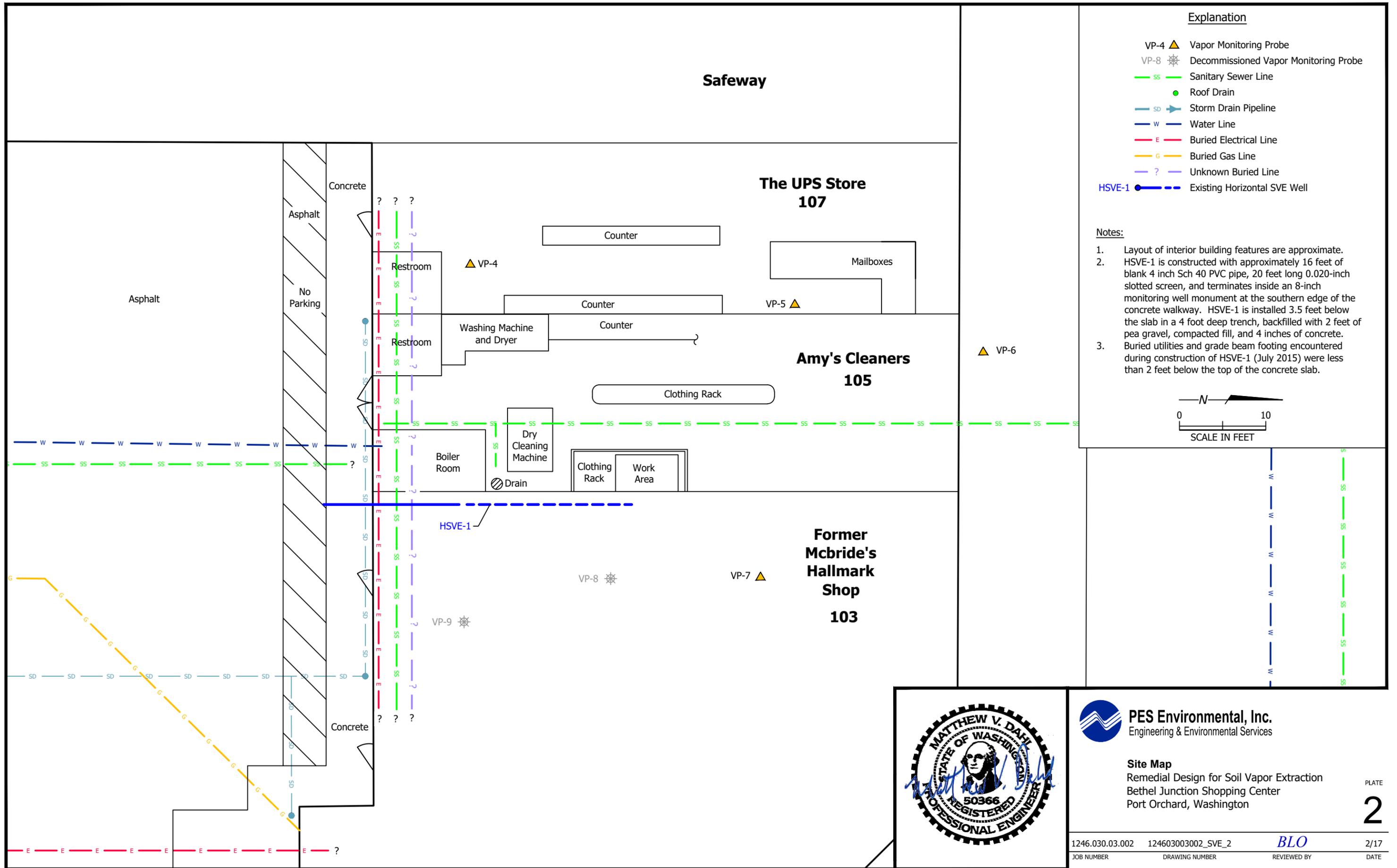
Aerial Photo: June 6, 2016 (Google 2016)



PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington

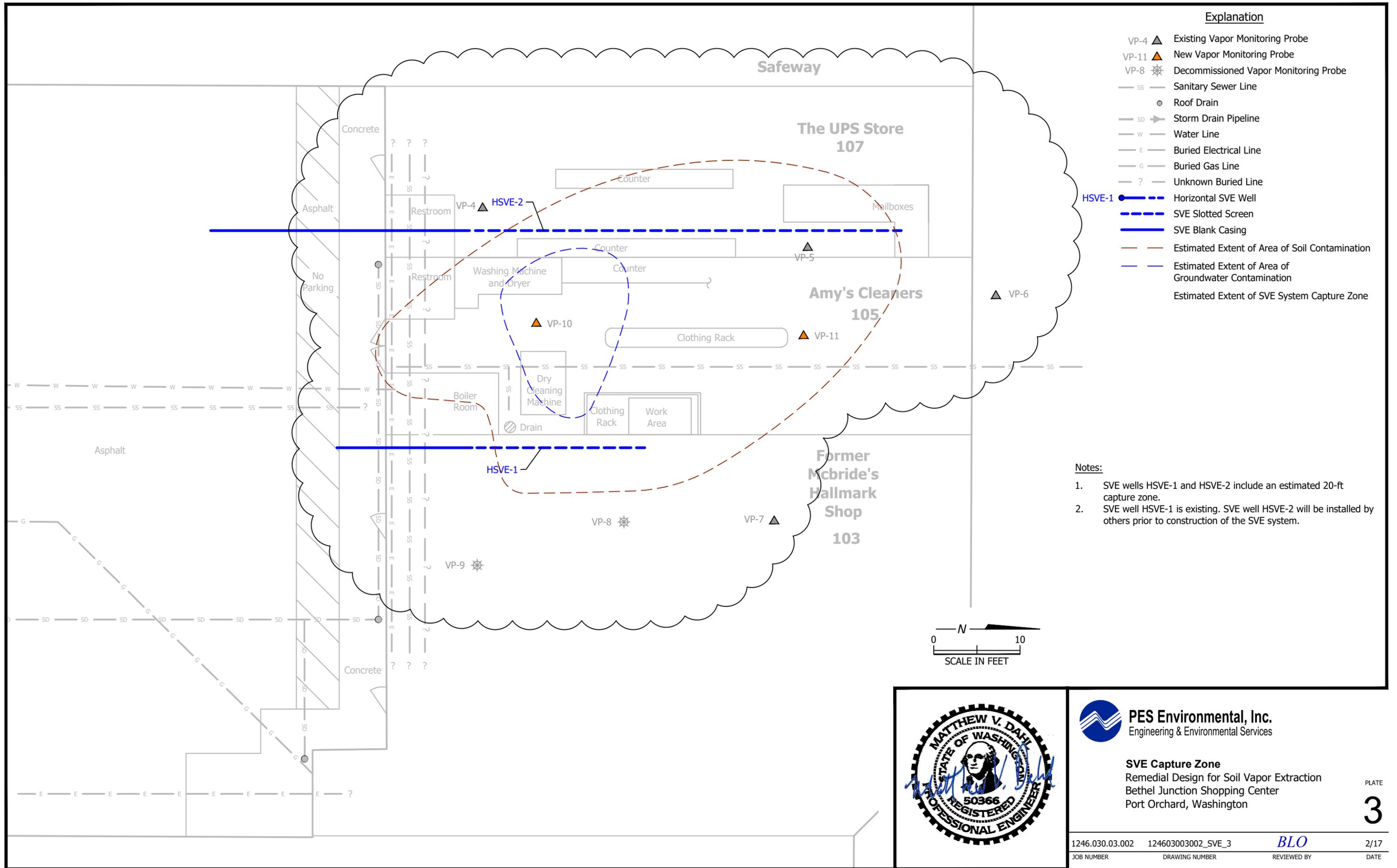
PLATE
1



PES Environmental, Inc.
Engineering & Environmental Services

Site Map
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE
2

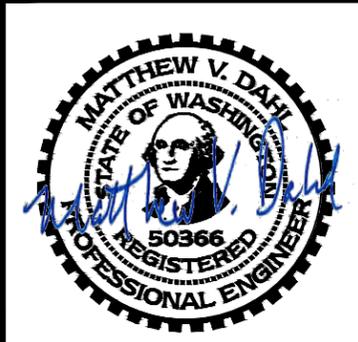


Explanation

- VP-4 ▲ Existing Vapor Monitoring Probe
- VP-11 ▲ New Vapor Monitoring Probe
- VP-8 ☼ Decommissioned Vapor Monitoring Probe
- SS — Sanitary Sewer Line
- Roof Drain
- SD — Storm Drain Pipeline
- W — Water Line
- E — Buried Electrical Line
- G — Buried Gas Line
- ? — Unknown Buried Line
- HSVE-1 ● — Horizontal SVE Well
- — SVE Slotted Screen
- — SVE Blank Casing
- — Estimated Extent of Area of Soil Contamination
- — Estimated Extent of Area of Groundwater Contamination
- — Estimated Extent of SVE System Capture Zone

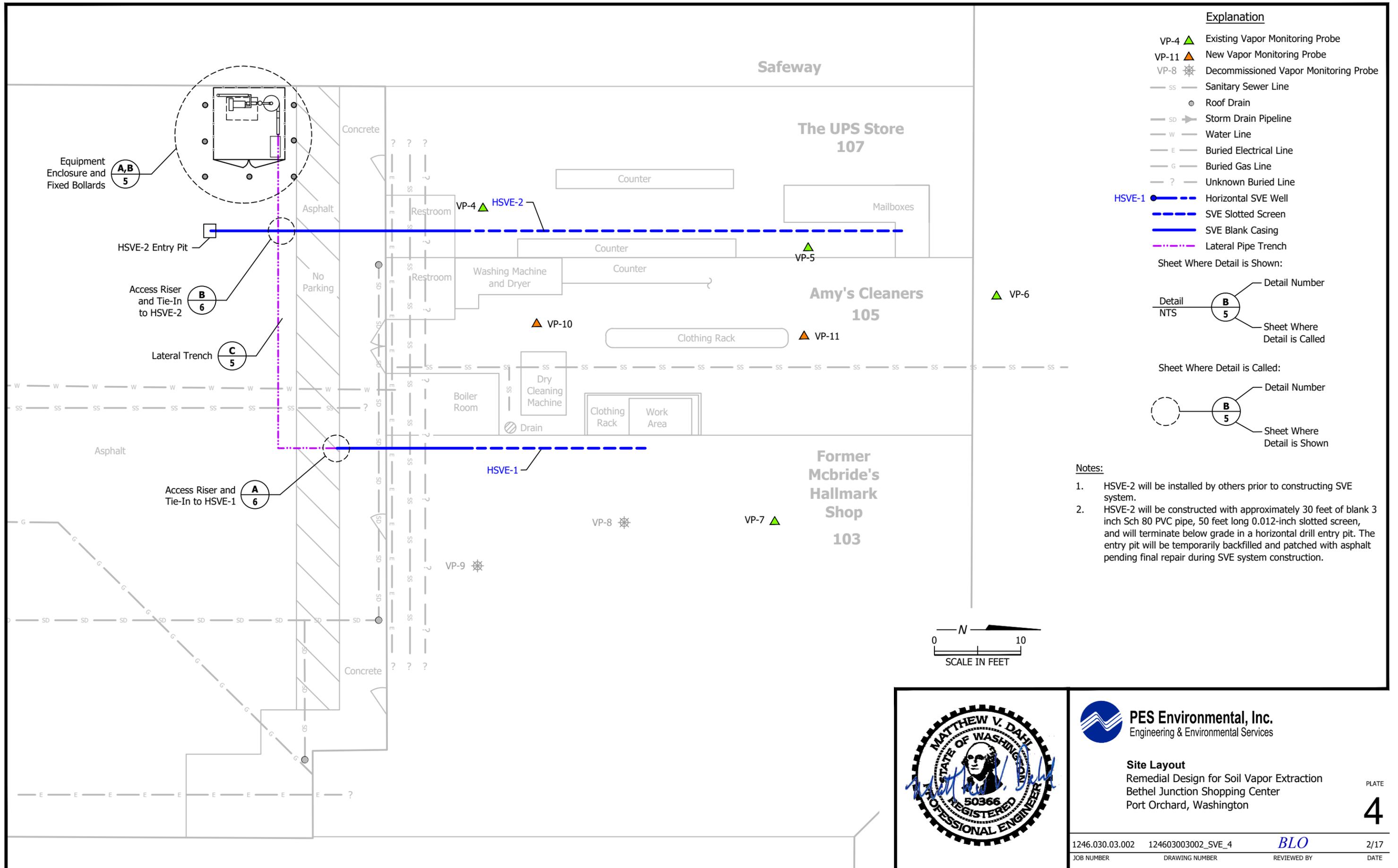
Notes:

1. SVE wells HSVE-1 and HSVE-2 include an estimated 20-ft capture zone.
2. SVE well HSVE-1 is existing. SVE well HSVE-2 will be installed by others prior to construction of the SVE system.

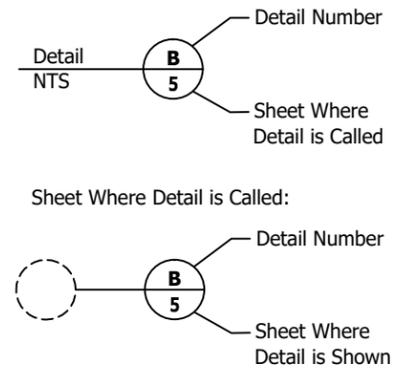


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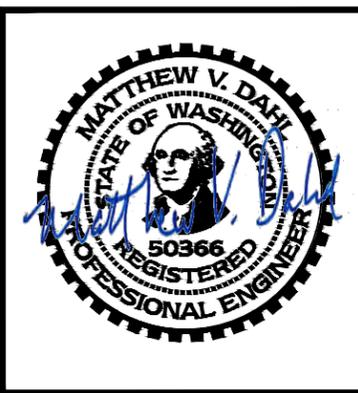
SVE Capture Zone
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington



- Explanation**
- VP-4 ▲ Existing Vapor Monitoring Probe
 - VP-11 ▲ New Vapor Monitoring Probe
 - VP-8 ☒ Decommissioned Vapor Monitoring Probe
 - SS — Sanitary Sewer Line
 - RD ● Roof Drain
 - SD — Storm Drain Pipeline
 - W — Water Line
 - E — Buried Electrical Line
 - G — Buried Gas Line
 - ? — Unknown Buried Line
 - HSVE-1 ●— Horizontal SVE Well
 - SVE Slotted Screen
 - SVE Blank Casing
 - Lateral Pipe Trench

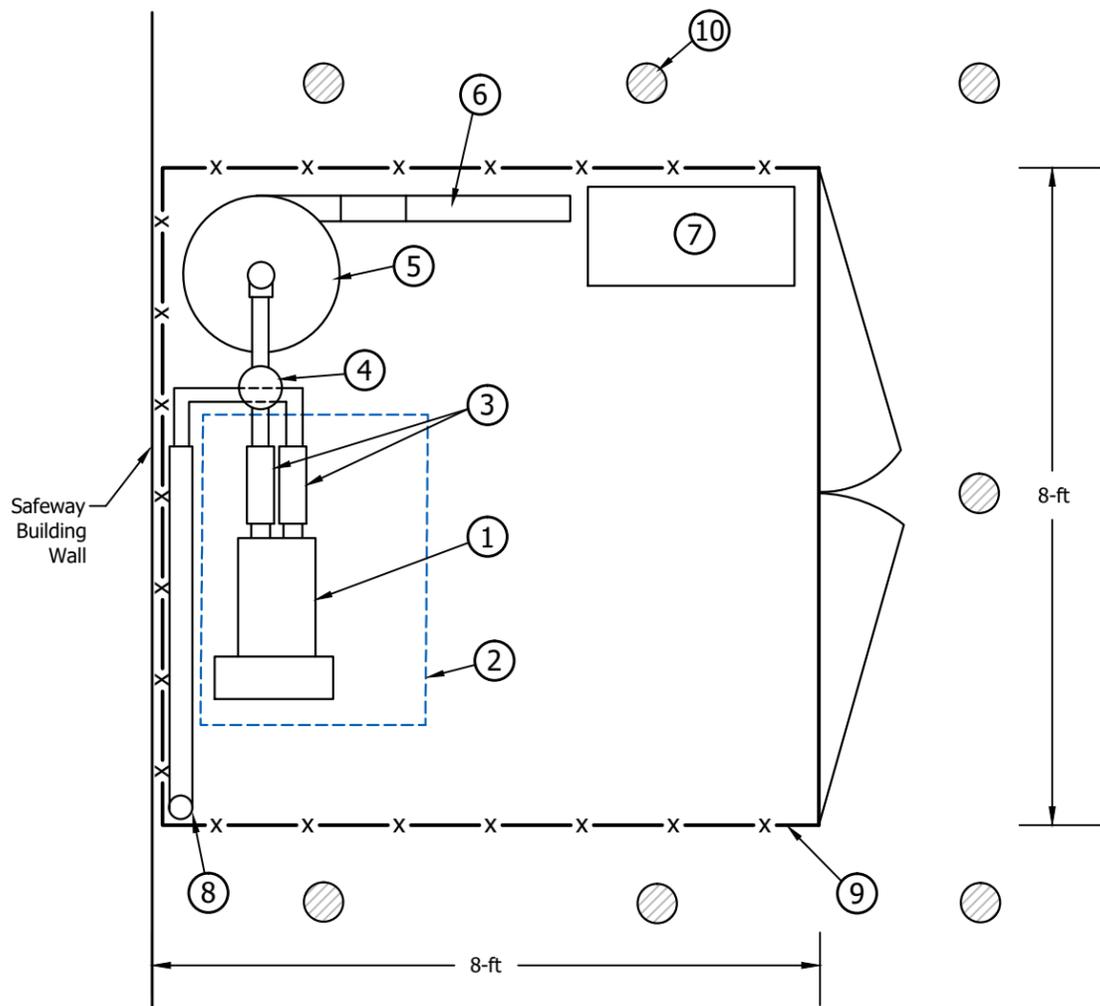


- Notes:**
1. HSVE-2 will be installed by others prior to constructing SVE system.
 2. HSVE-2 will be constructed with approximately 30 feet of blank 3 inch Sch 80 PVC pipe, 50 feet long 0.012-inch slotted screen, and will terminate below grade in a horizontal drill entry pit. The entry pit will be temporarily backfilled and patched with asphalt pending final repair during SVE system construction.



PES Environmental, Inc.
Engineering & Environmental Services

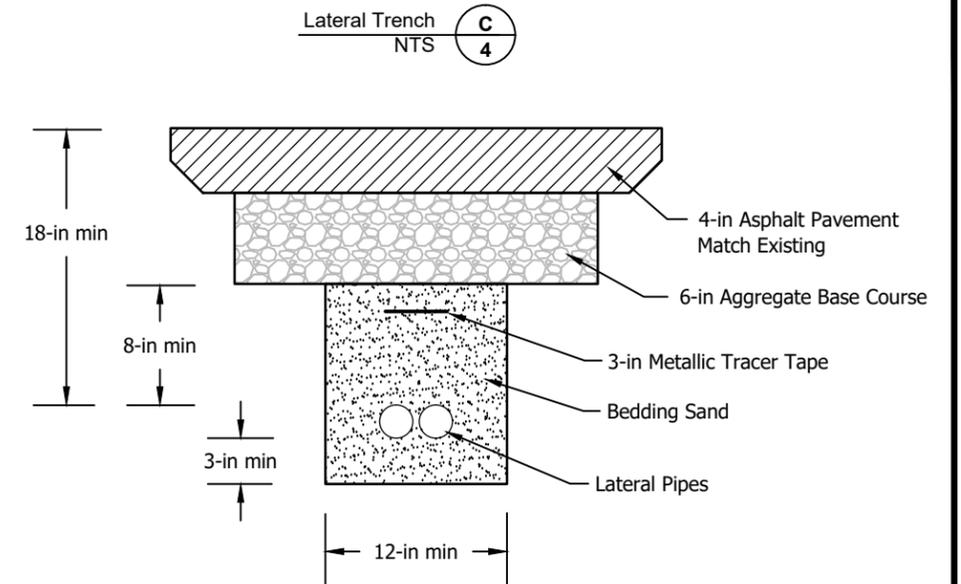
Site Layout
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington



Equipment Enclosure
NTS **A**
4

Equipment List:

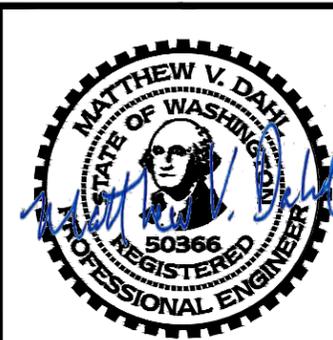
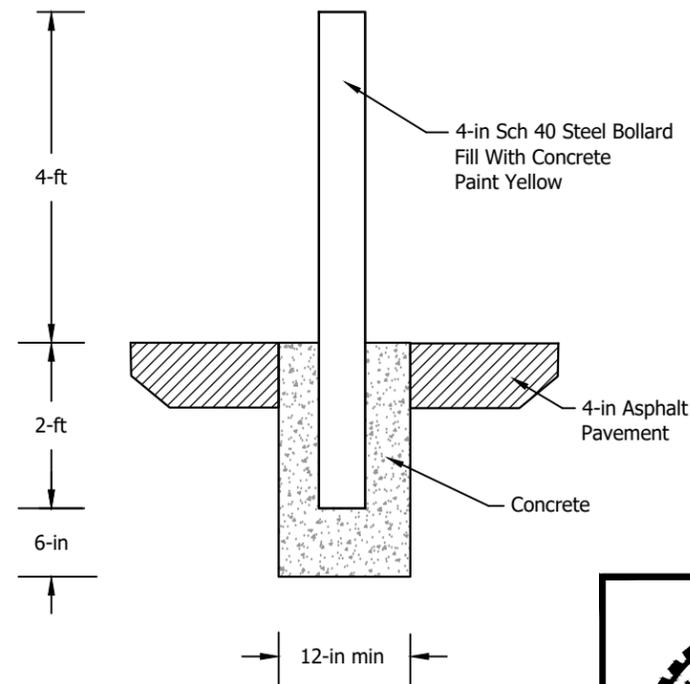
1. Blower - Rotron EN454
2. Galvanized steel noise enclosure with cooling fan. 65 dB max at 3-ft
3. Inline Silencer
4. Inline Filter
5. Condensate knockout with level switch and 1-in drain valve. Mount on 12-in high metal stand. 35 gallon storage capacity below level switch. 6-in w.c. pressure drop max. Heat trace and insulate knockout drum to prevent freezing.
6. 4-in Sch 40 PVC Manifold and connection to 2-in HSVE laterals
7. Control panel. NEMA 3R
8. 4-in Sch 40 PVC exhaust stack with tee. Extend 5-ft above Safeway building wall. Min. 10-ft setback from building intake fan
9. 6-ft high chain-link fence. Green privacy slats. 8-ft swing gate, lockable
10. 4-in Sch 40 steel bollards (7 minimum)



Notes:

1. Install one or two 2-in Sch 40 PVC SVE lateral pipe in trench per Plate 4.
2. Multiple pipes: Maintain 1-in minimum sand around all pipes.
3. Backfill trenches with bedding sand with a maximum loose lift of 8-inches before compaction.
4. Compact above the pipe zone to at least 95% of maximum density and within +/- 3% of optimum moisture (ASTM D-1557).
5. Pressure test all lateral pipes before burial. Test at 50 psi pressure for 15 minutes. Maximum 1 psi loss during test allowed.
6. Slope lateral pipes 2 percent minimum from manifold to well casing.

Fixed Bollard
NTS **B**
4

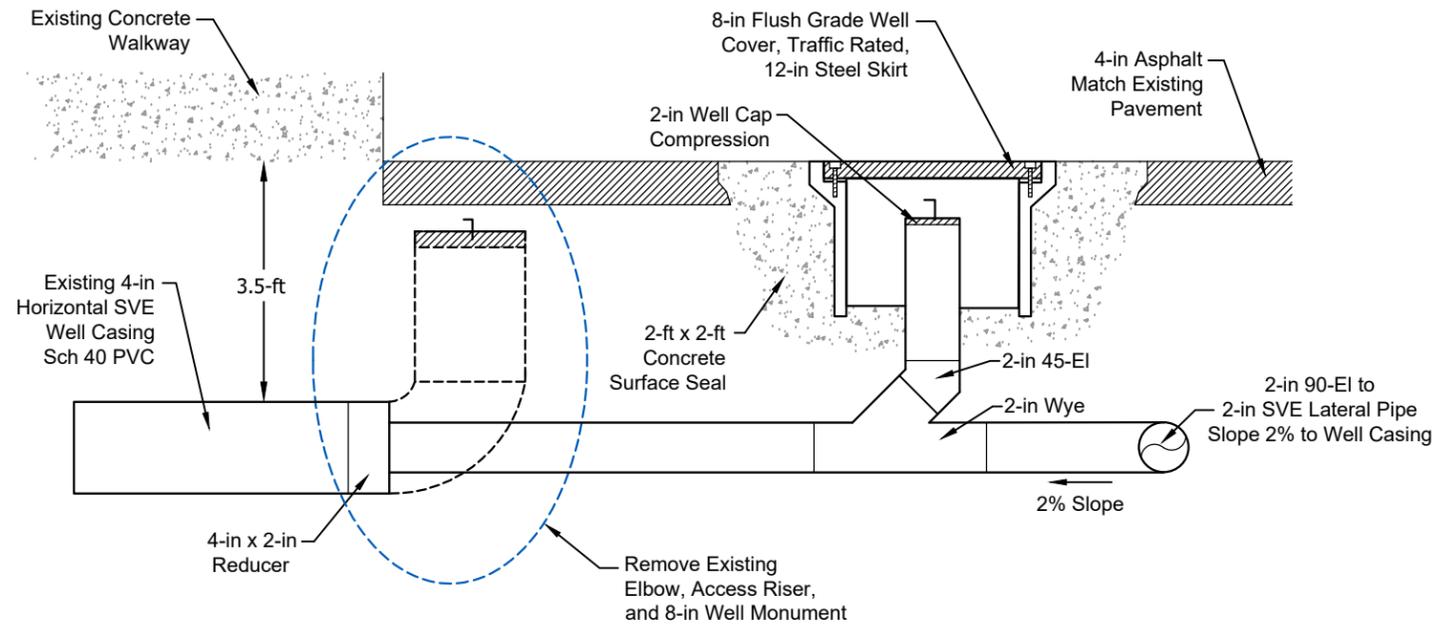


Equipment Layout and Details
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE

5

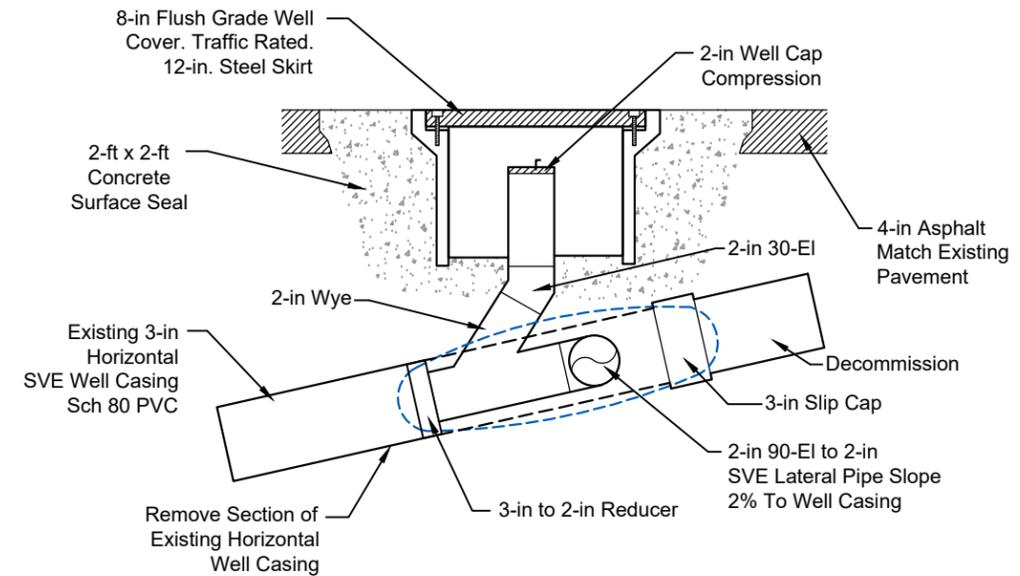
Access Riser and Tie-In To HSVE-1
NTS (A) 4



Notes:

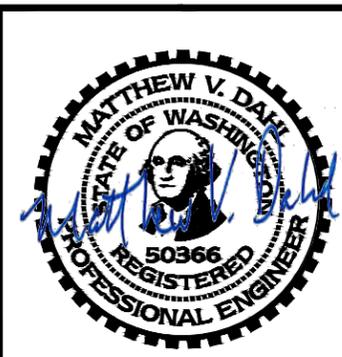
1. Existing HSVE-1 well blank casing and riser pipe are 4-in Sch 40 PVC.
2. Installed connections and piping to be Sch 40 PVC.
3. Existing casing is installed in 1-ft wide by 4-ft deep trench, and backfilled with pea gravel.
4. Excavate and expose horizontal SVE well casing and riser.
5. Remove existing access monument and 4-in riser pipe for tie-in to 2-in SVE lateral pipe.
6. Debur cut PVC ends and remove shavings before assembly of new riser and tie-in.
7. Connect 4-in well casing to new 2-in SVE lateral pipe, and install new 2-in access riser.
8. Seal existing pea gravel filled trench with 2-ft long cement entonite grout plug extending to depth of pea gravel (approx. 4-ft), and seal around casing and new SVE lateral pipe.

Access Riser and Tie-In To HSVE-2
NTS (B) 4



Notes:

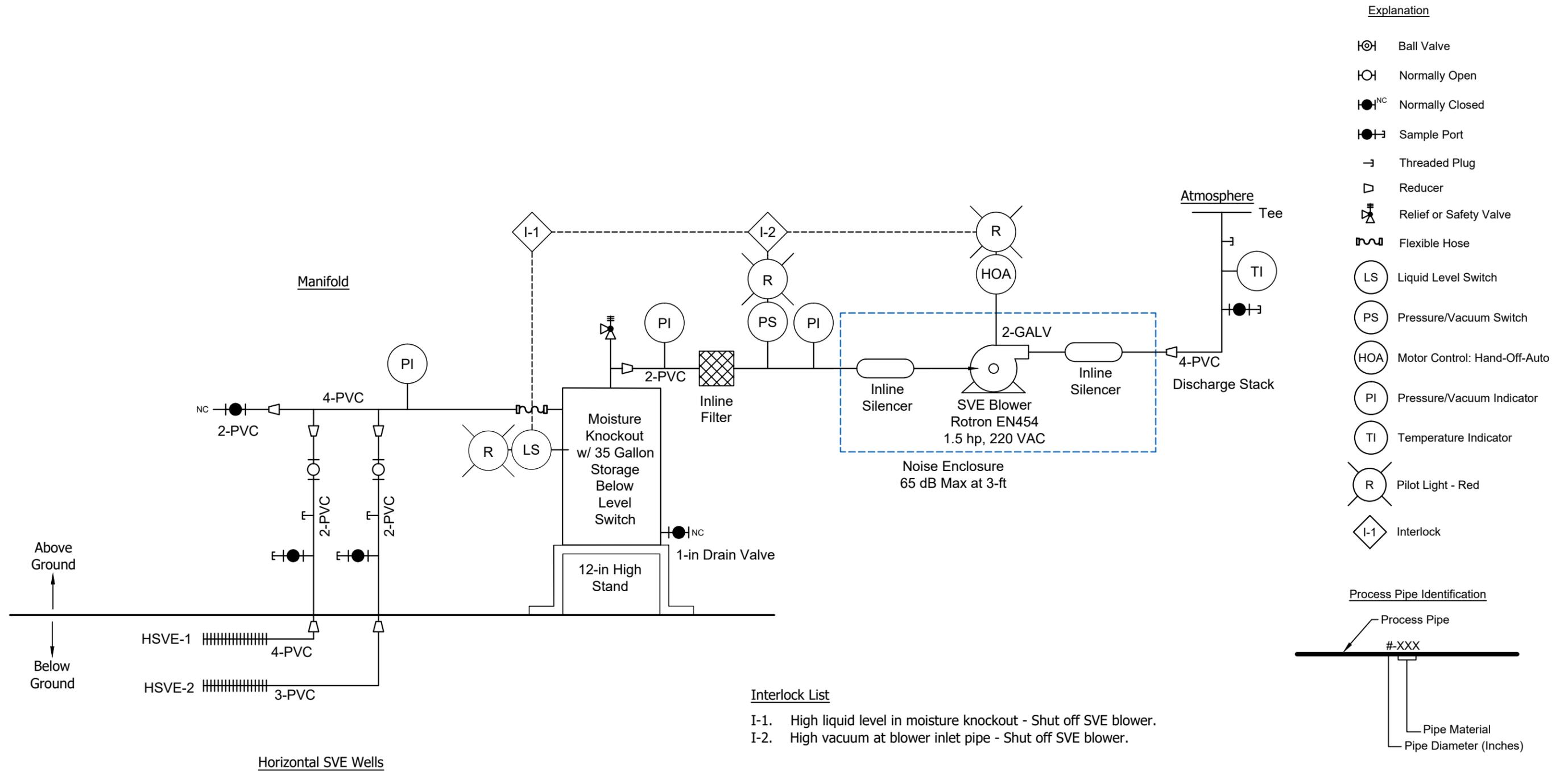
1. Existing HSVE-2 well blank casing is 3-in Sch 80 PVC.
2. Installed connections and piping to be Sch 40 PVC.
3. Existing casing is installed in horizontally bored well and the annulus was sealed with bentonite grout.
4. Excavate and expose horizontal SVE well casing. Approximately 2-ft to top of casing.
5. Remove section of casing for installation of access riser and tie-in to 2-in SVE lateral pipe.
6. Debur cut PVC ends and remove shavings before assembly of new riser and tie-in.
7. Install access riser, and tie well casing to new 2-in SVE lateral pipe.
8. Seal well casing annulus with one foot thick ring of cement bentonite grout. Extend grout one foot along casing.
9. Decommission the cut-off blank casing with cement bentonite grout and install slip caps on both ends.
10. Backfill HSVE-2 entry pit with gravel, compact, and repave to match existing grade.



Horizontal SVE Well Access and Tie-In Details
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington

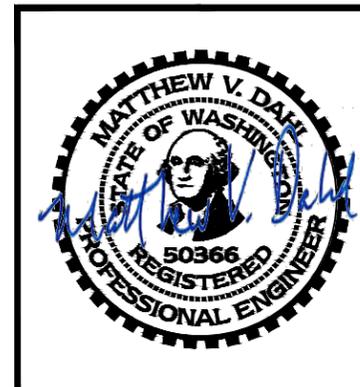
PLATE

6



Notes:

1. HSVE well access risers and vaults are not shown.
2. Heat trace and insulation on condensate knockout are not shown.
3. Install threaded plugs on manifold laterals and discharge stack. Locate in section of straight pipe with 10 straight pipe diameters upstream and 5 straight pipe diameters downstream of threaded plug.



Process and Instrumentation Diagram
Remedial Design for Soil Vapor Extraction
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE

7

ATTACHMENT A

Design Calculations

ATTACHMENT A1

Pilot SVE Well Capture Zone Calculation

Attachment A1 Pilot SVE Well Capture Zone Calculation Bethel Junction Shopping Center

PROBLEM:

- 1) Estimate the SVE well radius of influence (ROI) and capture zone (CZ) based on pilot test results from 8/8/2016 and select optimum ROI or CZ for conceptual SVE design. Pilot test trench included 20 ft slotted screen, and 37 ft long trench length.

GIVEN:

- A) Pilot test vacuum and flow data

Pilot Test Well ID	Dist. From Trench (ft)	Average Vacuum (in.w.c.)		Normalized Vacuum			Trench Avg. Flow Rate (scfm)		
		Step 1 (10 in.w.c.)	Step 2 (17 in.w.c.)	Step 1 (10 in.w.c.)	Step 2 (17 in.w.c.)		Step 1	Step 2	
Trench	0	10	17	1.0	1.0		48.2	86.5	
VP-4	27	0.04	0.03	0.004	0.002				
VP-5	29	0.05	0.07	0.005	0.004				
VP-6	42	0.03	0.02	0.003	0.001				
VP-7	19.3	1.03	1.68	0.103	0.099				
VP-8	9	0.11	0.24	0.011	0.014				
VP-9	14.4	1.03	1.68	0.103	0.099				

- B) Typical soil types in the vadose zone are silty sands (SM) and poorly graded sand (SP) and is observed to be dense. Assume dense SM for calculation.
- C) Minimum allowable SVE pore velocity at the edge of the ROI or CZ (see Note i) = 0.01 cm/s
- D) Target number of SVE pore volume (PV) exchanges per day (see Note ii) = 2 to 4 PV/day
- E) Air filled porosity for silty sand (see Note iii) = 0.2 (unit less)
- F) Trench horizontal well screen interval depth below ground surface = 2 ft
- G) Depth to water below ground surface encountered at 7 to 12 feet = 12 ft

NOTES:

- i) Minimum recommended pore gas velocity range is 0.001 to 0.01 cm/s (USACE 2002, page 5-10).
Note - Pore gas velocity of 0.01 cm/s is selected to optimize contaminant removal in a finer grained matrix.
- ii) Based on estimated 1,000 to 1,500 PV exchanges per project life (USACE 2002, page 5-4).
Note - The required PV exchanges may be higher or lower depending on actual project conditions.
- iii) Average air filled porosity of SP at field capacity (USACE 2002, page 4-46).
Note - The air filled porosity of SM = 0.20 and ML = 0.16.

REFERENCE:

USACE, 2002. *Engineering and Design, Soil Vapor Extraction and Bioventing*. No. 1110-1-4001. May 30.

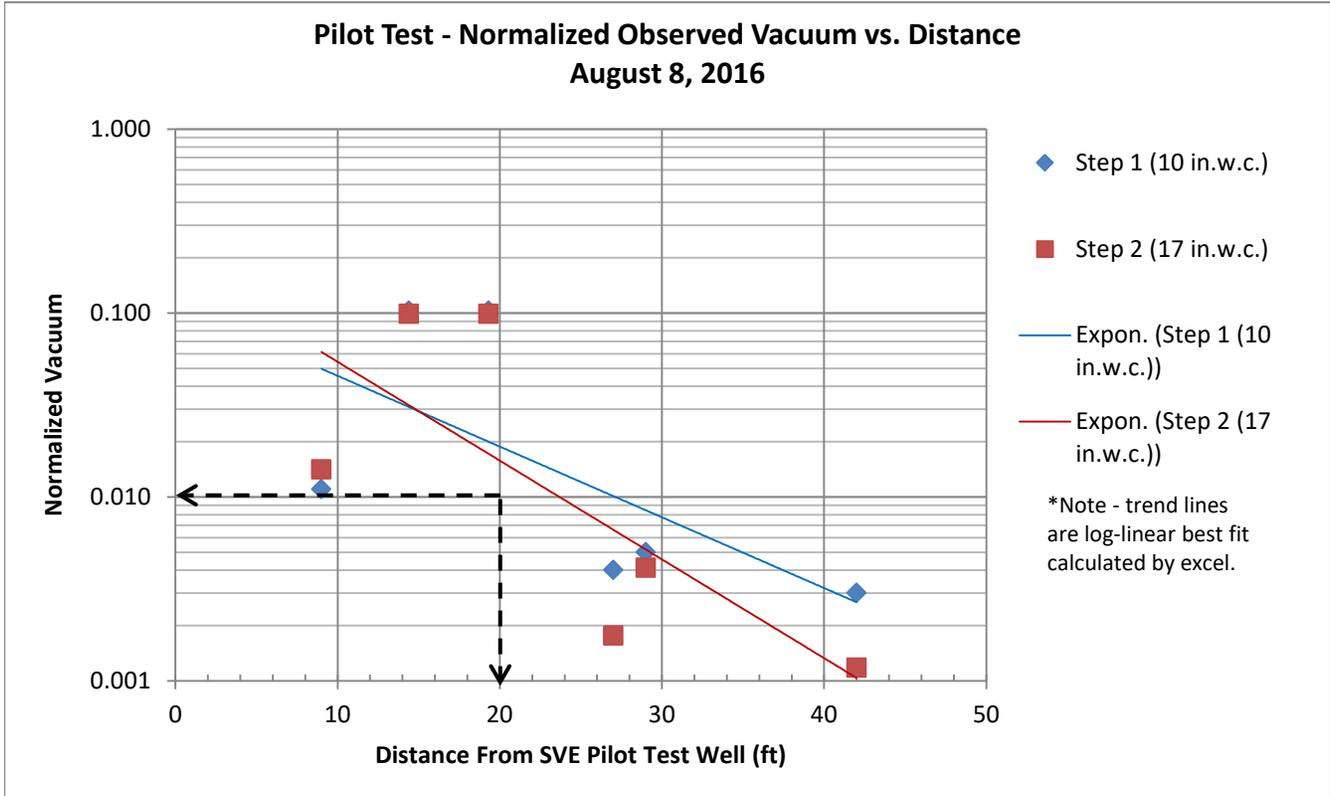
ASSUMPTIONS

- A) The vacuum ROI is defined as the horizontal distance from the SVE pilot test well where the field-measured vacuum response is 1 percent of the vacuum applied at the pilot test well.
- B) SVE flow at the edge of the ROI and CZ is horizontal through the perimeter of the ROI / CZ and distributed evenly across the entire depth of the ROI / CZ.
- C) The anticipated horizontal hydraulic conductivity (Kh) is expected to be at least 10 times the vertical hydraulic conductivity (Kv). Therefore the primary SVE flow direction is assumed to be horizontal.
- D) The CZ for a shallow horizontal SVE well is in the shape of a cylinder extending from the base of the concrete slab to the assumed water table. The cylinder height is: $H_v = 12$ ft

Attachment A1 Pilot SVE Well Capture Zone Calculation Bethel Junction Shopping Center

CALCULATION:

1) Estimate the maximum allowable SVE ROI based on pilot test data using semi-log plot.



Select maximum SVE ROI = 20 ft based on the best fit line of normalized vacuum and distance.

Check pore gas velocity at edge of ROI assuming minimum pilot test SVE flow rate of 48.2 cfm

$$V_p = Q / A$$

Where

Q = SVE well flow (scfm)

V_p = Minimum pore gas velocity of 0.01 cm/s

and $A = [(2\pi * (CZ)) + 2 * 20] * H_v * \Theta$

A = Pore area at the edge of CZ (ft²)

CZ = Capture zone distance from SVE trench

H_v = Height of the vadose zone (ft)

Θ = Air filled porosity (unit less)

Calculate for V_p using the formula above:

Well ID	CZ (ft)	Q (scfm)	H_v (ft)	Θ (unit less)	V_p (cm/s)
SVE1	20	48.2	12	0.20	0.062

Comment - The pore gas velocity at the edge of ROI = 20 ft is well above the 0.01 to 0.001 cm/s project target.

Attachment A1 Pilot SVE Well Capture Zone Calculation Bethel Junction Shopping Center

2) Next - estimate the pore volume exchange rate for the CZ cylinder using:

$$PVx = \frac{Q}{PV}$$

Well ID	Screen (ft)	CZ (ft)	H _v (ft)	Θ (unit less)	PV (cf)	Q (scfm)	PVx (PV/day)
Trench	20	20	12	0.20	4,936	48.2	14.1

Comment - The estimated pore volume removal is well above the 2 to 4 PV/day project target.

Select CZ = 20 ft

ATTACHMENT A2

New Horizontal SVE Well Screen

Attachment A2 New Horizontal SVE Well Screen Bethel Junction Shopping Center

PROBLEM:

Check the size of the SVE well screen based on the pilot test well screen and pilot test results, and estimate SVE flow from new well.

GIVEN:

- 1) New well screen: 50 ft long x 3" Schedule 80 PVC pipe with 0.012-in slots, 3 x 1.4-inch long slots per row, and 24 rows of slots per foot of screen. Open area = 1.21 sq.in. open area per foot of screen.
- 2) Slot size selected based on silty sand formation.
- 3) Existing pilot test well: 20 ft long x 4" Schedule 40 PVC pipe with 0.020-in slots and 6.43 sq.in. open area per foot of screen per Johnson Screen well screen specifications.
- 4) Assume air flow rate per open screen area varies based on open area only.
- 5) Pilot test flow rate was 48 scfm at 10-in.w.c. vacuum, and 87 scfm at 17-in.w.c. vacuum.
- 6) Estimated capture zone (CZ) from SVE pilot test was 20 ft at 12 ft CZ height and effective porosity of 0.2

CALCULATION:

- 1) Calculate flow rate per screen open area in pilot test well HSVE-1.
 - a) 48 scfm / 20 ft screen / 6.43 sq.in. open area/ft = 0.37 scfm / sq.in (10 in.w.c. vacuum on well)
 - a) 87 scfm / 20 ft screen / 6.43 sq.in. open area/ft = 0.68 scfm / sq.in (17 in.w.c. vacuum on well)

- 2) Calculate flow rate in HSVE-2.
 - a) At 0.37 scfm / sq.in. x 1.21 sq.in. open area / ft x 50 ft screen length = 23 scfm
 - b) At 0.68 scfm / sq.in. x 1.21 sq.in. open area / ft x 50 ft screen length = 41 scfm

- 3) Check pore gas velocity at edge of ROI assuming minimum pilot test SVE flow rate of 48.2 cfm

$$V_p = Q / A$$

and

$$A = [(2\pi * (CZ)) + 2 * 20] * H_v * \Theta$$

Where

Q = SVE well flow (scfm)

V_p = Minimum pore gas velocity of 0.01 cm/s

A = Pore area at the edge of CZ (ft²)

CZ= Capture zone distance from SVE trench

H_v = Height of the vadose zone

Θ = Air filled porosity (unit less)

Calculate for V_p using the formula above:

Well ID	CZ (ft)	Q (scfm)	H_v (ft)	Θ (unit less)	V_p (cm/s)
SVE1	20	23	12	0.20	0.029

Comment - The pore gas velocity at the edge of ROI = 20 ft is well above the 0.01 to 0.001 cm/s project target.

Attachment A2
New Horizontal SVE Well Screen
Bethel Junction Shopping Center

4) Estimate the minimum pore volume exchange rate at HSVE-2 for the CZ cylinder using:

$$PVx = \frac{Q}{PV}$$

Well ID	Screen (ft)	CZ (ft)	H _v (ft)	Θ (unit less)	PV (cf)	Q (scfm)	PVx (PV/day)
Trench	50	20	12	0.20	7,816	23	4.2

Comment - The estimated pore volume removal at the higher end of the 2 to 4 PV/day project target.

CONCLUSION:

Construction of new horizontal SVE well screen: 50 ft long, 3-in diameter Schedule 80 PVC, 0.012-inch slots, and 24 rows of slots per foot to meet the minimum soil gas velocity and PV exchange rate in HSVE-2 at the lowest estimated rates of flow and vacuum.

ATTACHMENT A3
SVE Blower Selection

**Attachment A3
SVE Blower Selection
Bethel Junction Shopping Center**

PROBLEM:

Select SVE blower based on anticipated SVE flow rates and vacuums.

GIVEN:

- 1) Pilot test flow rates of 48 scfm at 10 in.w.c. vacuum and 87 scfm at 17 in.w.c. vacuum will provide more than adequate pore gas velocity and pore volume recovery from the existing 4" diameter horizontal SVE well (HSVE-1).
- 2) New SVE well flow rate of 23 scfm at 10 in.w.c. vacuum and 41 scfm at 17 in.w.c. vacuum will provide more than adequate pore gas velocity and pore volume recovery from the proposed 3" diameter horizontal SVE well (HSVE-2)
- 3) Additional losses of approximately 11 in.w.c. are anticipated due to the inlet filter (5 in.w.c.), moisture knockout vessel (2 in.w.c.), interconnecting piping (2 in.w.c.), and discharge stack (2 in.w.c.).
- 4) Total estimated SVE flow rate based on pilot test, HSVE-2 calculations, and losses:
 - a) 10 in.w.c. applied at well head: 71 scfm and 21 in.w.c. vacuum.
 - b) 17 in.w.c. applied at well head: 128 scfm and 28 in.w.c. vacuum.
- 5) Pilot test blower was Rotron EN 454, and provided a maximum flow rate of 87 scfm at 17 in.w.c. vacuum. Based on the manufacturers blower curve, the vacuum at the blower inlet was estimated to be a 24 in.w.c. vacuum during the pilot test.

BLOWER SELECTION:

- 1) Try pilot test blower: Rotron EN 454 blower:
 - a) Based on flow curve: the EN 454 is capable of 90 scfm at 21 in.w.c. vacuum OK
 - b) Based on flow curve: the EN 454 is capable of 82 scfm at 28 in.w.c. vacuum OK

The EN 454 blower will provide appropriate flow and vacuum for the 2 well SVE system to meet the soil pore gas velocity and pore volume exchange rate recommendations (USACE, 2002).

Based on pilot test calculations and the EN 454 blower curve:

A design flow rate of 85 scfm at 25 in.w.c. available vacuum is assumed.

(Manufacturers cut sheet attached.)

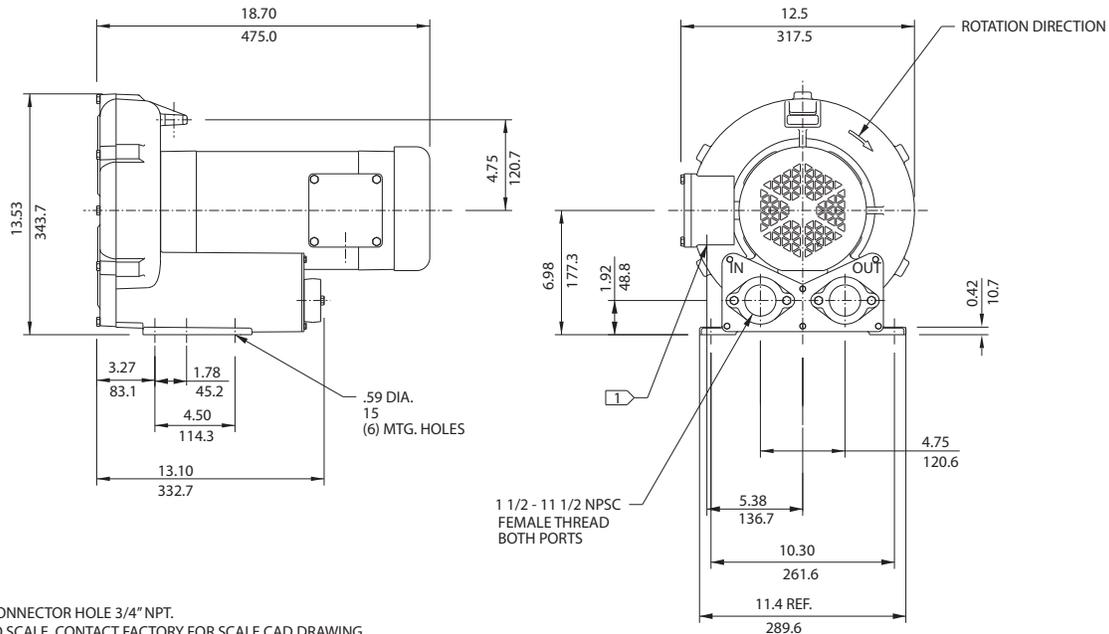
REFERENCE:

USACE, 2002. *Engineering and Design, Soil Vapor Extraction and Bioventing*. No. 1110-1-4001. May 30.

ATTACHMENT A4

SVE Condensate Generation Estimate

1.5 HP Sealed Regenerative w/Explosion-Proof Motor



IN
MM

- NOTES
- 1) TERMINAL BOX CONNECTOR HOLE 3/4" NPT.
 - 2) DRAWING NOT TO SCALE, CONTACT FACTORY FOR SCALE CAD DRAWING.
 - 3) CONTACT FACTORY FOR BLOWER MODEL LENGTHS NOT SHOWN.



Specification	Units	Part/Model Number			
		EN454W58ML 080487	EN454W72ML 080488	CP454W72MLR 080490	CP454FR72MLR 080494
Motor Enclosure - Shaft Mt.	-	Explosion-proof-CS	Explosion-proof-CS	CHEM XP-CS	CHEM XP-SS
Horsepower	-	1.5	1.5	1.5	1.5
Phase - Frequency	-	Single-60 hz	Three-60 hz	Three-60 hz	Three-60 hz
Voltage	AC	115/208-230	230/460	230/460	230/460
Motor Nameplate Amps	Amps (A)	15/7.9-7.5	4.6/2.3	4.5/2.3	4.6/2.3
Max. Blower Amps	Amps (A)	19/10.9-9.5	5.6/2.8	5.6/2.8	5.6/2.8
Locked Rotor Amps	Amps (A)	96-48	32/16	32/16	32/16
Service Factor	-	1/0	00/00	00/00	00/00
Starter Size	-	1.0	1.0	1.0	1.0
Thermal Protection	-	Class B - Pilot Duty	Class B - Pilot Duty	Class B - Pilot Duty	Class B - Pilot Duty
XP Motor Class - Group	-	I-D, II-F&G	I-D, II-F&G	I-D, II-F&G	I-D, II-F&G
Shipping Weight	Lbs	90	84	84	84
	Kg	40.8	38.1	38.1	38.1

Voltage - ROTRON motors are designed to handle a broad range of world voltages and power supply variations. Our dual voltage 3 phase motors are factory tested and certified to operate on both: **208-230/415-460 VAC-3 ph-60 Hz** and **190-208/380-415 VAC-3 ph-50 Hz**. Our dual voltage 1 phase motors are factory tested and certified to operate on both: **104-115/208-230 VAC-1 ph-60 Hz** and **100-110/200-220 VAC-1 ph-50 Hz**. All voltages above can handle a ±10% voltage fluctuation. Special wound motors can be ordered for voltages outside our certified range.

Operating Temperatures - Maximum operating temperature: Motor winding temperature (winding rise plus ambient) should not exceed 140°C for Class F rated motors or 120°C for Class B rated motors. Blower outlet air temperature should not exceed 140°C (air temperature rise plus inlet temperature). Performance curve maximum pressure and suction points are based on a 40°C inlet and ambient temperature. Consult factory for inlet or ambient temperatures above 40°C.

Maximum Blower Amps - Corresponds to the performance point at which the motor or blower temperature rise with a 40°C inlet and/or ambient temperature reaches the maximum operating temperature.

XP Motor Class - Group - See Explosive Atmosphere Classification Chart in Section I

This document is for informational purposes only and should not be considered as a binding description of the products or their performance in all applications. The performance data on this page depicts typical performance under controlled laboratory conditions. AMETEK is not responsible for blowers driven beyond factory specified speed, temperature, pressure, flow or without proper alignment. Actual performance will vary depending on the operating environment and application. AMETEK products are not designed for and should not be used in medical life support applications. AMETEK reserves the right to revise its products without notification. The above characteristics represent standard products. For product designed to meet specific applications, contact AMETEK Technical & Industrial Products Sales department.

FEATURES

- Manufactured in the USA - ISO 9001 and NAFTA compliant
- Maximum flow: 120 SCFM
- Maximum pressure: 65 IWG
- Maximum vacuum: 59 IWG
- Standard motor: 1.5 HP, explosion-proof
- Cast aluminum blower housing, impeller, cover & manifold; cast iron flanges (threaded); teflon® lip seal
- UL & CSA approved motor with permanently sealed ball bearings for explosive gas atmospheres Class I Group D minimum
- Sealed blower assembly
- Quiet operation within OSHA standards

MOTOR OPTIONS

- International voltage & frequency (Hz)
- Chemical duty, high efficiency, inverter duty or industry-specific designs
- Various horsepower for application-specific needs

BLOWER OPTIONS

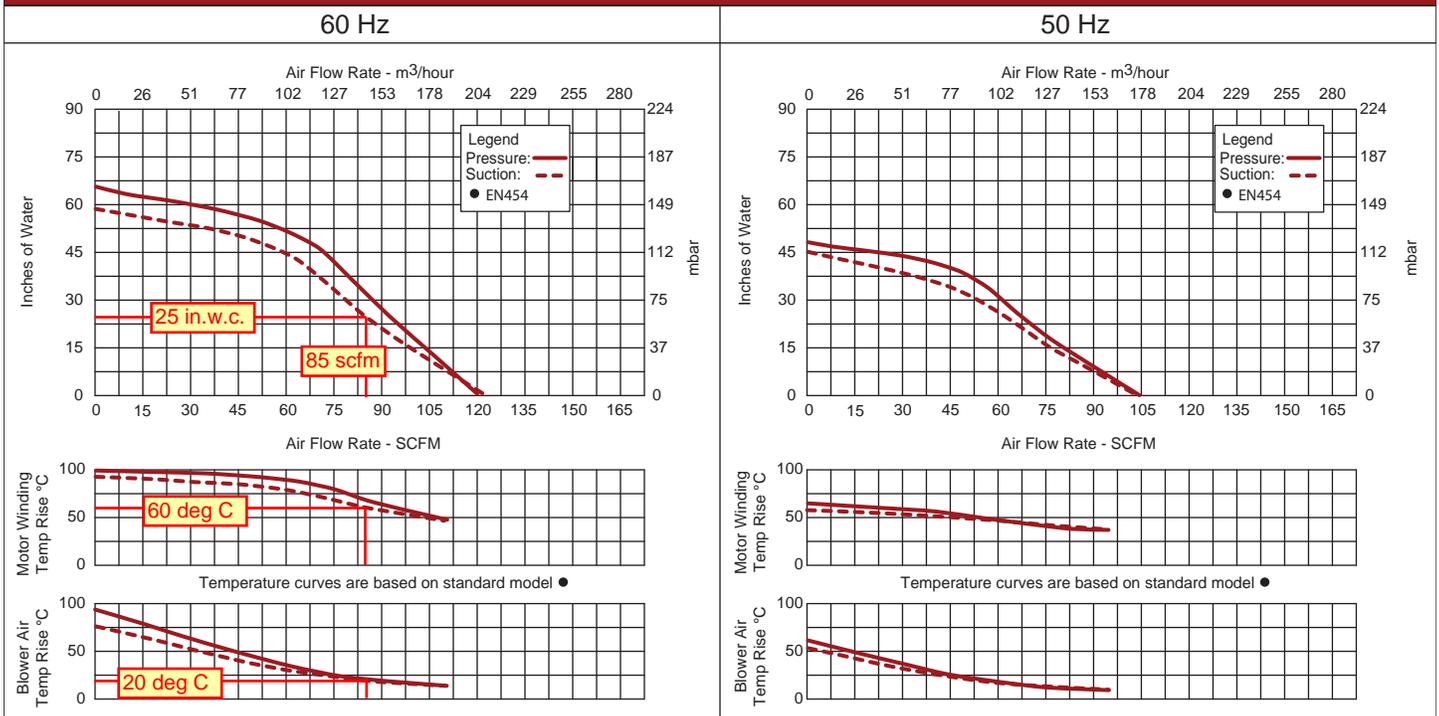
- Corrosion resistant surface treatments & sealing options
- Remote drive (motorless) models
- Slip-on or face flanges for application-specific needs

ACCESSORIES

- Flowmeters reading in SCFM
- Filters & moisture separators
- Pressure gauges, vacuum gauges, & relief valves
- Switches - air flow, pressure, vacuum, or temperature
- External mufflers for additional silencing
- Air knives (used on blow-off applications)
- Variable frequency drive package



Blower Performance at Standard Conditions



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Attachment A4 SVE Condensate Generation Estimate Bethel Junction Shopping Center

PROBLEM:

Estimate maximum condensate generation rate - worst case (January, December)

GIVEN:

- 1) Maximum SVE Flow Rate = 85 scfm
- 2) Mean soil temperature = Average annual air temp. = SVE vapor temp. ¹ (°F) = 51
- 3) Minimum ambient air temperature = Average daily air temp. ¹ (°F) = 40
- 4) Constant SVE flow through knockout vessel does not allow temperature to cool to ambient, so assume the air temp. in knockout vessel = Avg. daily air temp + 5 degrees (°F) = 45
- 5) Water vapor content of gas is similar to that of air at the same temperature and pressure.
- 6) Partial pressure of water vapor in gas is equal to the saturation pressure of the gas at the condensate trap (i.e. 100% relative humidity).

CALCULATION:

$$V_{\text{cond}} = \frac{(H_{s1} / \rho_{\text{air}1}) - (H_{s1} / \rho_{\text{air}2})}{\rho_{\text{H}_2\text{O}}} \times Q_{\text{SVE}}$$

where:

H_s = saturation humidity

ρ_{air} = density of air

$\rho_{\text{H}_2\text{O}}$ = density of water

Q_{SVE} = SVE flow rate

Initial Water Content at 51 °F

$$\frac{7.98\text{E-}03 \text{ lb}_{\text{H}_2\text{O}} / \text{lb}_{\text{air}}}{12.868 \text{ ft}^3 / \text{lb}_{\text{air}}} = 6.20\text{E-}04 \text{ lb}_{\text{H}_2\text{O}} / \text{ft}^3_{\text{air}}$$

Final Water Content at 40 °F

$$\frac{6.44\text{E-}03 \text{ lb}_{\text{H}_2\text{O}} / \text{lb}_{\text{air}}}{12.717 \text{ ft}^3 / \text{lb}_{\text{air}}} = 5.06\text{E-}04 \text{ lb}_{\text{H}_2\text{O}} / \text{ft}^3_{\text{air}}$$

Total SVE Condensate Flow Rate

$$\frac{(6.20\text{E-}04 - 5.06\text{E-}04) \text{ lb}_{\text{H}_2\text{O}} / \text{ft}^3_{\text{air}}}{8.335 \text{ lb}_{\text{H}_2\text{O}} / \text{gal}} \times 85 \text{ ft}^3 / \text{min} = 0.00116 \text{ gpm} = \boxed{1.7 \text{ gpd}} = \boxed{50 \text{ gal / mo}}$$

CONCLUSION:

Approximately 25 gallons of condensate storage space is required for 2 weeks of operation during the coldest weather months.

Notes:

- 1) Temperatures obtained from WRCC 1899 – 2012 (Bremerton station)
- 2) Saturation humidity, air density, and water density from: *Chemical Engineers Handbook, 4th Ed., Page 15-6, McGraw Hill*

APPENDIX H
SAMPLING AND ANALYSIS PLAN



Bethel GRF2, Inc.
c/o: Gerrity Group, LLC
973 Lomas Santa Fe Drive
Solana Beach, California

SAMPLING AND ANALYSIS PLAN

**AMY'S CLEANERS
BETHEL JUNCTION SHOPPING CENTER
PORT ORCHARD, WASHINGTON**

MARCH 22, 2017

By:

Brian O'Neal, P.E.
Associate Engineer



Kelly Rankich
Project Engineer

1246.030.03

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1.0 INTRODUCTION

This Sampling and Analysis Plan (SAP) was prepared on behalf of Bethel GRF2, Inc. (Gerrity) as a reference appendix to the Cleanup Action Plan (CAP) for the Amy's Cleaners at Bethel Junction Shopping Center property located at 3377 Bethel Road SE, in Port Orchard, Washington (Property, Plate 1; PES, 2017). The term "Site", as used in this SAP, refers to the locations where contaminants originating from the Property have come to be located. The Site is the location of releases from dry-cleaning operations from the suite currently occupied by Amy's Cleaners. The Site is the subject of on-going remedial investigations since July 2000.

This SAP applies to the collection and analysis of air, soil, and groundwater samples as a component of the CAP, including the performance and confirmation sampling programs. This SAP includes a Quality Assurance Project Plan (QAPP), which is presented in Section 3.0.

1.1 Property Description

The 9.24 acre Property is comprised of Kitsap County Assessor's Parcel Number 012301-2-111-2009. The term "Site", whenever used in this SAP, refers to the locations where contaminants originating from the former dry-cleaning operations have come to be located. Pertinent site features are shown on Plate 2.

1.2 Project History

The Property was residential from at least 1938 until it was developed into the Bethel Junction shopping center in 1989. Since the shopping center was constructed, uses of the Site include a variety of commercial businesses including a sporting goods store, a grocery store, retail stores, beauty salons, and restaurants. Gerrity does not plan any substantive changes in the uses of the property. Amy's Dry Cleaners has operated in its current commercial space since 1989. The original dry cleaner unit (DCU), operated between 1989 and 2002, used a tetrachloroethene (PCE)-based dry cleaning solvent. In 2002, the PCE-based DCU was replaced by a new DCU that utilizes a petroleum hydrocarbon solvent.

The first environmental investigation of the Property was conducted in July 2000 by the previous owner of the Property. Based on the results of the previous investigations, the prior owner of the Bethel Junction Shopping Center determined that the subsurface contamination does not present a risk to human health or the environment as long as it remains undisturbed beneath the concrete floor and in accordance with a restrictive covenant, which was placed on the property in 2004. The restrictive covenant pertains to the contaminated soil located beneath Suite #105 and restricts any activities that may result in the release or exposure to the environment of the contaminated soil or that could create a new exposure pathway. This information was submitted to Ecology, which issued a letter in 2005 determining that no further remedial action (NFA) was required. PES's 2017 CAP provides additional details regarding previous investigations conducted at the Site.

1.3 Remedial Action Purpose and Approach

Contaminated soil is located beneath an area within the central portion of the Amy's Cleaners suite (#105), along the western portion of Suite #103, and along the eastern portion of Suite #107 where VOC concentrations are above CULs. The investigations adequately defined the vertical extent of contamination, with the deepest samples containing VOCs exceeding CULs at a depth of 6 feet. The results of the groundwater investigations suggest an area of limited size where VOCs exceed the CULs, and in fact suggest a limited area where shallow perched groundwater is present at all. Only three borings located immediately around the DCU had VOCs exceeding the applicable CULs. Additional remedial actions are necessary to address the residual soil and groundwater contamination at the Site.

A soil vapor extraction (SVE) system is being installed to treat residual PCE in soil and groundwater. The SVE system is expected to be operational during the second or third quarters of 2017.

1.4 Document Organization

This SAP is organized into five sections. A brief description of each section is presented below.

- **Section 1 – Introduction.** Section 1 provides a description of the Site, briefly summarizes the project history, and describes the remedial action purpose and approach for remediating the subsurface soil and groundwater media, and documenting performance and compliance.
- **Section 2 – Sampling and Analysis Plan.** Section 2 details the performance and compliance monitoring procedures, laboratory methods, decontamination procedures, and the management of monitoring residuals.
- **Section 3 – Quality Assurance Project Plan.** Section 3 identifies quality assurance/quality control (QA/QC) procedures for monitoring and laboratory analysis.
- **Section 4 – Data Evaluation.** Section 4 provides the procedures for data evaluation, and interpretation.
- **Section 5 – References.** Section 5 provides the references cited in the work plan.
- **Appendix A – Field Forms.** Appendix A provides examples of field forms that will be used on this project.

2.0 SAMPLING AND ANALYSIS PLAN

This SAP has been developed as a project reference manual for the collection of high quality environmental data. This SAP includes collection of SVE vapor performance sampling data during SVE system operation, and compliance soil and groundwater sampling after the SVE system is shut-down. Any additional SVE system operational monitoring and sampling will be described separately in an operations and maintenance plan.

2.1 Sampling Needs and Objectives

The sampling and analysis plan for the project has been developed to collect high quality environmental data. The overall goal of the field work is to generate data that are acceptable for use in evaluating performance of the remedial action, and documenting compliance with the remedial action objectives (RAOs).

As demonstrated in the CAP, tetrachloroethene (PCE) and trichloroethene (TCE) are the primary contaminants of concern for soil and cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride are the primary contaminants of concern for shallow perched groundwater at the Site.

2.2 Health and Safety Plan Preparation

Prior to mobilization for field work, the site-specific health and safety plan (HASP) will be updated as needed for the scope of work. The original HASP was prepared consistent with the requirements of the Washington State Division of Occupational Safety and Health's Hazardous Waste Operations Regulation (WAC 296-843). The HASP includes a description of the project team, the scope of work, site control, a site hazard information, site hazard control, air monitoring, and emergency response. Information about the nearest hospital, including a map, is also provided.

2.3 Performance Vapor Sampling

As part of the operations and maintenance program for the SVE system, Volatile Organic Compound (VOC) concentrations in system effluent will be measured so that mass removal estimates can be update and to evaluate when the VOC concentrations in the SVE discharge reach asymptotic levels. Additionally, performance monitoring will be performed periodically to assess whether changes in system performance are needed to optimize contaminant removal efficiency. Performance monitoring will include monitoring VOC concentrations in each horizontal SVE well, stack emissions monitoring, and monitoring existing soil vapor probes for vacuum and VOC concentrations. Stack samples will be collected monthly and will be analyzed for VOCs by EPA Method TO-15 to verify compliance with PSCAA and Ecology toxic pollutant source discharge regulations.

2.4 Confirmation Soil Sampling

Once the VOC concentrations in the SVE discharge reach asymptotic levels and shutdown and rebound testing indicate little remaining contaminant mass, the SVE system will be shut down,

and soil samples will be collected from additional borings and analyzed to document system performance and compliance with the RAOs (e.g., soil cleanup levels).

Confirmation soil samples will be collected from 6 borings to confirm remediation of VOC impacted soil encountered during site characterization activities as shown on Plate 3.

2.4.1 Drilling and Soil Sample Collection

Soil borings will be advanced by a state-licensed well operator using a limited-access direct-push-probe drilling rig.

Soil samples will be collected continuously during drilling from the highest point possible to the bottom of the hole; samples will be extracted from the coring tube into new plastic sleeves. Soil samples will be monitored for odors and screened for volatile organic compounds with a photoionization detector (PID), and logged for lithologic characterization based on American Society of Testing and Materials (ASTM) Method D2488, Standard Practice for Description and Identification of Soils (Visual-Manual Method). All observations and measurements will be recorded on a Field Lithologic Log Form (Appendix A).

Screening with a PID will be used to identify the apparent presence and absence of contamination. If field screening of soil samples in a boring indicates the potential for contamination, then the soil sample that appears to be the most contaminated will be submitted for laboratory analysis of VOCs. Soil samples will also be collected to document whether VOCs are absent or below their respective cleanup levels for soil media.

Regardless of the apparent presence or absence of contamination, representative samples will be collected in accordance with EPA Method 5035 after the sample core is screened but before the sample core is logged. The samples will be placed in a laboratory-prepared containers, which will be placed in a chilled, insulated cooler. The samples will be handled and transported to the project laboratory as described in Section 2.6.

Each boring will be drilled until the target depth or lithologic unit is encountered. Upon drilling completion, each of the boreholes will be abandoned using bentonite in accordance with WAC 173-160, *Standard Construction and Maintenance of Wells*.

2.5 Groundwater Compliance Monitoring

If water is encountered in the soil borings, temporary wells will be installed and allowed to accumulate water for a minimum of 45 minutes. Monitoring will consist of collecting depth to water measurements and collecting groundwater samples for laboratory analysis. Groundwater samples will be collected using similar procedures as for the site characterization investigations and will be analyzed for VOCs using EPA Method 8260.

2.5.1 Groundwater Monitoring Methods

2.5.1.1 Groundwater Level Measurements

Groundwater elevations will be measured using the following procedures:

1. Install the temporary well casing with at least 5 feet of screen across the water table;
2. Allow the casing to accumulate water for at least 45 minutes;
3. Document initial conditions (time and water level at time of installation) on the Water Sampling Form (Appendix A);
4. Measure the initial water level to the nearest 0.01 foot, using an electronic water level probe;
5. Record all results (times, measured values, etc.) on the Water Sampling Form;
6. Rinse the probe tip with distilled water between each temporary well to avoid cross contamination; and
7. Periodically measure the water levels. Record all results on the Water Sampling Form.

2.5.1.2 Groundwater Sampling

This section includes a description of groundwater sampling methods. Sample field forms are provided in Appendix A.

Preparation. Prior to the initiation of any sampling activities, all of the necessary field equipment and documentation materials (e.g. field notebook and sampling forms) will be prepared. Prior to the commencement of purging and sampling, each of the field instruments will be calibrated with standard solutions at a minimum of once per day. Laboratory supplied sample bottles will be inspected for proper preservative (Table 1). The depth to water will be measured prior to sampling using the procedures outlined above.

Low-Flow Purging. New disposable polyethylene tubing will be used to sample each temporary well. The polyethylene tubing will be slowly lowered into the well until the tubing intake is at the mid-point of the well screen. The well will be purged with a peristaltic pump fitted with new disposable silicon tubing in the pump head. The polyethylene tubing in the well will be connected to the silicon tubing in the pump head. The time will be recorded and the pump will be started. Pumping rates will be measured with a stopwatch and graduated cylinder, graduated cup, or volatile organic analysis (VOA) 40 milliliter (mL) vial, depending on flow rate. Low flow purging will be conducted at a pumping rate between 80 and 500 mL per minute (mL/min).

During purging, the water level will be measured approximately every 3 to 5 minutes, until a steady water level is determined. If possible, a drawdown of 0.3 feet or less will be maintained in the well, with the pumping rate lowered to a minimum rate of 80 mL/min if necessary to maintain a drawdown of 0.3 feet or less. The water level in the well will be maintained above the tubing intake depth at all times. If the well yield is sufficiently poor that the water level drops to the tubing intake, the pump will be stopped until the water level recovers to near the pre-pumping level and a sample will be collected. The final purge volume will be at least as great as the submerged tubing volume plus the stabilized drawdown volume. All measured water levels and pumping rate changes will be recorded.

Field indicator parameters will be measured approximately every 3 to 5 minutes during purging. Field parameters will include pH, specific conductance, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP). Measurements will be recorded to the following standards:

- pH to ± 0.01 units;
- Specific conductance to ± 1 micro ohm;
- Temperature to $\pm 0.1^\circ\text{C}$;
- DO to ± 0.1 milligrams per liter (mg/L); and
- ORP to ± 1 millivolts (mV).

If there is sufficient water for purging, samples will not be collected until these parameters have stabilized for three consecutive readings to the following criteria:

- pH to ± 0.1 pH unit;
- Conductivity to ± 3 percent;
- Temperature to ± 3 percent; and
- DO to ± 10 percent.

ORP measurements will not be used to determine stability. If field parameters do not stabilize after 1 hour of pumping, a sample will be collected. Well purging data will be recorded. Field instruments will be calibrated using known standard solutions a minimum of once per day.

Upon completion of purging, samples will be collected from the discharge end of the peristaltic pump tubing. The same pump rate used at the end of well purging will be used during sample collection. The water samples will be submitted for analysis of VOCs using USEPA Method 8260B. All sample containers will be prepared and provided by the analytical laboratory (Table 3).

After collection of the sample from each well, the polyethylene tubing will be removed from the well, the casing will be removed, and the boring will be abandoned by filling the bottom of the boring to the surface with hydrated bentonite chips. All used tubing and the temporary well casing will be discarded appropriately.

All measured water levels and pumping rate changes will be recorded on a Groundwater Sampling Form.

Decontamination and purge water will be handled in accordance with Section 2.8 of this SAP.

2.6 Laboratory Analytical Procedures

All samples will be submitted to a Washington State-accredited laboratory. The laboratory methods shown in Table 1 will be used. Soil and groundwater samples will be analyzed for the following VOCs by EPA Method 8260B. SVE vapor samples will be analyzed for VOCs using EPA Method TO-15.

2.7 Sample Labeling, Shipping, and Chain-of-Custody

Sample labeling, shipping, and chain-of-custody will be performed consistent with the procedures described below.

2.7.1 Sample Labeling and Nomenclature

Sample container labels will be completed immediately before or immediately following sample collection. Container labels will include the following information:

- Project name;
- Soil Sample Name: boring identification number followed by the depth interval. For example, sample name for a soil sample collected 8 feet below ground surface (ft bgs) in boring B19 would be “B19-S-08”; or
- Groundwater Sample Name: well identification number followed by the date sampled. For example, the sample name for a groundwater sample collected at soil boring B19 on April 15, 2017, would be “B19-W-041517”;
- Initials of collector;
- Date and time of collection; and
- Analysis requested.

2.7.2 Sample Shipping

Samples will be shipped to the analytical laboratory using the following procedures:

- Sample containers will be placed in a sealed, iced cooler or other suitable shipping container after sample collection. This container will be used for transporting the samples to the analytical laboratory;
- In each shipping container, glass bottles will be separated by a shock absorbing material to prevent breakage and leakage;
- Ice sealed in separate plastic bags or “gel ice” packs, will be placed into each shipping container with the samples;
- All sample shipments will be accompanied by a chain-of-custody form (COC). The completed form will be sealed in a plastic bag, which will be taped to the inside lid of the shipping container;
- Signed and dated COC seals will be placed on all shipping containers; and
- The name and address of the analytical laboratory, along with sampler’s name and office (return) address, will be placed on each shipping container prior to shipping.

2.7.3 Chain-of-Custody

Once a sample is collected, it will remain in the custody of the sampler or other PES personnel until shipment to the laboratory. Upon transfer of sample possession to subsequent custodians, a COC will be signed by the persons transferring custody of the sample container. A signed and dated COC seal will be placed on each shipping container prior to shipping. COC records will be included in the analytical report prepared by the laboratory.

2.8 Decontamination

Decontamination procedures will be performed consistent with the procedures described in this section. All non-disposable sampling equipment will be decontaminated prior to initial use, between sampling locations, and at the completion of the site-specific sampling.

The following decontamination procedure will be used for non-dedicated and non-disposable sampling equipment:

- Tap water rinse;
- Non-phosphatic detergent (e.g., Liquinox) and tap water wash;
- Tap water rinse; and
- Distilled water rinse.

Water level probes will be decontaminated by rinsing with distilled or de-ionized water.

Decontamination of personnel involved in sampling activities will be accomplished as described in a site-specific health and safety plan.

2.9 Drilling and Sampling Residuals

The following procedures will be used for the drilling and sampling residuals, including soil, groundwater sampling purge water, and decontamination water:

- Soil generated during drilling will be placed in 55-gallon drums and securely stored on-site. Upon completion of drilling, a representative sample will be collected and analyzed for disposal characterization. Based on the results, the soil will be profiled and disposed of at an appropriate facility;
- Purge water and decontamination water generated during the investigation activities will be placed in 55-gallon drums and securely stored on site. A representative sample collected and analyzed for disposal characterization. Based on the results, the water will be profiled and disposed of at an appropriate facility; and
- Disposable clothing and equipment will be placed in plastic bags and disposed of as solid waste.

3.0 QUALITY ASSURANCE PROJECT PLAN

This quality assurance project plan (QAPP) describes the measures undertaken so that the data collected during the project are acceptable for their intended use(s) and includes the elements from Ecology's QAPP guidance document (Ecology, 2004).

3.1 Quality Assurance Project Plan Objectives

The overall QAPP objective for measurement data is to provide data of known and acceptable quality. All measurements will be made to yield accurate and precise results representative of the media and conditions measured. Chemical analyses will be performed in accordance with the requirements of the analytical methods. All sample results will be calculated and reported in consistent units to allow comparison of the sample data with regulatory criteria and federal, state, and local databases. QAPP objectives for precision, accuracy, and completeness have been established for each measurement variable, where possible, and are discussed below.

3.2 Chemical Analyses

Analysis of environmental samples will be performed in accordance with the laboratory analytical methods summarized in Table 1. The laboratory will report the results to levels less than or equal to the cleanup levels, using method reporting limits (MRLs) or MDLs as necessary to meet the cleanup levels. Any special analytical methods or modifications to methods will be determined with laboratory concurrence prior to beginning sample analysis.

3.3 Laboratory Quality Control

This section presents quality control (QC) requirements for the analytical laboratory. The purpose of this QC program is to produce data of known quality meeting project objectives and the requirements of the standard methods of analysis. Laboratory QC samples will include laboratory control samples (LCSs), matrix spike/matrix spike duplicate (MS/MSD) samples, laboratory duplicates, and method blanks. Laboratory QC samples (e.g., blanks and LCSs) will be included in the preparation batch with the field samples. An analytical batch is a number of samples (not to exceed 20, including the associated laboratory QC samples, MSs and MSDs) that are from a similar matrix and extracted or digested at the same time, analyzed sequentially, and with the same lot of reagents.

The identity of each analytical batch will be reported with the analyses so that a reviewer can identify the QC samples and the associated environmental samples. Samples that do not need separate extraction or digestion (e.g., volatile analyses by purge and trap) are included in each analytical batch.

All sample preparation and analysis will be completed within the method-required holding times. The holding time begins at the time of sample collection. If holding times are exceeded and the analyses are performed, the data will be qualified during the data review, in accordance with USEPA Functional Guidelines (USEPA, 1999 and 2002).

3.4 Field Quality Assurance

Field QC samples will be collected during groundwater sampling and will include trip blanks and field duplicates. Field QC samples will be collected at the frequency specified in Table 2 and described below.

3.4.1 Trip Blanks

A trip blank consists of a set of VOA vials filled in the laboratory with reagent-grade water, transported to the sampling site, handled under the same conditions as an environmental sample, and returned to the laboratory for analysis. Trip blanks are not opened in the field. Trip blanks are prepared only when volatile samples are collected and are analyzed only for volatile analytes. Trip blanks are used to assess the potential introduction of contaminants from sample containers or during the transportation and storage procedures. One trip blank per sampling day or per cooler will be included with the shipment of soil and water samples to the laboratory if VOC analyses are requested and will be analyzed for VOCs. If an analyte is detected in a trip blank, the data will be qualified during the data review per USEPA Functional Guidelines for Organics (USEPA, 1999).

3.4.2 Field Duplicates

A field duplicate sample is a second sample collected at the same location as the original sample. Duplicate samples are collected simultaneously or in immediate succession, using identical sampling techniques, and treated in an identical manner during storage, transportation, and analysis. The sample containers are assigned an identification number in the field so that they cannot be identified (blind duplicate) as duplicate samples by laboratory personnel performing the analysis. Duplicate sample results are used to assess precision of the sample collection process. One duplicate sample will be collected for approximately every 20 project samples.

3.5 Data Reporting and Data Validation Review

The laboratory performing sample analyses will be required to submit summary data and QA information to permit independent determination of data quality. The determination of data quality will be performed using the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA, 1999) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA, 2002) as guidelines for data review.

Laboratory deliverable requirements are outlined below and included in Table 3:

- Narrative cover letters for each sample batch will include a summary of any QC, sample, shipment, or analytical problems, and will document all internal decisions. Problems will be outlined, and final solutions documented;
- A copy of the signed chain-of-custody form for each batch of samples will be included in the results packet;

- Sample concentrations will be reported on standard data sheets in proper units and to the appropriate number of significant figures. For undetected values, the lower limit of detection for each compound will be reported separately for each sample. Dates of sample extraction or preparation and analysis must be included;
- A method blank summary will be included;
- Surrogate percent recovery will be calculated and reported;
- LCS results will be included;
- MS/MSD percent recoveries, spike level, and relative percent difference will be included; and
- Laboratory duplicate results will be included.

All chemistry data will be validated per USEPA data review guidelines (USEPA, 1999 and 2002). Data validation will include a review of holding times, method blank results, surrogate recovery results, LCSs, MS/MSDs, field and laboratory duplicates, completeness, detection limits, and chain-of-custody forms. Data validation memos will be prepared summarizing the reviews and any assigned data qualifiers.

4.0 DATA EVALUATION

Data generated during the remedial action, including the performance and confirmation monitoring programs, will be reviewed, summarized, and evaluated.

4.1 Field Documentation

Field sampling documentation and procedures, and issues (if any) will be reviewed and summarized, and maps will be prepared showing updated sampling locations.

4.2 Nature and Extent of Contamination

Chemistry data collected in connection with performance and confirmation sampling programs will be validated, tabulated, and summarized on maps of the Property. Maps will be updated with validated groundwater analytical data. After site-specific remedial action objectives have been achieved, data will be compared to the remedial action objectives and points of compliance.

4.3 Other Regulatory Requirements

Consistent with WAC 173-340-700(3), applicable state and federal laws, cross-media contamination, risk assessment procedures, and natural background and analytical procedures will be taken into consideration. If applicable, the process described above may be modified to account for these other requirements.

5.0 REFERENCES

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TABLES

Table 1

**Analytical Methods and Sample Handling Details
Amy's Cleaners, Bethel Junction Shopping Center, Port Orchard, Washington**

Analyses	Analytical Method	Sample Container	Preservation	Maximum Holding Time
Vapor Sample Laboratory Analyses				
Volatile Organic Compounds	EPA TO-15	Summa Canister	–	30 days
Soil Sample Laboratory Analyses				
Volatile Organic Compounds	EPA 8260	3 x 40 mL VOA vial	Cool, 4°C, methanol or sodium bisulfate	14 days
Groundwater Sample Laboratory Analyses				
Volatile Organic Compounds	EPA 8260	3 x 40 mL VOA vial	Cool, 4°C, HCL (pH < 2), no headspace	14 days
Groundwater Field Parameters				
pH	Probe/EPA 150.1	–	–	–
Specific conductance	Probe/EPA 120.1	–	–	–
Temperature	Probe/EPA 170.1	–	–	–
Dissolved oxygen (DO)	Probe/SM 4500	–	–	–
Oxidation/reduction potential (ORP)	Probe	–	–	–
NOTES: EPA = US Environmental Protection Agency SM = Standard Methods for the Examination of Water and Wastewater HCL = hydrochloric acid				

Table 2

**Field and Laboratory Quality Control Sample Summary
Amy's Cleaners, Bethel Junction Shopping Center, Port Orchard, Washington**

Matrix	QA/QC Analyses	Frequency
Field		
Soil/water	Trip blank	1 per sampling day or cooler when samples are analyzed for VOCs
Soil/water	Field duplicate	1 per 20 project samples (approximately)
Water	Equipment blank	1 per 20 project samples (approximately)
Laboratory		
Soil/water/vapor	Laboratory control sample (LCS)	Every analytical batch
Soil/water/vapor	MS/MSD	1 per 20 project samples
Soil/water/vapor	Method blank	Every analytical batch

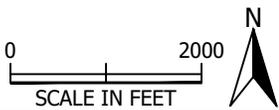
Table 3**Laboratory Deliverables
Amy's Cleaners, Bethel Junction Shopping Center, Port Orchard, Washington****The following deliverables will be required from the laboratory:**

- A transmittal letter and case narrative which includes information about receipt of the samples, the analytical results, and any significant problems in any aspect of sample analysis (e.g., deviation from methodologies or quality control).
- Sample analytical results:
 - Soil results in mg/kg or $\mu\text{g}/\text{kg}$
 - Water results in mg/L or $\mu\text{g}/\text{L}$
 - Vapor results in ppb-v or $\mu\text{g}/\text{m}^3$
 - Method detection limit (MDL) or Method Reporting limit (MRL) for undetected values reported for each analyte on a sample-by-sample basis
 - Date of sample receipt
 - Date of sample preparation/extraction
 - Date of sample analysis
 - Method blank results, including the samples associated with each blank
 - As applicable:
 - Surrogate recovery results, reported as percent recoveries, including actual spike levels
 - Duplicate results
 - Matrix Spike (MS)/ Matrix Spike Duplicate (MSD) results reported as percent recoveries, including actual spike levels
 - Laboratory control sample (LCS) results
- Copies of signed chain-of-custody forms

FIGURES



PROJECT SITE



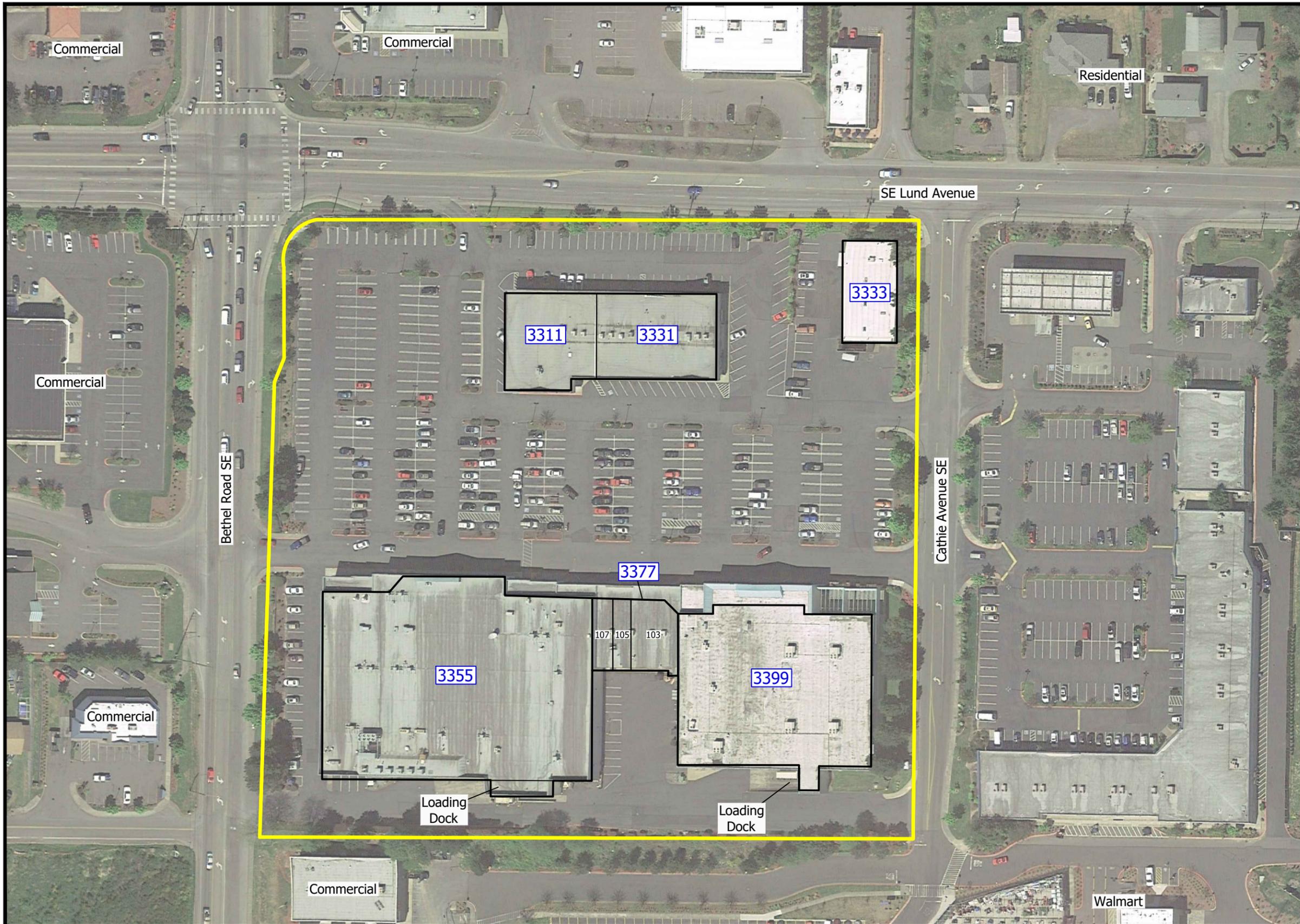
Aerial Photo: June 6, 2016 (Google 2016)



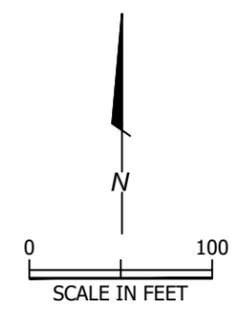
PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

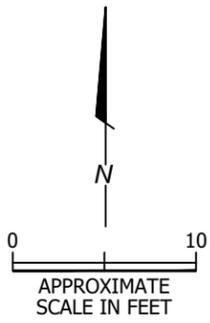
PLATE
1



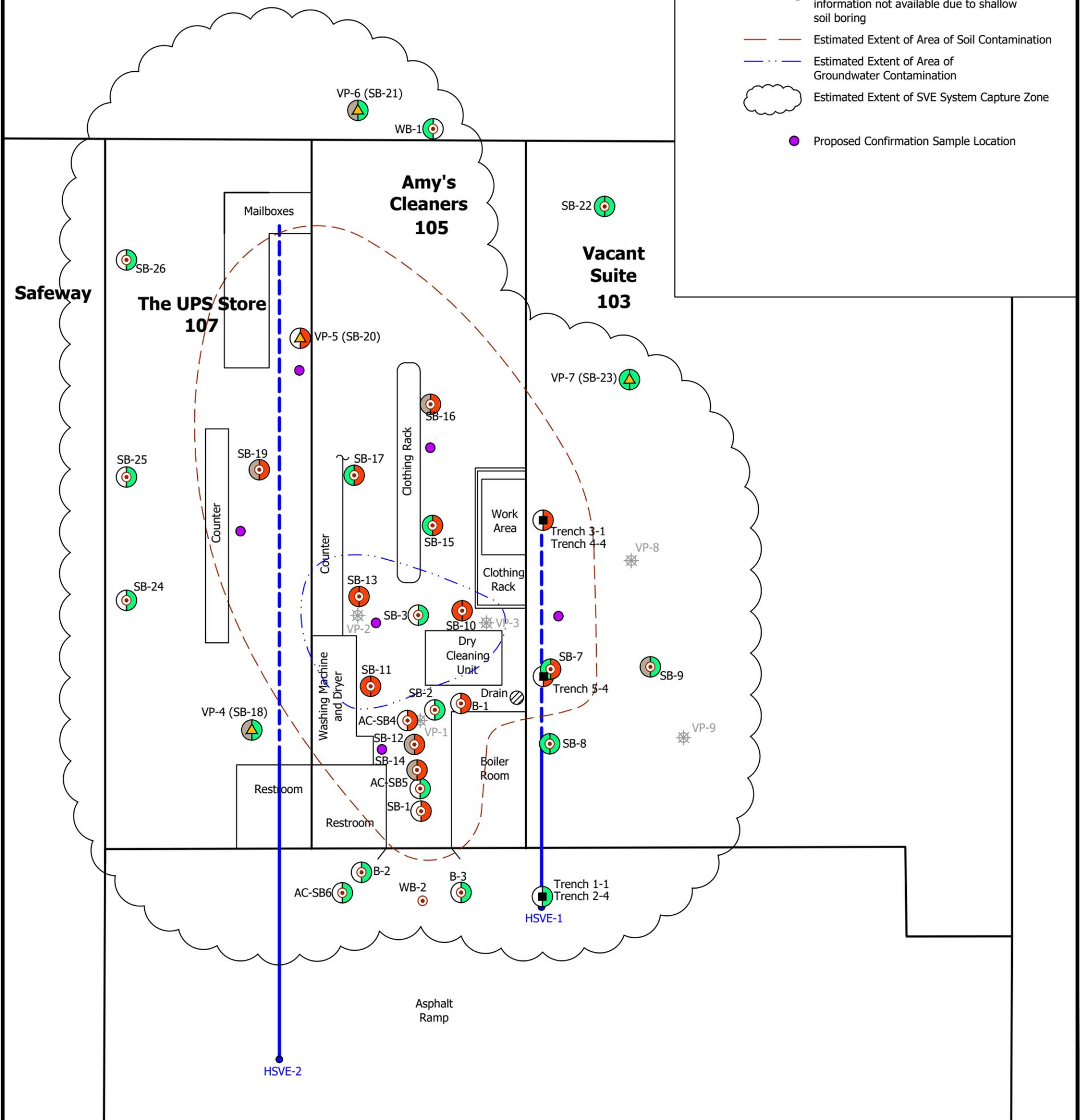
- Explanation**
- Approximate Property Boundary
 - 3333 Building Addresses on Bethel Road SE
 - 103 Building Suite Number



Aerial Photo: May 4, 2013 (Google 2014)



- Explanation**
- SB-7 Soil Boring
 - Trench 1-1 Trench Sample
 - Vapor Probe Location
 - VP-8 Decommissioned Vapor Monitoring Probe
 - HSVE-1 Existing and Planned Horizontal SVE Well
 - Groundwater Contaminant of Concern (COC) Concentration above applicable Cleanup Levels (CULs)
 - Groundwater COC Concentration below applicable CULs or Method Reporting Limits (MRLs)
 - Dry
 - Soil COC Concentration above applicable CULs
 - Soil COC Concentration below applicable CULs or MRLs
 - Soil sample not collected or groundwater information not available due to shallow soil boring
 - Estimated Extent of Area of Soil Contamination
 - Estimated Extent of Area of Groundwater Contamination
 - Estimated Extent of SVE System Capture Zone
 - Proposed Confirmation Sample Location



PES Environmental, Inc.
Engineering & Environmental Services

Area of Contamination and Proposed Confirmation Sampling Locations

Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE
3

APPENDIX A
FIELD FORMS

