PES Environmental, Inc.
Engineering & Environmental Services

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

CLEANUP ACTION REPORT

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

ALS	ALS Environmental
APS	Applied Professional Services, Inc.
bgs	Below Ground Surface
Cascade	Cascade Drilling
CAR	Cleanup Action Report
CAP	Cleanup Action Plan
cDCE	cis-1,2-Dichloroethene
COC	Contaminant of Concern
CUL	Cleanup Level
CVOC	Chlorinated Volatile Organic Compounds
DCU	Dry Cleaning Unit
EBI	EnviroBusiness, Inc.
Ecology	State of Washington Department of Ecology
EPA	United States Environmental Protection Agency
ESN	ESN Northwest
Fremont	Fremont Analytical, Inc.
HSVE	Horizontal Soil Vapor Extraction
in.w.c.	Inches of Water Column
lb/day	Pounds Per Day
lb/yr	Pounds Per Year
mg/kg	Milligrams Per Kilogram
MRL	Method Reporting Limit
MTCA	Model Toxics Control Act
NFA	No Further Action
O&M	Operations and Maintenance
PCE	Tetrachloroethene
PES	PES Environmental, Inc.
PID	Photo-ionization Detector
ppm	Parts Per Million
PQL	Practical Quantitation Limit
PSCAA	Puget Sound Clean Air Agency

LIST OF ACRONYMS AND ABBREVIATIONS (CONT.)

PVC	Polyvinyl Chloride
scfm	Standard cubic feet per minute
SVE	Soil Vapor Extraction
TCE	Trichloroethene
tDCE	Trans-1,2-Dichloroethene
USGS	United States Geological Society
$\mu g/m^3$	Micrograms Per Cubic Meter
VC	Vinyl Chloride
VCP	Voluntary Cleanup Program
VOCs	Volatile Organic Compounds
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

This Cleanup Action Report (CAR) has been prepared to document the cleanup of the Site located at the Bethel Junction Shopping Center in Port Orchard, Washington. The Site is associated with Amy's Cleaners, an active dry cleaning business which started operations in 1989 when the shopping center was built. The original dry cleaner unit (DCU) utilized tetrachloroethene (PCE) as the dry cleaning solvent. Use of PCE stopped in 2002 when the PCE-based DCU was replaced by a new DCU that utilizes a petroleum hydrocarbon solvent.

The previous owner investigated the Site and determined that the subsurface contamination did not present a risk to human health or the environment under current site conditions and placed a restrictive covenant on the property in 2004. The restrictive covenant restricts activities that may result in the release or exposure to the environment of the contaminated soil. This information was submitted to Ecology, which issued a No Further Action letter in 2005.

The current owner conducted additional investigations documenting environmental conditions at the Site and provided a basis for the selection and design of the soil vapor extraction (SVE) cleanup action. These investigations are documented in the *Cleanup Action Plan* (CAP) that was submitted to the Washington Department of Ecology (Ecology) in March 2017, along with an application to enter the Site into Ecology's Voluntary Cleanup Program (VCP). The Site was accepted into the VCP in November 2017.

Consistent with design presented in the CAP, PES completed construction of the SVE cleanup system in 2018 and operated the system from December 2018 through August 2020. Monitoring of the SVE system showed that system functioned as intended and concentrations in the SVE effluent asymptotically declined by 92 percent of total detected chlorinated volatile organic compounds (CVOCs) and by 88 percent of PCE over the operating period.

PES met with the Ecology VCP Project Manager in February 2020 to provide an update on the SVE operations and the results of the initial compliance soil and groundwater samples collected in September 2019. At that time, Ecology confirmed the opinion that the Site had been adequately characterized based on the information presented in the CAP, and that if the operation of the SVE system and subsequent compliance soil, groundwater, and indoor air sampling results established that the Site met applicable MTCA cleanup standards, it would be appropriate to remove the existing restrictive covenant and issue an unrestricted NFA determination.

The SVE system was operated until early August 2020 at which point it was shut down and supplemental compliance soil and indoor air samples were collected. Combined with the September 2019 compliance sampling results, the data indicate that concentrations of CVOCs in soil, groundwater, and indoor air are below applicable cleanup levels (CULs) throughout the Site and that conditions that required the existing environmental covenant at the Site have been successfully addressed and the environmental covenant is no longer required to protect human health or the environmental. Based on the information presented in this report, it is recommended that the existing environmental covenant be removed and Ecology issue a No Further Action determination for the Site.

1.0 INTRODUCTION

PES Environmental, Inc. (PES) has prepared this Cleanup Action Report (CAR) 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; Figure 1). The Site is associated with operations at Amy's Cleaners located within Bethel Junction Shopping Center. Specifically, this report documents the implementation of the final cleanup action consisting of soil vapor extraction (SVE) for the Site. The investigations documenting environmental conditions at the Site and the selection and design of the SVE cleanup action are documented in the *Cleanup Action Plan* (CAP) that was submitted to the Washington Department of Ecology (Ecology) in March 2017 (PES 2017a).

1.1 Definition of "Site"

For the purpose of this CAR, the term "Site" refers to an area where contamination released from the former Amy's Cleaners tenant suite has come to be located, consistent with the definition of "site" or "facility" in the Ecology Model Toxics Control Act (MTCA), Chapter 173-340 of the Washington Administrative Code (WAC). The term "Property" used herein refers to the area within the shopping center boundary that encompasses the Site (Figure 2).

1.2 Purpose

The objective of this CAR is to document the implementation of cleanup actions at the Site, document that these cleanup actions meet the substantive requirements contained in MTCA and its implementing regulations for characterizing and addressing the contamination at the Site, and to request that the existing restrictive covenant be removed and a No Further Action (NFA) determination issued by Ecology.

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: Chris Maurer

1.4 Report Organization

The CAP is organized into 7 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, History, and Regulatory History: Provides a summary of the Site location, history and operations, and Site regulatory history.

Section 3 – Summary of Previous Investigations: Summarizes 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 and summarizes the hydrology and geology of the Site.

Section 4 – Remediation System Installation, Startup, and Operations: Describes the construction, startup, and operations and maintenance (O&M) of the SVE extraction system, including system monitoring results.

Section 5 – Compliance Sampling: Describes the soil, groundwater, and indoor air sampling activities and results used to document the performance of the SVE system.

Section 6 – Conclusions and Recommendations: Presents a brief summary of the site conceptual model, establishes the cleanup levels for the Site, summarizes the nature and extent of soil and groundwater contamination, and makes overall conclusions and recommendations for the Site.

Section 7 – References: Lists the sources of information referenced in the document.

2.0 SITE BACKGROUND, HISTORY, AND REGULATORY HISTORY

This section provides a brief summary of the Site background and history that are described in detail in the CAP (PES 2017a) as well as an updated regulatory history.

2.1 Site Location and Description

The Property is located within a mixed commercial/residential neighborhood, located on approximately 9.24 acres in the eastern part of Port Orchard, Kitsap County, Washington. 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. 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. 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.

2.3 Site 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 by EnviroBusiness, Inc. (EBI) 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. This information was submitted to Ecology, which issued an NFA letter in 2005 (Ecology, 2005). Ecology performed Periodic Reviews in 2010 and 2016 that indicated: (1) the cleanup actions completed at the Site appeared to be protective of human health and the environment, (2) MTCA Method A soil cleanup levels had not been met but that the cleanup action complied with cleanup standards since the long-term integrity of the containment system was ensured, and (3) the Restrictive Covenant continued 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).

Gerrity acquired the Property in 2015 and conducted additional Site investigations and evaluation and design of the additional cleanup actions as summarized in the CAP. The CAP and an application to re-enter the Site into Ecology's Voluntary Cleanup Program (VCP) were submitted to Ecology on March 22, 2017 (PES, 2017b). In the VCP application, Gerrity requested an opinion that the Site characterization was complete and that if the proposed cleanup action was successfully implemented, the existing restrictive covenant could be removed and an unrestricted NFA determination could be made by Ecology. The Site was accepted back into the VCP on November 13, 2017.

As described in Sections 4 and 5, PES completed construction of the SVE cleanup system in 2018 and operated the system from December 2018 through August 2020. PES met with the VCP Project Manager, Chris Maurer, on February 5, 2020, to provide an update on the SVE operations and the results of the initial compliance soil and groundwater samples collected in September 2019. At that time, Mr. Maurer confirmed that in his opinion the Site had been adequately characterized, and that if the operation of the SVE system and subsequent compliance soil, groundwater, and indoor air sampling results established that the Site met applicable MTCA cleanup standards, it would be appropriate to remove the existing restrictive covenant and issue an unrestricted NFA determination.

PES met with Mr. Maurer again on November 12, 2020 to provide an update on the performance of the SVE system and the compliance soil and indoor air sampling conducted after the SVE system was shut down in early August 2020. Based on the information presented, Mr. Maurer confirmed the conclusions reached during the February 2020 meeting regarding the approach to removing the existing restrictive covenant and issuing an unrestricted NFA determination.

3.0 SUMMARY OF PREVIOUS INVESTIGATIONS

This section provides a brief summary of the previous environmental investigations conducted at the Site and the site-specific geological and hydrogeological information. A detailed description of this information is included in the CAP.

3.1 Previous Environmental Investigations

3.1.1 EnviroBusiness, Inc. – Subsurface Investigations

On behalf of the prior owner of the Property, EBI conducted a series of subsurface investigations that were documented in reports previously reviewed by Ecology (EBI, 2000, 2001a, 2001b, and 2003). Results of these investigations detected cis-1,2-dichloroethene (cDCE), trichloroethene (TCE), chlorobenzene, PCE, dichlorobenzene, ethyl benzene, xylenes, and toluene in the soil, with PCE concentrations up to 2.3 milligrams per kilogram (mg/kg), exceeding the then current MTCA Method A cleanup level (CUL) of 0.5 mg/kg. Based on a comparison of the historical data to current MTCA Method A and Method B CULs, only TCE in one sample at a depth of 3 feet below ground surface (bgs) exceeded the current CULs. Groundwater was not encountered in shallow borings (generally less than 12 feet bgs) advanced beneath the dry cleaner suite. A groundwater sample collected from approximately 26 feet bgs on the north side of the suite did not detect PCE or related compounds.

Based on the information contained in these environmental investigations, 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 the restrictive covenant placed on the property in 2004. Ecology concurred with this conclusion and issued an NFA determination in 2005 (Ecology, 2005).

3.1.2 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). The results of this sampling determined that PCE and TCE concentrations exceeded the applicable MTCA Method B soil gas screening levels. 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 roof. After correcting the indoor air samples 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).

3.1.3 PES Environmental Remedial Investigations

PES conducted a series on environmental investigations on behalf of Gerrity between May 2015 and September 2016 that provided the basis for selecting the cleanup action for this Site.

3.1.3.1 Vapor Investigation of Suite #103 – May 2015

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. 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.

3.1.3.2 Phase II Investigation – June/July 2015

The objective of the 2015 Phase II investigation was to further investigate the soil contamination around the DCU and beneath the adjacent Suite #103. This investigation included advancing 11 soil borings using a limited access rig to the maximum depth possible (11 to 16 feet bgs). At least three samples were collected from each boring and analyzed for VOCs. Shallow perched groundwater was unexpectedly encountered in several locations, and temporary wells were installed in all of the soil borings.

The investigation results defined 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 chlorinated VOC (CVOC) concentrations were above the applicable MTCA CULs. The investigation adequately defined the vertical extent of contamination, with the deepest samples containing CVOCs exceeding CULs at depths of 6 feet collected from two locations. None of the 9-foot or deeper samples had CVOCs exceeding CULs and most were below the analytical MRLs.

With respect to the lateral extent of contamination, the previous investigation results appeared to adequately define the extent to the south and southeast 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, the results of prior groundwater investigations suggested a limited area where perched groundwater was present, and an even smaller area where CVOCs exceeded 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 had CVOCs exceeding the applicable CULs. Other locations either had CVOC concentrations in groundwater below CULs or were dry.

The depth of contamination was limited to within the upper 9 feet bgs, and appeared to have impacted an approximately 1- to 2-foot thick shallow perched groundwater zone at varying depths in the locations encountered, generally around the former DCU.

3.1.3.3 Design Investigation – July/September 2016

Based on a review of the previous investigations, 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 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 CVOC 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. Vapor monitoring probes were installed in six of the soil borings to confirm vacuum influence during 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).

CVOCs were detected in only six of the 15 soil samples submitted for analysis during this investigation and only exceeded the applicable CULs at two locations along the eastern edge of Suite #107 (SB-19 and SB-20; Figure 3). CVOCs were not detected above the method reporting limit (MRL) in the two groundwater samples collected from the temporary wells where sufficient water was present to sample. Based on these results, the lateral extent of soil contamination exceeding CULs was defined.

During this investigation, it was determined that a sub-slab horizontal SVE system extraction pipe should 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 slotted extraction pipe (identified as well HSVE-1) within a 4-foot deep trench located along the western edge of Suite #103. This SVE well was terminated at the surface directly south of the edge of the sidewalk behind the suite, inside an 8-inch diameter well monument (Figure 3; PES 2017a).

3.1.3.4 SVE Pilot Test Field Activities – August 2016

An SVE pilot test was conducted utilizing the existing horizontal well HSVE-1 to provide information to assist with the design of the SVE system to remediate CVOCs to concentrations below applicable CULs. Pilot test equipment included a vacuum blower, moisture knockout drum, interconnecting pipe and hoses, a discharge stack, a dilution valve for adjusting flow rate and vacuum at HSVE-1, and several sampling/monitoring ports. Previously installed vapor points were utilized for monitoring vadose zone vacuum and field CVOC concentrations during the pilot test. The vapor points are located radially and at varying distances from HSVE-1 (Figure 4).

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 photo-ionization detector (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 an SVE capture zone. The pilot test provided information regarding vacuum measurements at various distances from SVE well and CVOC concentrations throughout the test that allowed for the

development of a radius of influence and predicted CVOC emission rates. This information was used during the design of the full scale SVE system described in Section 4.

3.2 Site Geology and Hydrogeology

3.2.1 Regional and Site Geology

3.2.1.1 Regional Geology

The Puget Sound Region is underlain by a thick accumulation of Quaternary sediment of alluvial and glacial origin. Glacial till has been mapped at the surface at and near the Property, with recessional outwash present to the east of the Property. Geologic mapping investigations conducted near the Property indicate a glacial till thickness of approximately 40 feet, underlain by advance outwash (approximately 80 feet thick), glacial lacustrine deposits (approximately 80 feet thick), and a thick sequence of older inter-layered sand, gravel, silt, and clay (Welch et al, 2014).

3.2.1.2 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 bgs. The sand locally contained layers of crushed rock, 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 encountered at the base of many of the borings and appeared to be consistent with glacial till.

3.2.2 Regional and Site Hydrogeology

3.2.2.1 Regional Hydrogeology

Four aquifers have been identified beneath the Property that are sandwiched between five low-permeability confining layers (Welch et al, 2014). 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. Near the Property, the groundwater flow direction 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.

A search of Ecology's water well log database found logs for 55 existing water wells located within a 1-mile radius of the Property. The identified public water supply wells are all screened at depths between 261 feet and 1,525 in much deeper water bearing zones. 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. 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.

3.2.2.2 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. 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 REMEDIATION SYSTEM INSTALLATION, STARTUP, AND O&M

This section provides a summary of the remedial action completed at the Site.

4.1 Soil Vapor Extraction System Purpose, Design, and Installation

4.1.1 SVE System Purpose and Design

The SVE system is designed to treat shallow vadose zone soil and perched shallow groundwater containing CVOCs exceeding the MTCA Method A CULs beneath Suites #103, #105, and #107 (Figure 3). As documented in the previous investigations and summarized in Section 3 of this report, CVOCs exceeding the MTCA Method A CULs in soil were limited to PCE and TCE in the upper 6 feet bgs. The design goal for the SVE system was to reduce soil and groundwater concentrations below the Method A CULs if possible[1].

Based on pilot test results, a *Soil Vapor Extraction System Design Memorandum* was prepared and was included as Appendix G of the CAP (PES, 2017a). The design memorandum provided the basis of the SVE design with supporting design calculations, a description of how the system would be constructed, construction drawings, and planned SVE operations. As described in the design memorandum, the extracted vapors discharged directly to the atmosphere at concentrations below regulated levels, and the SVE discharge would be monitored and tested to verify compliance with applicable discharge regulations.

4.1.2 Installation

The soil vapor extraction system consists of two shallow horizontal SVE (HSVE) wells and a remediation equipment enclosure containing SVE mechanical equipment and controls (Figure 4). The SVE wells were installed beneath the Former Hallmark Suite (Suite #103) and The UPS Store Suite (Suite #107) located on either side of Amy's Cleaners Suite (Suite #105). The HSVE wells were installed on either side of the Amy's Cleaners suite to avoid potential short circuiting through backfill for the sanitary sewer line running north/south beneath Amy's Cleaners. In this configuration, HSVE-1 addresses soil east of the sanitary sewer line and HSVE-2 addresses soil to the west of the sanitary line (Figure 4). The HSVE wells were installed in 2015 and 2018, prior to SVE system construction.

- **HSVE-1.** This well was installed in July 2015 beneath Suite #103, is 3.5 feet deep, and consists of 20 feet of 0.020-inch slotted screen beneath the suite and approximately 16 feet of blank 4-inch diameter Schedule 40 polyvinyl chloride (PVC) casing that temporarily terminated 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-foot-deep trench that is backfilled with 2 feet of pea gravel, compacted fill, and 4 inches of concrete.

[1] The discussions in Sections 4 and 5 compare results to the Method A CULs, as this was the original objective for the SVE system. As noted in Section 6, however, the results also allow for the compliance sampling results for soil to be compared to the Method B CUL based on direct contact as an alternative approach to establish compliance with MTCA cleanup standards.

- **HSVE-2.** This well was installed in July 2017 beneath Suite #107 by Directed Technologies Drilling Inc. using a horizontal drilling machine. The well was installed via an entry pit located approximately 40 feet south of the building, and consists of 50 feet of blank 3-inch-diameter Schedule 80 PVC casing, 50 feet of 0.012-inch slotted screen, and a natural filter pack. The well screen was installed at approximately 6 feet bgs. Each end of HSVE-2 was capped, and the southern end was covered with asphalt pavement. A copy of Directed Technologies Drilling Inc.'s well installation report is included in Appendix A.

Within the remediation enclosure, the mechanical equipment includes a well manifold, regenerative blower, moisture knockout, condensate storage, inline mesh filter, vacuum relief valve with inlet air filter, and a discharge stack. The manifold includes a ball valve, which can be used to provide dilution air to the blower as necessary. Prior to entering the manifold, each HSVE leg includes a balancing valve, sampling port, and flow monitoring port. The discharge stack includes a sampling port, flow monitoring port, and temperature gauge. The SVE blower is mounted inside a fan-cooled galvanized steel enclosure to dampen equipment noise. The system includes seven vapor monitoring probes installed to monitor the influence of the SVE system beneath the three suites. The system layout is shown on Figure 4, and the SVE system as-built drawings are included in Appendix A.

The SVE system was constructed by IO Environmental and Infrastructure, Inc. of Redmond, Washington with oversight by PES over an approximate two-week period in October 2018. This included trenching to tie-in the horizontal SVE wells, electrical power connection at an existing shopping center transformer, installing the fenced enclosure, and installing the skid mounted SVE system and discharge stack. Work also included sealing cracks in the concrete floor slab in Suite #103 east of Amy's Cleaners and installing vapor monitoring probes VP-10, VP-11, and VP-12 (Figure 4). Connection to the transformer and electric meter installation was performed by the utility provider, Puget Sound Energy, in November 2018.

4.2 SVE System Startup

The SVE system was started up on December 4, 2018. Startup activities included pre-startup monitoring, equipment shakedown testing, startup, and an approximate one-month startup period. The startup period included equipment startup, well balancing, monitoring of SVE system influence, and sampling.

Directly prior to startup, PES monitored the seven vapor monitoring probes (Figure 4) for background VOC concentrations and soil gas pressure beneath the building slab. Startup of the SVE system included balancing the SVE wells to optimize vacuum, flow rate, and contaminant removal. Individual wells and the discharge stack were monitored for vacuum/pressure, vapor flow rate, and field VOC concentrations. Each of the seven vapor monitoring probes were monitored for vacuum to confirm SVE system coverage, and the blower and discharge stack noise level was monitored. The SVE manifold was modified to improve condensate collection at end of the startup period.

Two vapor samples were collected during the startup period and submitted for laboratory analysis of target CVOCs by the United States Environmental Protection Agency (EPA) Method

TO-15, including PCE, TCE, cDCE, trans-1,2-dichloroethene (tDCE), and vinyl chloride (VC). The samples were collected to evaluate mass removed and to verify compliance with Puget Sound Clean Air Agency (PSCAA) and Ecology discharge regulations. The first sample was collected on December 14, 2018, from the stack sample port. The second sample was collected on December 21, 2018, from the well manifold because it was determined that the automatic vacuum relief valve was adding fresh air to the SVE vapors upstream of the blower and discharge stack.

All of the target CVOCs were detected in startup samples except for VC. PCE and cDCE had the highest concentrations, accounting for about 41 and 53 percent of total detected CVOCs, respectively. TCE and tDCE made up 5 percent of the detected CVOCs. Total CVOC concentration (e.g., the sum of detected CVOCs) was 144 micrograms per cubic meter ($\mu g/m^3$) on December 14 and 318 $\mu g/m^3$ on December 21, 2018. PCE concentrations were 61 and 130 $\mu g/m^3$, and cDCE concentrations were 76 and 170 $\mu g/m^3$, respectively. The difference in concentrations between the two samples is believed to be due to the dilution valve adding air to the SVE vapors upstream of the stack.

Vapor probes were monitored during the startup period to confirm the influence of the SVE system. The SVE legs were balanced to provide approximately equal flow from both wells during the startup period. Startup monitoring data from the SVE system and vapor monitoring probes are included in Tables 1 and 2, and stack sample laboratory results are summarized in Table 3. Copies of validated laboratory reports are included in Appendix B.

4.3 SVE System O&M

O&M activities during the operating period included field inspections, testing, and periodic maintenance of the SVE system. Specific activities included documenting and maintaining the operational status of the SVE equipment, documenting general operating conditions, monitoring and balancing HSVE wells (flow rate, vacuum), measuring field VOC concentrations from HSVE wells and the discharge stack using a PID, stack and HSVE well sampling, and responding to system alarms.

The SVE system operated between December 4, 2018, and August 3, 2020, with an average uptime of 85 percent. The system was shut down periodically for routine maintenance (e.g., filter changeouts, condensate management) and in September 2019 for two days to conduct compliance soil sampling (see Section 5.2). The remaining downtime was related to condensate high level alarms and blower failure. Condensate generation during cool weather months was much higher than anticipated and resulted in a total of 36 days of downtime in 2019 and 2020. In January 2020, the condensate storage capacity was expanded by approximately 35 gallons to a total of 70 gallons, significantly decreasing the number of high level alarms and reducing downtime by 80 percent. The system was restarted following compliance soil sampling and the plan was to continue SVE until the compliance soil sample data could be evaluated. However, in early October 2019, the SVE blower failed due to overheating caused by a plastic trash bag that had blown into the system compound and blocked the cooling fans for the blower's noise enclosure. The system was down for 47 days until a replacement blower could be provided by the manufacturer and installed. PES constructed a protective barrier around the noise enclosure to prevent future damage from blowing debris.

Based on the results of compliance sampling in September 2019, it was determined that the SVE system should continue to operate, and that SVE should be focused on the area surrounding HSVE-2 where soil gas concentrations had been highest (see discussion of individual HSVE well sampling in Section 4.3.2). The system then operated between November 2019 (following blower replacement) and the end of March 2020 on HSVE-2 alone. At that time, it was discovered that the one of the blower cooling fans had failed and it was necessary to restart HSVE-1 and operate both wells in tandem in order to reduce blower operating temperatures. New cooling fans were procured and installed in mid-June 2020 and it was no longer necessary to operate both wells. At that time, HSVE-1 was turned off and the focus of system operation returned back to the HSVE-2 area.

The system was shut down permanently on August 3, 2020, and compliance soil and indoor air samples were collected (see Section 5).

The SVE system operated with a total flow rate of between 28 and 94 standard cubic feet per minute (scfm), averaging 56 scfm. HSVE-1 operated at a flow rate between 4 and 72 scfm, with vacuums of 2.5 to 25 inches of water column (in.w.c.). HSVE-2 operated at a flow rate between 7 and 49 scfm with vacuums of 25 to 73 in.w.c.. The SVE blower operated at an average vacuum of 65 in.w.c.

4.3.1 SVE Stack Sampling

Stack samples were collected periodically through the operating period to assess SVE system performance. The samples were analyzed for the target CVOCs (PCE, TCE, cDCE, tDCE, and VC) by EPA Method TO-15. Following the initial one-month startup period, concentrations in the SVE effluent asymptotically declined by 92 percent of total detected CVOCs and by 88 percent of PCE over the operating period. PCE was the primary detected VOC (between 52 to 67 percent of total CVOC concentration), followed by cDCE (23 to 40 percent), TCE (5 to 10 percent), and tDCE (2 percent of total, when detected). VC was not detected in any samples during the startup and operating period. A summary of stack sample results is shown in Table 3, and copies of laboratory reports and data validation memoranda are included in Appendix B. A chart showing the asymptotic decline of SVE effluent VOC and PCE concentrations is shown on Figure 5.

The VOC removal rates averaged 0.00046 pounds per day (lb/day) and PCE removal rates averaged 0.00022 lb/day over the operation of the system. Approximately 0.167 pounds of VOCs and 0.087 pounds of PCE were estimated to have been removed throughout the lifetime of the SVE system. The SVE system discharge was in compliance with the PSCAA exemption limits (e.g., less than 500 pounds per year [lb/year] of total VOCs), and is below Ecology's *de minimus* discharge of 1.3 lb/year of PCE.

4.3.2 SVE Well Sampling

Samples from the HSVE wells were collected to assess the performance of the individual wells and analyzed for select CVOCs by EPA Method TO-15. Samples from both wells were collected in July and August 2019 to assess soil gas CVOC concentrations prior to conducting soil compliance sampling in September 2019 (see Section 5.2). The low VOC concentrations in

HSVE-1 led to shutting down this well and focusing extraction efforts on HSVE-2. HSVE-2 was sampled again in March 2020, and the results indicated that total CVOC and PCE concentration in HSVE-2 had declined three-fold from July 2019 to March 2020.

HSVE well sample results are summarized in Table 4. Copies of the laboratory analytical reports and data validation memoranda are included in Appendix B.

4.4 Residuals Management and Disposal

Residual wastes generated during construction and operation of the SVE system included non-hazardous soil from installation of HSVE-1 and from SVE system trenching, F002-listed drilling mud from horizontal drilling installation of HSVE-2, and SVE system condensate (non-hazardous wastewater). The residual waste media were sampled and profiled for disposal at approved disposal facilities. Copies of disposal documentation are included in Appendix C.

4.4.1 Drilling Mud Disposal

A total of 1,948 gallons of F002-listed drilling mud were generated during installation of HSVE-2 in 2017 using a horizontal boring machine. The material was solidified and disposed of offsite at the Chemical Waste Management Subtitle C Landfill in Arlington, Oregon.

4.4.2 Construction Related Soil Disposal

A total of approximately 58.3 tons of soil was generated during the 2015 installation of HSVE-1 and during the 2018 pipe trenching activities.

- **HSVE-1:** 7.64 tons of soil was disposed of at Waste Management Subtitle D landfill in Wenatchee, Washington under contained-in disposal approval from Ecology.
- **SVE System Trenching:** 50.64 tons of excavated soil was disposed of as solid waste at Waste Management's Columbia Ridge Subtitle D Landfill, in Arlington, Oregon. Pre-construction soil samples collected along the trench alignment were non-detect for Site contaminants of concern.

4.4.3 SVE System Condensate Disposal

A total of 1,015 gallons of SVE system condensate was disposed of off-site as non-hazardous wastewater by Marine Vacuum Service, Inc. of Seattle, Washington in March 2019 (400 gallons), February 2020 (450 gallons), and September 2020 (165 gallons).

5.0 COMPLIANCE SAMPLING

This section provides a summary of compliance sampling conducted at the Site following startup of the SVE system.

In the discussions below, the compliance sampling results for soil are compared to both the MTCA Method A CULs for unrestricted land use and the Method B CUL based on direct contact. The Method A CUL was the original objective for the SVE system, but as described in more detail in Section 6, compliance sampling results for groundwater and indoor air are such that using the Method B direct contact CUL is appropriate for establishing compliance with MTCA cleanup standards.

5.1 Compliance Soil and Groundwater Sampling – September 2019

Compliance soil and groundwater sampling was conducted in September 2019; PES collected 18 soil samples and two groundwater samples from six borings to evaluate contaminant concentrations in areas where CVOCs had previously exceeded their CULs. The samples were collected and analyzed using methods consistent with those used during the 2015 and 2016 site investigations (PES, 2017a). One soil boring was advanced in the former Hallmark Suite (Suite #103), three soil borings were advanced in the Amy's Cleaners Suite (Suite #105), and two soil borings were advanced in The UPS Store Suite (Suite #107). Groundwater was encountered in two of the six borings, and samples were collected from temporary wells installed in borings SB-27 and SB-29. The soil and groundwater sample locations are shown on Figures 5 and 6.

5.1.1 Soil Borings and Temporary Well Installations

Six soil borings (SB-27 through SB-32) were drilled in September 2019 for the compliance soil and groundwater sampling. Prior to the start of drilling, PES notified the Washington Utility Notification Center of the planned work and requested that underground utilities be marked in the Property vicinity. Applied Professional Services, Inc. (APS), of North Bend, Washington, located the on-Property subsurface utilities around the planned drilling locations. Drilling, temporary well installation, and boring abandonment were completed per Ecology's *Minimum Standards for Construction and Maintenance of Wells* (WAC 173-160). Drilling was conducted by ESN Northwest (ESN). The locations of the borings are shown on Figure 6 and updated hydrogeologic cross section is provided in Figure 7.

Soil borings SB-27, SB-28, SB-29, and SB-30 were advanced on September 24, 2019 using a limited access dolly-mounted direct-push drill rig. Soil boring SB-27 was located in the former Hallmark Suite (Suite #103). Soil borings SB-28, SB-29, and SB-30 were located in the Amy's Dry Cleaner Suite (Suite #105). Soil borings SB-31 and SB-32 were advanced on September 25, 2019 in The UPS Store Suite (Suite #107). Prior to drilling, ESN cored the concrete slab at the locations of each of the borings. The soil borings were hand cleared for utilities to 3 feet bgs, and then advanced to the maximum depth of 15 feet bgs.

The direct-push samples were collected continuously during drilling using 4-foot-long core barrels lined with new acetate sleeves. Soil samples from the upper 3 feet during hand clearing for utilities were collected using the hand auger. The hand auger was decontaminated between

borings. PES observed the samples for lithologic characterization and field-screened the samples for the potential presence of VOCs using a PID. Field observations, including lithologic descriptions, visual and olfactory observations, and PID readings, were recorded on a PES boring log form during drilling. The borings logs are included in Appendix D.

Three soil samples were collected from each boring at 0.5 feet bgs, 3 feet bgs, and 6 feet bgs for laboratory analysis based on previous depths of contamination in those areas. Soil samples were collected using laboratory provided syringe samplers, consistent with the EPA Method 5035 protocols, and placed in laboratory-provided bottles preserved with methanol. Sample bottles were sealed, labeled, and placed in coolers on ice for transport under chain-of-custody protocol to Fremont Analytical, Inc. (Fremont) for analysis of VOCs using EPA Method 8260. A total of eighteen soil samples were submitted for analysis.

Groundwater samples were collected from temporary wells in the two borings where groundwater was encountered. Upon drilling to the maximum depth of 15 feet bgs, the soil borings sat open for 30 minutes to one hour to allow accumulation of water. In borings where water accumulated, a temporary well was installed in the boring. Groundwater was only encountered in soil borings SB-27 at 9.4 feet bgs and SB-29 at 13.2 feet bgs. Temporary wells were constructed in borings SB-27 and SB-29 with nominal 0.75-inch-diameter, flush-threaded Schedule 40 PVC and a 10-foot-long well screen with 0.020-inch wide slots. Minimal well development was possible due to the low recharge rate and the temporary wells going dry during purging. Groundwater samples were collected using low flow sampling methods consistent with standard procedures. Groundwater samples were collected and submitted to Fremont for analysis of VOCs by EPA Method 8260.

Following sample collection, temporary wells were removed, and all soil borings were abandoned by filling with bentonite and capping at the surface with concrete. The boring logs are provided in Appendix D.

5.1.2 Data Validation Review

PES conducted a data quality review of the vapor intrusion analytical results. No data were qualified or rejected based on the data validation review, and PES judged all data acceptable for use. The data validation memorandum is included in Appendix B.

5.1.3 Soil Results

Contaminants of concern (COCs) were detected above the MRL in twelve of the eighteen soil samples collected during the compliance sampling investigation. PCE was detected above the MTCA Method A CUL of 0.05 mg/kg in four samples, including SB-28 at 0.0911 mg/kg (3 feet bgs), SB-29 at 0.141 mg/kg (0.5 feet bgs), and SB-30 at 0.0830 mg/kg (0.5 feet bgs) and at 0.0570 mg/kg (6 feet bgs); all of these results were more than two orders of magnitude below the MTCA Method B CUL of 480 mg/kg. TCE was detected above the MTCA Method A CUL of 0.03 mg/kg in four samples, including SB-28 at 0.114 mg/kg (3 feet bgs), and in SB-30 at 0.109 mg/kg (3 feet bgs) and at 0.385 mg/kg (6 feet bgs); these results were more than an order of magnitude below the MTCA Method B CUL of 12 mg/kg. The remaining detections were

below their respective CULs. The laboratory reports are included in Appendix B. Soil analytical results are presented in Table 6.

5.1.4 Groundwater Results

Sufficient groundwater to collect samples was only encountered in two of the six locations and COCs were only detected above the MRL in one of the samples collected during the compliance sampling investigation. The only COC above the MRL was cDCE in the sample collected from SB-29 that was detected at a concentration of 7.66 µg/L, well below the MTCA Method A CUL of 16 µg/L. The laboratory data report is included in Appendix B. Groundwater analytical results are presented on Table 7.

5.1.5 Summary and Discussion

The purpose of the compliance soil and groundwater sampling was to evaluate whether the operation of the SVE system had reduced contaminant concentrations in areas where CVOCs had previously exceeded their CULs.

5.1.5.1 Soil

The compliance soil sampling in 2019 indicated that PCE or TCE concentrations had dropped below their respective MTCA Method A CULs in soil samples collected from the three borings beneath the adjacent Suites #103 and #107. While there was a significant reduction in soil concentrations over the 10 months of SVE system operation, PCE and TCE concentrations still exceeded their respective MTCA Method A CULs in five samples at three locations beneath the former dry cleaner (Suite #105). All PCE and TCE results were one to two orders of magnitude below their respective MTCA Method B CULs of 480 mg/kg and 12 mg/kg. Soil sampling conducted in 2015 and 2016 prior to SVE operation included 22 samples that exceeded the PCE CUL (0.05 mg/kg) and 11 samples that exceeded the TCE CUL (0.03 mg/kg). After 10 months of SVE, only four samples exceeded the PCE CUL, and three samples exceeded the TCE CUL. All of the detections, both pre-SVE and in 2019, were within the upper 0.5 to 6 feet bgs.

Before SVE operations began, the average and maximum concentrations (in samples exceeding the MTCA Method A CUL) were 4 and 13 times the CUL for PCE, and 8 and 22 times the CUL for TCE, respectively. After 10 months of SVE operation, the average and maximum concentration dropped to 2 and 3 times the CUL for PCE, and 7 and 13 times the CUL for TCE, respectively. While the overall declines were significant and the lateral extent of the contamination had decreased to a narrow area beneath the dry cleaner suite (Suite #105), it was decided to restart the SVE system in November 2019 following blower replacement (see Section 4.3), focusing on HSVE-2 located west of the sanitary sewer alignment, to facilitate additional mass removal and achieve further reductions on COC concentrations were possible.

5.1.5.2 Groundwater

The confirmation groundwater sampling in 2019 showed that none of the CVOCs exceeded their respective MTCA Method A CULs (Figure 8). Groundwater had exceeded the cDCE and VC CULs in three samples beneath the dry cleaner suite (Suite #105) in 2015 and 2016. After 10 months of SVE system operation, all of the results were below MRLs, except for cDCE in

one sample at a concentration less than half of the CUL. The primary soil CVOCs, PCE and TCE, were not detected at all in groundwater in 2015/2016 or in 2019. As described in the CAP (PES, 2017a), perched groundwater has been encountered intermittently in limited areas and at depths between 8 to 14 feet beneath the dry cleaner suite (Suite #105), and observations during the 2019 confirmation sampling are consistent with these findings. Since soil contamination is limited to the upper 6 feet bgs and primarily the upper 0.5 to 3 feet bgs, and since PCE and TCE have not been detected in groundwater, there appears to be little risk of recurring impacts of perched groundwater.

5.2 Compliance Soil Sampling – August 2020

Additional compliance soil sampling was conducted in August 2020. PES collected 5 soil samples to evaluate contaminant concentrations in areas where residual CVOCs had exceeded their CULs during the September 2019 compliance soil sampling described above. The samples were collected and analyzed using the methods utilized in the 2015 and 2016 investigations (PES, 2017a). Three soil borings (SB-33, SB-34, and SB-35) were advanced adjacent to previous soil borings SB-28, SB-29, and SB-30 in the Amy's Dry Cleaner Suite (Suite #105). The soil sampling locations are shown on Figure 6.

5.2.1 Soil Borings

Three soil borings (SB-33 through SB-35) were advanced in August 2020. Prior to the start of drilling, PES notified the Washington Utility Notification Center of the planned work and requested that underground utilities be marked in the Property vicinity. APS located the on-Property subsurface utilities around the planned drilling locations. Drilling, temporary well installation, and boring abandonment were completed per WAC 173-160. Drilling was conducted by Cascade Drilling (Cascade), of Woodinville, Washington. The locations of the borings are shown on Figure 6.

Soil borings SB-33, SB-34, and SB-35 were advanced on August 7, 2020, in the Amy's Cleaners Suite (Suite #105) using a limited access dolly-mounted direct-push drill rig. Prior to drilling, Cascade cored the concrete slab at the locations of each of the borings. Soil boring SB-33 was hand-cleared to 2.5 feet bgs, then drilled to the maximum depth of 6 feet bgs. Soil boring SB-34 was advanced to 1-foot bgs with a hand auger. Soil boring SB-35 was advanced to 3 feet bgs with a hand auger.

The direct-push samples were collected during drilling using 4-foot-long core barrel lined with a new acetate sleeve. Soil samples collected during hand clearing for utilities were collected with a hand auger. The hand auger was decontaminated between borings. PES observed the samples for lithologic characterization and field-screened the samples for the potential presence of VOCs using a PID. Field observations, including lithologic descriptions, visual and olfactory observations, and PID readings, were recorded on a PES boring log form during drilling. The boring logs are included in Appendix D.

Soil samples were collected from SB-33 at 0.5 feet bgs, 3 feet bgs, and 6 feet bgs, from SB-34 at 0.5 feet bgs, and from SB-35 at 3 feet bgs. Samples were collected based on previous depths of contamination in those areas (e.g., in adjacent borings SB-30, SB-29, and SB-28, respectively).

Soil samples were collected using syringe samplers, consistent with the EPA Method 5035 protocols, and placed in laboratory-provided bottles preserved with methanol. Sample bottles were sealed, labeled, and placed in coolers on ice for transport under chain-of-custody protocol to Fremont for analysis of VOCs using EPA Method 8260. A total of five soil samples were submitted for analysis.

Following sample collection, the soil borings were abandoned by filling with bentonite and capping at the surface with concrete. The boring logs are provided in Appendix D.

5.2.2 Data Validation Review

PES conducted a data quality review of the vapor intrusion analytical results. No data were qualified or rejected based on the data validation review, and PES judged all data acceptable for use. The data validation memorandum is included in Appendix B.

5.2.3 Soil Results

CVOCs were detected above the MRL in four of the five soil samples collected during this investigation. PCE was detected above the MTCA Method A CUL of 0.05 mg/kg in two samples including SB-33 at 0.153 mg/kg (0.5 feet bgs), and in SB-34 at 0.0954 mg/kg (0.5 feet bgs); as with the initial compliance sampling, all of these results were more than two orders of magnitude below the MTCA Method B CUL of 480 mg/kg. TCE was detected above the MTCA Method A CUL of 0.03 mg/kg in two samples including SB-33 at 0.0518 mg/kg (3 feet bgs), and in SB-35 at 0.0598 mg/kg (3 feet bgs); all of these results were more than two orders of magnitude below the MTCA Method B CUL of 12 mg/kg. The remaining detections were below their respective Method A or B CULs. The laboratory data report is included in Appendix B. Soil analytical results are presented in Table 6.

5.2.4 Summary and Discussion

The purpose of the August 2020 compliance soil sampling was to evaluate contaminant concentrations in areas where CVOCs had exceeded their CULs in September 2019. There was notable improvement in soil concentrations over the 8 months of additional SVE system operation following the September 2019 sampling, with PCE or TCE concentrations declining further but remaining just above their respective MTCA Method A CULs at the three locations beneath the former dry cleaner. As noted above, PCE and TCE concentrations were more than two orders of magnitude below the Method B direct contact CUL. In 2019, the highest TCE concentration was at a depth of 6 feet bgs, but in 2020, the adjacent 6 feet bgs confirmation sample was below the practical quantitation limit (PQL). The remaining exceedances for PCE and TCE were within the upper 0.5 to 3 feet bgs, and the number of samples that exceeded the Method A CUL dropped from 7 samples in 2019 to 5 samples in 2020. The average and maximum concentrations of PCE has remained at approximately 2 and 3 times the Method A CUL, respectively. The drop in TCE concentrations, however, was much more notable. The average and maximum TCE concentrations have been reduced from 7 and 13 times the Method A CUL in 2019 to less than 2 times the Method A CUL in 2020. With soil impacts now limited to the upper 3 feet bgs and limited to a relatively small area beneath the dry cleaner suite (Suite #105), there appears to be an even lower risk of recurring impact to perched groundwater.

Indoor air sampling conducted in 2015 and in September 2020 after SVE system shut-down (see Section 5.2) document that the very small area of impacted soil does not pose a vapor intrusion risk to indoor air.

5.3 Vapor Intrusion Evaluation – March and September 2020

Indoor air samples were collected by PES in 2020 to confirm that concentrations of COCs in indoor air were below applicable CULs, consistent with the 2015 results documented in Section 4.2 of the CAP (PES, 2017a). Two rounds of indoor air samples were collected: (1) in March 2020 when the SVE system was operating, and (2) a second round in September 2020 after the SVE system was offline for approximately 1 month. All air samples were collected consistent with the applicable Ecology vapor intrusion guidance. Each air sample was collected over an 8-hour time period using a 6-liter Summa canister. The air samples were submitted to ALS Environmental (ALS) in Simi Valley, California for analysis of target VOCs using Method TO-15. The indoor and ambient air sample locations are shown on Figure 4.

5.3.1 Indoor and Ambient Air Sampling

One indoor air sample (Indoor AS-030420 abbreviated as AA-1) was collected on March 4, 2020, while the SVE system was operating to provide insight to the baseline concentrations of target CVOCs in the indoor air inside the Amy's Cleaners Suite (Suite #105) without influence from soil vapors. Sample AA-1 was collected near the dry cleaning unit.

After the SVE system was offline, one indoor air sample (Indoor-Air-090220, abbreviated as IA-2) and one ambient air sample (Ambient-Air-090220, abbreviated as AA-1) were collected on September 2, 2020. The samples were collected approximately 30 days after the SVE system had been shut-off. Sample IA-2 was collected in approximately the same location as IA-1, and sample AA-1 was collected on the roof of the former Hallmark Suite (Suite #103).

5.3.2 Data Validation Review

PES conducted a data quality review of the vapor intrusion analytical results. No data were qualified or rejected based on the data validation review, and PES judged all data acceptable for use. The data validation memorandum is included in Appendix C.

5.3.3 Results

PCE was detected in both indoor air samples including IA-1 at 4.1 $\mu g/m^3$ and in IA-2 at 2.4 $\mu g/m^3$. Both results were well below the MTCA Method B CUL of 9.6 $\mu g/m^3$ (consistent with the 2015 vapor intrusion sampling). The remaining VOCs were not detected at or above laboratory MRLs in both indoor air samples. VOCs were not detected at or above the MRL in AA-2.

Vapor intrusion sample results are summarized in Table 5. Copies of the laboratory analytical reports and data validation memoranda are included in Appendix B.

5.3.4 Summary of Vapor Intrusion Evaluation

The vapor intrusion investigation in 2020 confirmed the results in 2015 and shows that indoor air concentrations of CVOCs continue to remain below applicable cleanup levels, both when the SVE system is operational and when it is offline.

5.4 Compliance Sampling Residuals

Approximately twenty gallons of residual soil and two gallons of purging and decontamination water were generated during compliance sampling in September 2019 and August 2020. The soil and water is currently stored on-site pending profiling and disposal.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This first part of this section provides: (1) a brief update on the Conceptual Site Model (CSM) described in detail in the CAP, (2) updates the nature and extent of contamination based on the post-SVE confirmation sampling described in Section 5, and (3) updates the CULs that are applicable to the Site. Based on this information, overall conclusions regarding the effectiveness of the cleanup action are reached and recommendations regarding the final status of the Site are made.

6.1 Summary of Conceptual Site Model

The CSM presented in the CAP identified the potential or suspected sources of hazardous substances, types of contaminants, potentially contaminated media, and actual or potential exposure pathways and receptors. Based on the information available at that time, two primary exposure pathways were identified:

- **Soil:** The potential for human receptors (site worker) to be exposed to contaminants present in the soil via direct contact (and potential incidental ingestion) during subsurface construction activities; and

- **Groundwater:** 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.

The existing environmental covenant restricted activities that could have resulted in exposure of potential receptors via these pathways. Other potential exposure pathways that were excluded from consideration were as follows:

- Ingestion of groundwater was determined not to be a current or potential future exposure pathway due the non-potability of the shallow, perched groundwater at the Property exists in discontinuous lenses that are not laterally extensive;

- Indoor air sampling indicated that vapor intrusion was not occurring and there did not appear to be the potential for indoor workers or customers in a commercial setting to be exposed to volatile COCs at concentrations exceeding the risk-based cleanup levels through inhalation of vapors originating from contaminated media beneath the building; and

- Ecological exposure to the soil was determined not to be a complete exposure pathway and the Site meets the conditions for a primary exclusion as stated in WAC 173-340-7491(1)(c)(i).

The data collected subsequent to submittal of the CAP (and reported in Section 5) confirms this CSM and the potentially applicable exposure pathways.

6.2 Nature and Extent of Contamination

This section presents an update of the Site soil and groundwater data conditions following the operation of the SVE system described in Section 4 and the post-SVE compliance sampling discussed in Section 5. This discussion is focused on PCE and the degradation products associated with the historical dry-cleaning operations and previously detected above potentially applicable CULs. Specifically, the COCs for the Site are PCE, TCE, cis-1,2-DCE, and VC.

6.2.1 Cleanup Levels

MTCA provides several methods for determining cleanup levels including Method A (look-up 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 and is not applicable to this Site. 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, were initially selected for the Site and served as the cleanup objective for the SVE system. As described in Section 5.2 and 5.3, compliance sampling confirmed that concentrations of COCs in groundwater had been reduced to below the Method A CULs in all samples.

Regarding soil, the MTCA Method A CULs for PCE and TCE in soil are based on the protection of groundwater. However, the results of the September 2019 compliance groundwater samples collected after 10 months of SVE system operation were below MRLs except cDCE in one sample at less than half of the applicable Method B CUL and PCE and TCE not detected at all in groundwater. Furthermore, the indoor air compliance sampling confirmed that all COCs are below their Method B indoor air CUL, and therefore soil does not present a significant vapor intrusion risk at the Site. Based on these groundwater and indoor air results, soil conditions at the Site are protective of groundwater and vapor intrusion pathway. Therefore, the soil cleanup selected for the Site is the MTCA Method B based on the direct contact (ingestion) exposure pathway. The soil compliance sampling documented significant reductions in concentrations of PCE and TCE throughout the treatment area and the shrinking of the lateral extent of the residual contamination beneath the dry cleaners, and all concentrations of PCE and TCE are more than two orders of magnitude below their respective Method B CUL.

Based on the above, the final CULs for soil and groundwater at the Site are as follows:

- **Soil CULs:** The following MTCA Method B CULs for soil are protective of direct contact:
    - PCE – 480 mg/kg; and
    - TCE – 12 mg/kg
- **Groundwater CULs:** 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); and
    - Vinyl Chloride – 0.2 µg/L

6.2.2 Soil Quality

The previous investigations have adequately defined the vertical and lateral extent of contamination at the Site. As data shown on Figure 6 indicate, all of the analytical results of post-SVE compliance soil samples collected in the treatment area confirm that PCE and TCE concentrations are two to three orders of magnitude below the soil CULs defined above.

6.2.3 Groundwater Quality

Previous investigations have identified a limited area where shallow perched groundwater is present in discontinuous lenses. Within this limited area, the results of compliance groundwater sampling (presented on Figure 8) document that all COCs are present at concentrations below the applicable CULs or not detected above the MRL.

6.3 Conclusions

This report documents the construction and operation of the SVE extraction system at the Site. The SVE system was designed to remove contaminant mass from the subsurface, reduce contaminant concentrations in soil and groundwater to below the applicable CULs, and restore Site conditions to the point where the existing environmental covenant can be safely removed. As described above, these three objectives have all been met. Specifically:

- The SVE system extracted approximately 0.167 pounds of CVOCs over the 18 months of SVE system operations, total CVOC concentrations in the SVE effluent declined by 92 percent of total detected CVOCs, and SVE effluent CVOC and PCE concentrations declined asymptotically as shown on Figure 5;
- Soil and groundwater concentrations are below their applicable CULs throughout the Site and, as a result, Site soil and groundwater do not present a risk via the potential exposure pathway of direct contact (ingestion);
- Indoor air sampling conducted after the SVE system was shut down confirmed that, consistent with pre-SVE sampling results, COCs were below the applicable CULs in indoor air and the site does not represent a significant vapor intrusion risk; and

- Conditions that required the existing environmental covenant at the Site have been successfully addressed and the environmental covenant is no longer required to protect human health or the environmental.

6.4 Recommendations

Based on the information presented in this report, PES recommends that:

- The existing environmental covenant be removed as provided for in Section 8 of the covenant and using the procedures outlined in Ecology Publication 15-09-057 entitled *Toxics Cleanup Program Procedure 440C: Releasing Environmental Covenants under the Model Toxics Control Act* (Ecology, 2016); and

- Ecology issue a No Further Action determination for the Site.

7.0 REFERENCES

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TABLES

Table 1
SVE System Operation and Maintenance Data
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Date	Time	System Run Time (days)	System Down Time (days)	Blower Hours	Operating Efficiency	HSVE-1 Vacuum (in.wc)	HSVE-1 Flow (scfm)	HSVE-1 PID (ppm)	HSVE-2 Vacuum (in.wc)	HSVE-2 Flow (scfm)	HSVE-2 PID (ppm)	Discharge Stack Flow (scfm)	Discharge Stack PID (ppm)	Blower Vac. (in.wc.)	Sample	Lab Data VOCs (ug/m3)	Lab Data PCE (ug/m3)	Removal Rate VOC (lb/day)	Removal Rate PCE (lb/day)	Cumulative Mass Removed VOCs (lbs)	Cumulative Mass Removed PCE (lbs)	Notes
12/4/18	10:00	0.0	--	0	--	0	--	--	0	--	--	--	--	--	--	--	--	--	--	--	--	Initial startup and balancing.
12/4/18	11:00	0.2	--	4	--	25	40	0.2	25	10	14.7	81	1.4	40	--	--	--	--	--	--	--	Initial startup and balancing.
12/4/18	13:20	0.3	--	6	--	25	30	--	25	11	--	80	--	40	--	--	--	--	--	--	--	Initial startup and balancing
12/6/18	10:30	0.4	--	9	--	4.5	9	0.4	47	7	2.2	65	0.9	44	--	--	--	--	--	--	--	Startup monitoring.
12/10/18	10:45	4.4	--	105	73%	4.0	10	0.0	38	9	0.5	35	0.0	52	--	--	--	--	--	--	--	Startup monitoring.
12/14/18	8:30	8.3	--	199	83%	5.5	11	0.0	45	9	0.0	30	0.0	50	Stack	144	61	0.00038	0.00016	0.003	0.001	Collect first stack sample.
12/21/18	8:45	15.0	--	359	88%	2.5	4	0.1	50	9	0.1	87	0.1	54	Manifold	318	130	0.00248	0.00101	0.013	0.005	Collect sample from manifold as vacuum relief valve is open.
1/10/19	10:30	35.0	--	840	95%	5	11	0.2	68	17	0.2	28	1.8	76	--	--	--	--	--	--	--	Raise manifold and replumb. Tighten relief valve.
1/16/19	12:00	39.0	2.0	936	91%	--	--	--	--	--	--	--	--	--	--	-	--	--	--	--	--	System down on high level alarm. Drain and Restart.
1/21/19	13:30	42.3	1.8	1,014	88%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
1/24/19	10:40	45.0	0.2	1,081	88%	2.5	8	0.2	73	36	--	44	0.2	81	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
1/28/19	6:00	46.9	2.1	1,126	85%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
2/6/19	9:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
2/14/19	13:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
2/19/19	9:45	60.3	8.6	1,448	78%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
2/22/19	10:50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
2/26/19	6:00	64.8	2.5	1,555	77%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/1/19	9:30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/5/19	0:00	72.4	0.1	1,738	80%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/8/19	10:50	75.5	--	1,811	80%	3.5	14	--	62	19		43	0	80	Stack	50	26	0.00019	0.00010	0.094	0.039	Collect stack sample.
3/13/19	9:45	77.3	3.2	1,854	78%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/18/19	13:00	81.1	1.1	1,947	78%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/22/19	10:45	85.0	--	2,041	79%	3.4	17	0.4	60	39	--	56	0.3	80	--	--	--	--	--	--	--	Condensate disposal - MarVac.
3/27/19	10:30	88.7	1.4	2,128	78%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
3/29/19	9:00	90.7	--	2,176	79%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Transfer condensate.
4/2/19	9:00	94.6	--	2,271	80%	4.5	15	--	52	15	--	30	--	74	--	--	--	--	--	--	--	Raised flow rate in HSVE-1.
4/5/19	8:15	97.5	--	2,340	80%	--	--	--	--	--	--	--	--	76	--	--	--	--	--	--	--	Transfer condensate.
4/11/19	10:00	102.3	1.3	2,454	80%	6.0	--	--	--	--	--	--	--	70	--	--	--	--	--	--	--	System down on high level alarm. Drain and Restart.
4/16/19	11:00	106.9	--	2,566	80%	12.5	44	0.0	51	21	0.0	69	0.0	62	Stack	39	21	0.00025	0.00013	0.101	0.043	Collect stack sample.
4/19/19	12:00	109.9	--	2,637	81%	8.5	30	--	58	27	--	57	--	71	--	--	--	--	--	--	--	Pump 1 gal condensate from HSVE-2.
4/23/19	11:00	113.7	--	2,729	81%	7.0	39	--	60	21	--	61	--	75	--	--	--	--	--	--	--	Raised HSVE-1 flow rate.
4/29/19	11:00	119.7	--	2,873	82%	17.0	68	--	37	22	--	90	--	54	--	--	--	--	--	--	--	Transfer condensate.
5/6/19	9:45	126.7	--	3,040	83%	5.0	18	--	60	23	--	41	--	72	--	--	--	--	--	--	--	Throttled HSVE-1 to 1,500 fpm.
5/7/19	15:05	127.9	--	3,069	83%	11.0	36	--	46	20	--	56	--	61	--	--	--	--	--	--	--	Adjust HSVE-1.
5/23/19	12:50	143.8	--	3,450	85%	11.0	28	--	50	22	--	50	1.0	60	Stack	42	28	0.00019	0.00013	0.109	0.047	Replaced 2-inch hoses and piping with 3-inch.
6/25/19	10:30	176.6	--	4,238	87%	8.0	27	0.3	50	25	0.3	52	0.6	60	Stack	39	25	0.00018	0.00012	0.115	0.051	Collect stack sample.
7/30/19	12:20	211.7	--	5,080	89%	10.5	33	0.2	50	23	0.1	56	0.1	60	HSVE-1 and HSVE -2	42	28	0.00021	0.00014	0.122	0.056	Collect HSVE well samples. Used flow weighted average to estimate stack concentration.
8/27/19	11:00	239.6	--	5,750	90%	6.0	17	--	58	28	--	46	--	67	HSVE-1, HSVE-2, and Stack	45	28	0.00018	0.00011	0.126	0.059	Collect HSVE well samples and stack sample.
9/23/19	13:38	266.7	--	6,401	91%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Shut off system for soil sampling.
9/25/19	11:19	266.7	2.0	6,401	90%	x	--	--	x	--	--	--	--	x	--	x	x	x	x	x	x	Restarted system.
10/24/19	11:10	281.4	14.3	6,754	87%	x	--	--	x	--	--	--	--	x	--	x	x	x	x	x	x	System down - blower blown upon restart.
10/29/19	8:00	281.4	5.0	6,754	86%	x	--	--	x	--	--	--	--	x	--	x	x	x	x	x	x	Troubleshoot blower with electrician - blower damaged.
11/8/19	11:00	281.4	10.0	6,754	83%	x	--	--	x	--	--	--	--	x	--	x	x	x	x	x	x	Electrician install new blower - blower miswired and damaged.
11/26/19	11:05	281.5	18.0	6,755	79%	--	--	--	70	27	--	--	--	74	--	--	--	--	--	--	--	Electrician install new blower. Close HSVE-1.
12/3/19	9:35	288.3	--	6,920	79%	--	--	--	70	32	--	32	--	74	--	--	--	--	--	--	--	Adjusted blower vacuum relief valve to open.

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SVE System Operation and Maintenance Data
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Date	Time	System Run Time (days)	System Down Time (days)	Blower Hours	Operating Efficiency	HSVE-1 Vacuum (in.wc)	HSVE-1 Flow (scfm)	HSVE-1 PID (ppm)	HSVE-2 Vacuum (in.wc)	HSVE-2 Flow (scfm)	HSVE-2 PID (ppm)	Discharge Stack Flow (scfm)	Discharge Stack PID (ppm)	Blower Vac. (in.wc.)	Sample	Lab Data VOCs (ug/m3)	Lab Data PCE (ug/m3)	Removal Rate VOC (lb/day)	Removal Rate PCE (lb/day)	Cumulative Mass Removed VOCs (lbs)	Cumulative Mass Removed PCE (lbs)	Notes
12/13/19	9:45	298.3	--	7,160	80%	--	--	--	65	31	--	54	--	72	--	--	--	--	--	--	--	Replaced vacuum relief valve with gate valve. Drain condensate.
12/24/19	9:30	309.3	--	7,422	80%	--	--	--	66	36	--	48	--	74	--	--	--	--	--	--	--	Drain condensate.
1/3/20	9:30	318.5	0.7	7,645	81%	--	--	--	68	37	0.1	45	--	75	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
1/9/20	13:45	324.5	--	7,787	81%	--	--	--	--	--	--	--	--	74	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
1/17/20	9:00	328.3	4.2	7,879	80%	--	--	--	66	37	--	52	--	73	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart. Install condensate overflow drum.
1/27/20	9:30	336.3	2.0	8,070	80%	--	--	--	69	42	--	51	--	73	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
2/4/20	11:00	340.9	3.3	8,182	80%	--	--	--	66	35	--	55	--	74	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
2/10/20	9:00	346.8	--	8,323	80%	--	--	--	66	31	--	55	--	74	--	--	--	--	--	--	--	Condensate disposal - MarVac.
2/18/20	10:30	353.5	1.3	8,485	80%	--	--	--	64	39	--	54	--	72	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
2/21/20	9:00	356.5	--	8,555	80%	--	--	--	65	49	--	49	--	72	--	--	--	--	--	--	--	Drained condensate.
2/25/20	9:30	360.5	--	8,651	80%	--	--	--	66	43	--	46	--	74	--	--	--	--	--	--	--	Drained condensate.
2/28/20	12:30	363.6	--	8,726	81%	--	--	--	64	44	--	46	--	72	--	--	--	--	--	--	--	Drained condensate.
3/4/20	6:10	368.3	--	8,839	81%	--	--	--	63	38	--	50	--	72	Indoor air and HSVE-2	26	16	0.00011	0.00007	0.145	0.071	Collect HSVE-2 sample and indoor air sample inside Amy's Dry Cleaner.
3/12/20	12:00	375.9	0.4	9,021	81%	--	--	--	64	42	--	47	--	73	--	--	--	--	--	--	--	System down on high level alarm. Drain and restart.
3/19/20	13:30	382.9	--	9,190	81%	--	--	--	69	45	--	45	--	75	--	--	--	--	--	--	--	Drained condensate. Broken cooling fan.
3/25/20	9:25	388.8	--	9,330	81%	--	--	--	65	42	--	47	--	74	--	--	--	--	--	--	--	Drained condensate.
3/31/20	18:00	394.3	--	9,462	82%	23.0	69	--	27	21	--	90	--	35	--	--	--	--	--	--	--	Change inlet filter. Open HSVE-1 and close vacuum relief.
4/14/20	10:15	407.9	--	9,790	82%	21.0	72	--	26	18	--	90	--	38	--	--	--	--	--	--	--	Drained condensate.
5/11/20	9:00	435.8	--	10,460	83%	20.0	66	--	26	24	--	90	--	38	--	--	--	--	--	--	--	Change inlet filter.
6/15/20	10:20	469.9	--	11,277	84%	22.0	72	--	29	21	--	94	--	38	--	--	--	--	--	--	--	Replace broken cooling fan. Change inlet filter. Shut off HSVE-1 and adjust vacuum relief.
8/3/20	12:00	519.0	--	12,455	85%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.171	0.087	Shut off system. Estimated culumlative mass removed.
9/2/20	10:20	--	--	x	x	x	--	--	x	--	--	--	--	x	Indoor and Ambient air	x	x	x	x	x	x	Condensate disposal - MarVac. Air sample inside Amy's Dry Cleaner and ambient air sample on roof.

Notes:
1. Operating efficiency based off blower hours
2. Samples analyzed using EPA Method TO-15

-- = Not measured or not applicable
x = System is off

Abbreviations:
KWH = Kilowatt Hours
in.wc. = inches of water column
scfm = standard cubic feet per minute; calculated from velocity
lbs. = pounds
ug/m3 = micrograms per cubic meter
lbs/day = pounds per day
PID = photoionization detector
ppm = parts per million
VOCs = Volatile Organic Compounds as sum of Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cDCE), trans-1,2-Dichloroethene (tDCE), and Vinyl Chloride

Table 2
Vapor Monitoring Probe Results
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Date	Time	VP-4 Vacuum (in.wc.)	VP-5 Vacuum (in.wc.)	VP-6 Vacuum (in.wc.)	VP-7 Vacuum (in.wc.)	VP-10 Vacuum (in.wc.)	VP-11 Vacuum (in.wc.)	VP-12 Vacuum (in.wc.)
12/4/18	9:30	--	--	--	--	0.10	0.06	--
12/4/18	11:00	0.10	--	0.40	0.03	0.22	0.12	1.2
12/4/18	13:20	0.06	0.22	0.80	--	0.24	0.10	0.10
12/6/18	10:30	0.04	0.28	0.12	0.68	0.10	0.10	0.04
12/10/18	0:00	0.04	0.08	0.01	0.52	0.04	0.08	0.01
12/21/18	8:45	0.08	0.27	0.06	0.59	0.08	0.10	0.00
1/10/19	10:30	0.08	0.42	0.12	0.22	0.22	0.90	0.12
1/24/19	10:40	0.00	0.40	0.07	0.90	0.10	0.16	0.00
3/8/19	10:50	0.07	0.37	0.06	0.88	0.15	0.10	0.00
3/22/19	10:45	--	--	0.12	0.42	0.19	0.19	0.04
4/16/19	11:00	0.08	0.24	0.06	--	0.19	0.19	--
4/19/19	12:00	--	--	--	1.4	--	--	0.04
5/23/19	12:00	0.02	0.33	0.06	--	0.20	0.17	--
6/25/19	10:30	0.5	0.00	0.00	1.3	0.30	0.40	0.00
7/30/19	12:20	0.12	0.42	0.12	1.3	0.25	0.19	0.12
8/27/19	11:00	0.1	0.42	0.10	--	0.24	0.23	0.00
2/4/20	11:00	0.16	1.00	0.21	1.15	0.29	0.29	0.00

Abbreviations:
in.wc. = inches of water column
-- = Not measured or not applicable

Table 3
Chlorinated VOC Concentrations in SVE System Stack
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Date	PCE Concentration ($\mu g/m^3$)				
	PCE	TCE	cDCE	tDCE	Vinyl Chloride
12/14/2018	**61**	**3.7**	**76**	**3.7**	0.78 U
12/21/2018	**130**	**9.8**	**170**	**8.4**	5.9 U
3/8/2019	**26**	**2.8**	**20**	**1.2**	0.93 U
4/16/2019	**21**	**2.5**	**15**	**0.94**	0.77 U
5/23/2019	**28**	**3.0**	**11**	0.79 U	0.77 U
6/25/2019	**25**	**3.0**	**11**	0.80 U	0.80 U
7/30/2019	**28**	**3.1**	**9.8**	**1.02**	0.69 U
8/27/2019	**28**	**3.7**	**13**	1.9 U	1.9 U
3/4/2020	**16**	**2.6**	**7.0**	2.1 U	1.9 U

NOTES:

1. Concentrations in migrograms per cubic meter ($\mu g/m^3$).
2. Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cDCE), trans-1,2-Dichloroethene (tDCE), and Vinyl Chloride analzed using EPA Method TO-15.
3. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. Detected concentrations are shown in **bold.**
5. Stack sample not collected on July 30, 2019. Concentrations estimated using flow weighted average concenrations from the HSVE wells.
6. HSVE-2 was the only well operating on March 4, 2020.

Table 4
Chlorinated VOC Concentrations in SVE Wells
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Date	Sample Location	PCE Concentration (µg/m^3)				
		PCE	TCE	cDCE	tDCE	Vinyl Chloride
7/30/2019	HSVE-1	**10**	**0.71**	**0.69**	0.69 U	0.69 U
7/30/2019	HSVE-2	**54**	**6.7**	**23**	**1.5**	0.69 U
8/27/2019	HSVE-1	**8.9**	2.2 U	2.2 U	2.2 U	2.2 U
8/27/2019	HSVE-2	**46**	**6.7**	**25**	2.2 U	2.2 U
3/4/2020	HSVE-2	**16**	**2.6**	**7.0**	2.1 U	1.9 U

NOTES:
1. Concentrations in migrograms per cubic meter (µg/m^3).
2. Tetrachloroethene (PCE), Trichloroethene (TCE), cis-1,2-Dichloroethene (cDCE), trans-1,2-Dichloroethene (tDCE), and Vinyl Chloride analzed using EPA Method TO-15.
3. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. Detected concentrations are shown in **bold.**

Table 5
Chlorinated VOCs in Indoor Air Samples in 2020
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, WA

Constituent	Indoor AS-030420 (IA-1) 3/4/2020 8-hour		Indoor-Air-090220 (IA-2) 9/2/2020 8-hour		Ambient-Air-090220 (AA-1) 9/2/2020 8-hour		Adjusted Indoor Air 9/2/2020 8-hour		Method B Indoor Air Cleanup Level (µg/m3)
PCE	**4.1**		**2.4**		0.13	U	**2.4**		9.6
TCE	0.15	U	0.17	U	0.15	U	0.17	U	0.33
tDCE	0.15	U	0.17	U	0.15	U	0.17	U	--
cDCE	0.15	U	0.17	U	0.15	U	0.17	U	--
VC	0.15	U	0.17	U	0.15	U	0.17	U	0.28

Notes:

1. All results in $\mu g/m^3$ (micrograms per cubic meter).
2. Volatile Organic Compound (VOC) analysis by EPA Method TO-15 for tetrachloroethene (PCE), trichloroethene (TCE), trans-1,2-dichloroethene (tDCE), cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC).
3. Detected results shown in **bold**.
4. U = not detected at or above the concentration shown.
5. Measured indoor air concentrations corrected for ambient air concentrations consistent with Ecology's current vapor intrusion guidance
6. -- = Not applicable
7. The sample IDs have been abbreviated to IA-1, IA-2, and AA-1 for purposes of report discussion and presentation on illustrations.
8. Indoor air sample IA-1 was collected when the SVE system was operational.
9. Indoor air sample IA-2 and ambient air sample AA-2 were collected after the SVE system had been shut off for approximately one month.

Table 6
Select Soil Analytical Results
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (mg/kg)				
			PCE	TCE	tDCE	cDCE	VC
Former Hallmark Suite (Suite 103)							
SB-7	6/12/15	0 to 4	**0.0893**	0.0222 U	0.0222 U	0.0222 U	0.00222 U
		4 to 8	0.0229 U	0.0229 U	0.0229 U	**0.0458**	0.00229 U
		13	0.0199 U	0.0199 U	0.0199 U	**0.0279**	0.00199 U
SB-8	6/12/15	0.5	**0.0489**	0.0272 U	0.0272 U	0.0272 U	0.00272 U
		5	0.0243 U	0.0243 U	0.0243 U	**0.296**	0.00243 U
		10	0.0251 U	0.0251 U	0.0251 U	0.0251 U	0.00251 U
dup		10	0.0336 U	0.0336 U	0.0336 U	0.0336 U	0.00336 U
SB-9	6/12/15	0.5	**0.0432**	0.0251 U	0.0251 U	0.0251 U	0.00251 U
		5	0.0199 U	0.0199 U	0.0199 U	0.0199 U	0.00199 U
		9	0.0213 U	0.0213 U	0.0213 U	0.0213 U	0.00213 U
SB-22	7/18/16	3	0.0201 U	0.0201 U	0.0201 U	0.0201 U	0.00201 U
		6	0.0272 U	0.0272 U	0.0272 U	0.0272 U	0.00272 U
		9.5	0.0188 U	0.0188 U	0.0188 U	0.0188 U	0.00188 U
SB-23	7/18/16	3	**0.0432**	0.0237 U	0.0237 U	0.0237 U	0.00237 U
		6	0.0240 U	0.0240 U	0.0240 U	0.0240 U	0.00240 U
		9	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.00200 U
SB-27	9/24/19	0.5	**0.0415**	0.0232 U	0.0232 U	0.0232 U	0.0290 U
		3	**0.0336**	0.0247 U	0.0247 U	0.0247 U	0.0308 U
		6	0.0241 U	0.0193 U	0.0193 U	0.0193 U	0.0241 U
Trench 1-1	7/6/2015	1	0.0216 U	0.0216 U	0.0216 U	0.0216 U	0.00216 U
Trench 2-4	7/6/2015	4	0.0206 U	0.0206 U	0.0206 U	0.0206 U	0.00206 U
Trench 3-1	7/6/2015	1	**0.147**	**0.0712**	0.0202 U	0.0202 U	0.00202 U
Trench 4-4	7/6/2015	4	0.0216 U	**0.0345**	0.0216 U	**0.0598**	0.00216 U
Trench 5-4	7/6/2015	4	**0.131**	**0.507**	0.0218 U	**0.300**	0.00218 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	0.00225 U
		3	**0.269**	**0.0222**	0.0222 U	0.0222 U	0.00222 U
		10	0.0199 U	0.0199 U	0.0199 U	**0.0682**	0.00199 U
SB-11	6/25/15	0.5	**0.656**	**0.0230**	0.0200 U	0.0200 U	0.00200 U
		2	**0.179 J**	**0.660**	0.0234 U	**0.113**	0.00234 U
dup		2	**0.313 J**	**0.551**	0.026 U	**0.0802**	0.00255 U
		9	0.0214 U	0.0214 U	0.0214 U	**0.0252**	0.00214 U
SB-12	6/25/15	0.5	**0.0995**	0.0249 U	0.0249 U	0.0249 U	0.00249 U
		3	**0.0986**	**0.225**	0.016 U	**0.0600**	0.00164 U
		9	0.0225 U	0.0225 U	0.0225 U	**0.192**	0.00225 U
SB-13	6/25/15	0.5	**0.232**	**0.0213**	0.0213 U	0.0213 U	0.00213 U
		3	**0.136**	**0.0450**	0.0205 U	**0.119**	0.00205 U
		9	0.0214 U	0.0214 U	0.0214 U	**0.0263**	0.00214 U
SB-14	7/9/15	0.5	**0.321**	0.0207 U	0.0207 U	0.0207 U	0.00207 U
		3	**0.0441**	**0.173**	**0.0268**	**0.0856**	0.00210 U
		6	**0.0465**	**0.0210**	0.0196 U	**0.0851**	0.00196 U
		9	0.0277 U	0.0277 U	0.0277 U	**0.176**	0.00227 U
SB-15	7/9/15	0.5	**0.104**	0.0289 U	0.0289 U	0.0289 U	0.00289 U
		3	**0.0464**	**0.126**	0.0200 U	**0.0584**	0.00200 U
		6	**0.0437**	0.0230 U	0.0230 U	0.0230 U	0.00230 U
		10.5	0.0197 U	0.0197 U	0.0197 U	0.0197 U	0.00197 U
dup		10.5	0.0205 U	0.0205 U	0.0205 U	**0.0261**	0.00205 U

Table 6
Select Soil Analytical Results
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (mg/kg)				
			PCE	TCE	tDCE	cDCE	VC
SB-16	7/9/15	0.5	**0.0527**	0.0227 U	0.0227 U	0.0227 U	0.00227 U
		3	**0.0762**	0.0210 U	0.0210 U	0.0210 U	0.00210 U
		6	**0.572**	**0.142**	0.0235 U	0.0235 U	0.00235 U
		9	0.0200 U	0.0200 U	0.0200 U	**0.194**	0.00200 U
SB-17	7/9/15	0.5	**0.0736**	0.0304 U	0.0304 U	0.0304 U	0.00304 U
		3	**0.0828**	0.0230 U	0.0230 U	0.0230 U	0.00230 U
		6	**0.0526**	**0.0469**	0.0229 U	0.0229 U	0.00229 U
		9	0.0210 U	0.0210 U	0.0210 U	0.0210 U	0.00210 U
SB-28	9/24/19	0.5	**0.0410**	0.0243 U	0.0243 U	0.0243 U	0.0304 U
		3	**0.0911**	**0.114**	0.0222 U	0.0222 U	0.0278 U
		6	**0.0330**	0.0203 U	0.0203 U	0.0203 U	0.0253 U
SB-29	9/24/19	0.5	**0.141**	0.0286 U	0.0286 U	0.0286 U	0.0358 U
		3	0.0254 U	**0.0231**	0.0203 U	0.0203 U	0.0254 U
		6	0.0303 U	0.0242 U	0.0242 U	0.0242 U	0.0303 U
SB-30	9/24/19	0.5	**0.0830**	0.0230 U	0.0230 U	0.0230 U	0.0288 U
		3	0.0257 U	**0.109**	0.0206 U	**0.0375**	0.0257 U
		6	**0.0570**	**0.385**	0.0201 U	**0.0481**	0.0252 U
SB-33	8/7/20	0.5	**0.153**	0.0224 U	0.0224 U	0.0224 U	0.0279 U
		3	**0.0367**	**0.0518**	0.0202 U	**0.0239** U	0.0253 U
		6	0.0273 U	0.0218 U	0.0218 U	0.0218 U	0.0273 U
SB-34	8/7/20	0.5	**0.0954**	0.0218 U	0.0218 U	0.0232 U	0.0272 U
SB-35	8/7/20	3	0.0261 U	**0.0598**	0.0209 U	0.0232 U	0.0261 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	0.00197 U
		6	0.0229 U	0.0229 U	0.0229 U	**0.162**	0.00229 U
		9	0.0257 U	0.0257 U	0.0257 U	0.0257 U	0.00257 U
SB-19	7/17/16	3	**0.140**	0.0221 U	0.0221 U	0.0221 U	0.00221 U
		6	0.0231 U	0.0231 U	0.0231 U	0.0231 U	0.00231 U
		9	0.0243 U	0.0243 U	0.0243 U	0.0243 U	0.00243 U
SB-20	7/17/16	3	**0.0945**	0.0242 U	0.0242 U	0.0242 U	0.00242 U
		6	0.0224 U	0.0224 U	0.0224 U	0.0224 U	0.00224 U
		7	0.0198 U	0.0198 U	0.0198 U	0.0198 U	0.00198 U
SB-24	9/18/16	3	**0.0329**	0.0258 U	0.0258 U	0.0258 U	0.00258 U
SB-25	9/18/16	3	**0.0462**	0.0264 U	0.0264 U	0.0264 U	0.00264 U
SB-26	9/18/16	3	**0.0330**	0.0206 U	0.0206 U	0.0206 U	0.00206 U
SB-31	9/25/19	0.5	**0.0397**	0.0293 U	0.0293 U	0.0293 U	0.0366 U
		3	0.0289 U	0.0231 U	0.0231 U	0.0231 U	0.0289 U
		6	0.0323 U	0.0259 U	0.0259 U	0.0259 U	0.0323 U
SB-32	9/25/19	0.5	0.0291 U	0.0232 U	0.0232 U	0.0232 U	0.0291 U
		3	**0.0463**	0.0282 U	0.0282 U	0.0282 U	0.0352 U
		6	0.0276 U	0.0221 U	0.0221 U	0.0221 U	0.0276 U

Table 6
Select Soil Analytical Results
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Sample	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (mg/kg) PCE	TCE	tDCE	cDCE	VC
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	0.00208 U
		6	0.0227 U	0.0227 U	0.0227 U	0.0227 U	0.00227 U
		9	0.0282 U	0.0282 U	0.0282 U	0.0282 U	0.00282 U
MTCA Method A Cleanup Level			0.05	0.03	--	--	--
MTCA Method B Cleanup Level			480	12	1,600	160	0.67

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, and VC = vinyl chloride
4. (A) = MTCA Method A soil cleanup level for protection of groundwater for unrestricted use
5. (B) = MTCA Method B soil cleanup level for protection of direct contact
6. **Bold** indicates that the compound was detected above the PQL, and shading indicates the concentration exceeds the applicable cleanup level
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

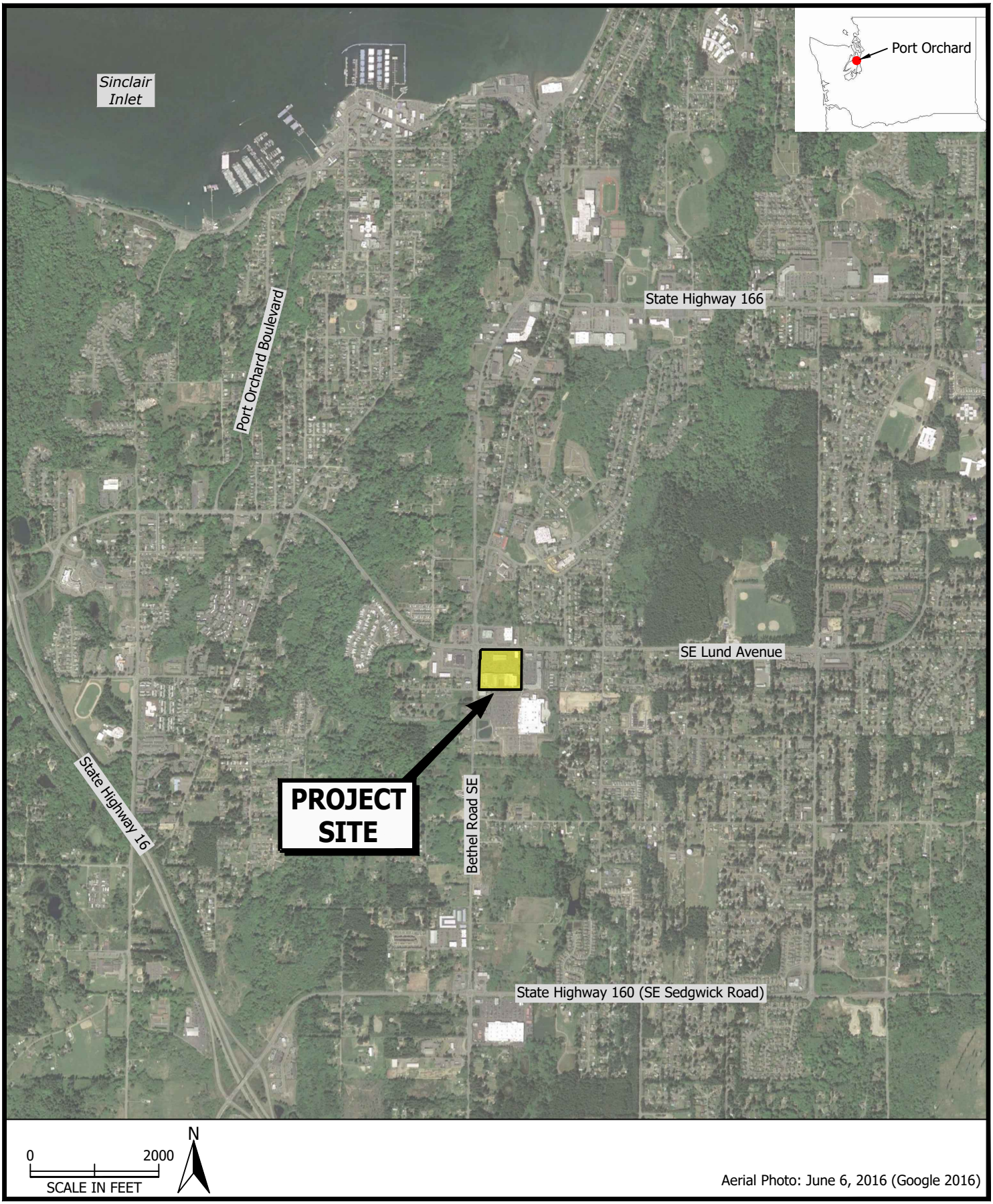
Table 7
Groundwater Analytical Results
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center, Port Orchard, Washington

Boring	Date Sampled	Sample Depth (feet bgs)	Detected VOCs (µg/L)				
			PCE	TCE	cDCE	tDCE	Vinyl Chloride
SB-7	6/12/15	12.5	1.00 U	0.500 U	**6.67**	1.00 U	0.200 U
SB-8	6/12/15	9.0	1.00 U	0.500 U	**13.1**	1.00 U	0.200 U
SB-10	6/25/15	13.4	**1.52**	0.500 U	**18.3**	1.00 U	0.200 U
SB-11	6/25/15	13.7	1.00 U	0.500 U	**61.6**	1.00 U	**0.706 J**
SB-13	6/25/15	14.0	1.00 U	0.500 U	**37.3**	1.00 U	**0.658 J**
SB-15	7/9/15	14.5	1.00 U	0.500 U	**8.22**	1.00 U	0.200 U
SB-17	7/9/15	13.0	1.00 U	0.500 U	**10.4**	1.00 U	0.200 U
SB-22	7/18/16	11.5	1.00 U	0.500 U	1.00 U	1.00 U	0.200 U
SB-23	7/18/16	14.5	1.00 U	0.500 U	1.00 U	1.00 U	0.200 U
SB-27	9/24/19	13.0	1.00 U	0.500 U	1.00 U	1.00 U	0.200 U
SB-29	9/24/19	14.0	1.00 U	0.500 U	**7.66**	1.00 U	0.200 U
MTCA Method A/B CULs			5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)

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, VC = Vinyl Chloride
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

ILLUSTRATIONS



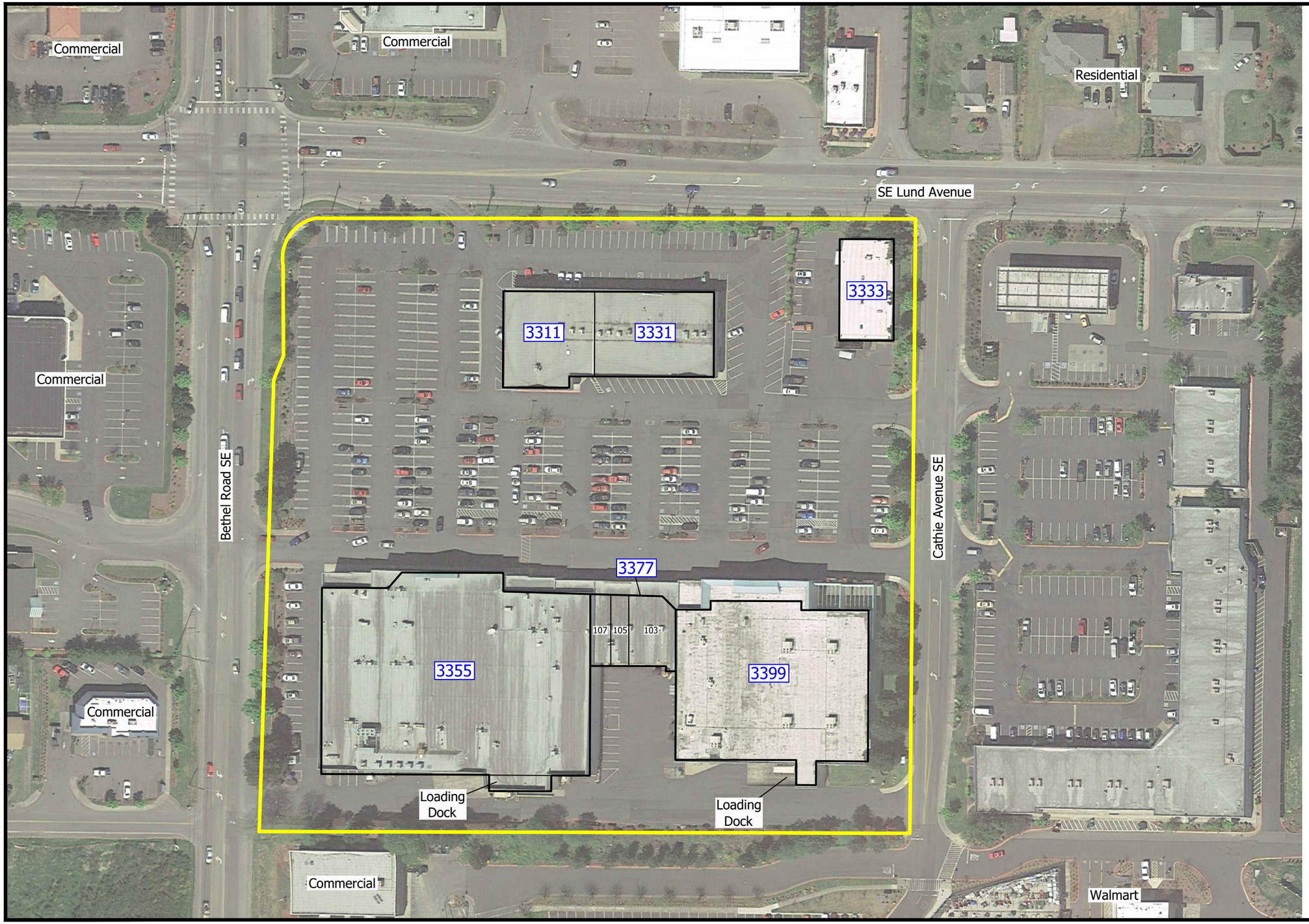
Aerial Photo: June 6, 2016 (Google 2016)

PES Environmental, Inc.
Engineering & Environmental Services

Site Location
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE
1

1246.030.03.004	124603003004_CAP20_1	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

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

N

0 100

SCALE IN FEET

Aerial Photo: May 4, 2013 (Google 2014)

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Vicinity
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE
2

1246.030.03.004	124603003004_CAP20_2	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

N

0 10

APPROXIMATE SCALE IN FEET

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 MCTA Method A CULs
- Soil COC Concentration below MTCA Method A 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

Safeway

The UPS Store 107

Amy's Cleaners 105

Vacant Suite 103

Mailboxes

Counter

Clothing Rack

Work Area

Clothing Rack

Counter

Washing Machine and Dryer

Dry Cleaning Unit

Drain

Boiler Room

Restroom

Restroom

Asphalt Ramp

SB-26 SB-25 SB-24 SB-19 SB-17 SB-16 SB-15 SB-13 SB-3 SB-10 SB-11 SB-2 B-1 AC-SB4 SB-12 SB-14 AC-SB5 SB-1 SB-22 SB-7 SB-9 SB-8 VP-5 (SB-20) VP-4 (SB-18) VP-7 (SB-23) VP-6 (SB-21) WB-1 VP-2 VP-3 VP-1 VP-8 VP-9 Trench 3-1 Trench 4-4 Trench 5-4 B-2 AC-SB6 WB-2 B-3 Trench 1-1 Trench 2-4 HSVE-1 HSVE-2

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Pre-SVE Soil and Groundwater Conditions
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE 3

1246.030.03.004	124603003004_CAP20_3	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

N

0 10

APPROXIMATE SCALE IN FEET

Explanation

- WB-1 — Previous Boring Location
- SB-7 — Soil Boring
- VP-8 — Decommissioned Vapor Probe
- VP-7 — Vapor Probe Location
- Subslab_Air_052215 — Subslab Vapor Sample Location
- Trench 1-1 — Trench Sample
- HSVE-1 — Horizontal SVE Well
- SVE Slotted Screen
- SVE Blank Casing
- SVE Lateral Pipe Trench
- IA-2 — Indoor Air Sample Location
- SV4 — Ambient Air Sample
- Sanitary Sewer Line
- Sanitary Sewer Cleanout
- Storm Drain Pipeline
- Water Line
- Buried Electrical Line
- Buried Gas Line
- Unknown Buried Line
- Telecom Line

Safeway

The UPS Store 107

Mailboxes

Amy's Cleaners 105

Vacant Suite 103

SB-26 SB-25 SB-24 SB-32 SB-19 SB-31 SB-17 SB-16 SB-35 SB-28 SB-15 SB-13 SB-3 SB-29 SB-10 SB-34 SB-11 SB-30 SB-33 SB-12 SB-14 SB-1 SB-2 SB-22 SB-27 SB-9 SB-7 SB-8

VP-5 (SB-20) VP-4 (SB-18) VP-2 VP-3 VP-10 VP-11 VP-12 VP-1 VP-8 VP-9 VP-7 (SB-23)

AA-1 IA-1 IA-2 AC-SB4 AC-SB5 AC-SB6 B-1 Drain B-2 B-3 WB-1 WB-2

Counter Counter Counter

Clothing Rack Clothing Rack

Work Area

Dry Cleaning Unit

Washing Machine and Dryer

Restroom Restroom

Boiler Room

Subslab_Air_052215

Trench 3-1 Trench 4-4 Trench 5-4 Trench 1-1 Trench 2-4

HSVE-1 HSVE-2

SVE System Enclosure

Asphalt Ramp

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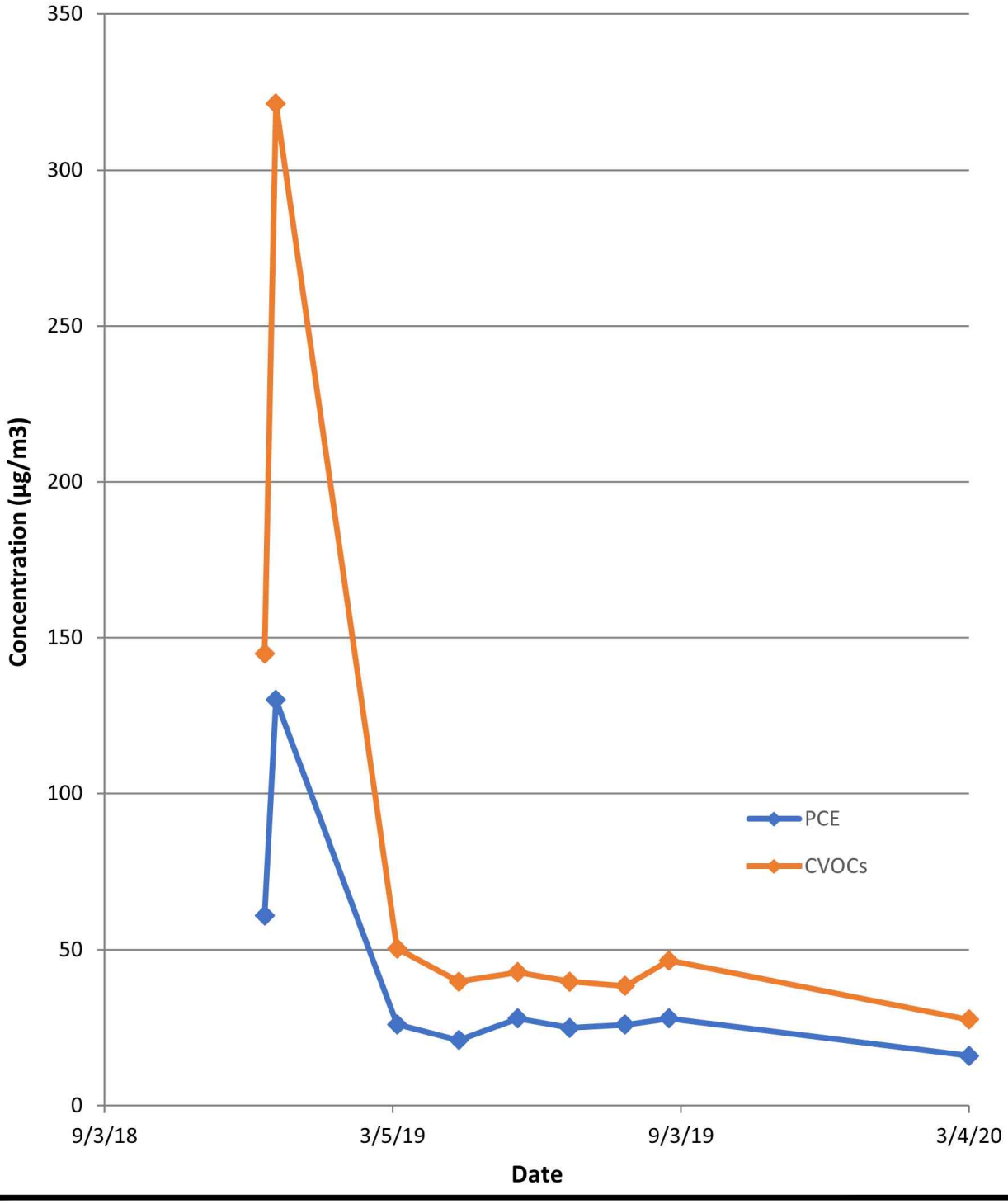
Site Layout
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE 4

1246.030.03.004	124603003004_CAP20_4	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

VOC Concentrations in SVE System Stack



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VOC Concentrations in SVE System Stack
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE
5

1246.030.03.004	124603003004_CAP20_5	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

N

0 10

APPROXIMATE SCALE IN FEET

Explanation

- SB-7 — Soil Boring
- Trench 1-1 — Trench Sample
- Vapor Probe Location
- VP-8 — Decommissioned Vapor Monitoring Probe
- HSVE-1 — Horizontal SVE Well
- Soil Contaminant of Concern (COC) Concentrations above MTCA Method A Cleanup Levels (CULs) but below MTCA Method B CULs
- Soil COC Concentrations below MTCA Method A CULs or Method Reporting Limits (MRLs)
- * Sample collected prior to SVE system operation The historical results are included in the report table
- A A' Hydrogeologic Cross-Section Location (Arrows show direction of view)
- Pre-SVE Estimated Extent of Area of Soil Contamination
- Pre-SVE Estimated Extent of Area of Groundwater Contamination
- Estimated Extent of SVE System Capture Zone

Compliance Sample Results		MTCA Method A CULs	MTCA Method B CULs
0.5	Sample depth (ft)	Soil	Soil
PCE	Tetrachloroethene	0.05	480
TCE	Trichloroethene	0.03	12
cDCE	cis-1,2-Dichloroethene	NA	160
tDCE	trans-1,2-Dichloroethene	NA	1,600
VC	Vinyl Chloride	NA	0.67

Soil concentrations in milligrams per kilogram (mg/kg)
Shaded cells = exceeds applicable cleanup level
NA = Not Applicable

SB-32

9/25/19	0.5	3	6
PCE	0.0291 U	**0.0463**	0.0276 U
TCE	0.0232 U	0.0282 U	0.0221 U
cDCE	0.0232 U	0.0282 U	0.0221 U
tDCE	0.0232 U	0.0282 U	0.0221 U
VC	0.0291 U	0.0352 U	0.0276 U

SB-35

8/7/20	3
PCE	0.0261 U
TCE	**0.0598**
cDCE	0.0209 U
tDCE	0.0232 U
VC	0.0261 U

SB-28

9/24/19	0.5	3	6
PCE	**0.0410**	**0.0911**	**0.0330**
TCE	0.0243 U	**0.114**	0.0203 U
cDCE	0.0243 U	0.0222 U	0.0203 U
tDCE	0.0243 U	0.0222 U	0.0203 U
VC	0.0304 U	0.0278 U	0.0253 U

SB-31

9/25/19	0.5	3	6
PCE	**0.0397**	0.0289 U	0.0323 U
TCE	0.0293 U	0.0231 U	0.0259 U
cDCE	0.0293 U	0.0231 U	0.0259 U
tDCE	0.0293 U	0.0231 U	0.0259 U
VC	0.0366 U	0.0289 U	0.0323 U

SB-27

9/24/19	0.5	3	6
PCE	**0.0415**	**0.0336**	0.0241 U
TCE	0.0232 U	0.0247 U	0.0193 U
cDCE	0.0232 U	0.0247 U	0.0193 U
tDCE	0.0232 U	0.0247 U	0.0193 U
VC	0.0290 U	0.0308 U	0.0241 U

SB-30

9/24/19	0.5	3	6
PCE	**0.0830**	0.0257 U	**0.0570**
TCE	0.0230 U	**0.109**	**0.385**
cDCE	0.0230 U	0.0206 U	0.0201 U
tDCE	0.0230 U	**0.0375**	**0.0481**
VC	0.0288 U	0.0257 U	0.0252 U

SB-29

9/24/19	0.5	3	6
PCE	**0.141**	0.0254 U	0.0303 U
TCE	0.0286 U	**0.0231**	0.0242 U
cDCE	0.0286 U	0.0203 U	0.0242 U
tDCE	0.0286 U	0.0203 U	0.0242 U
VC	0.0358 U	0.0254 U	0.0303 U

SB-33

8/7/20	0.5	3	6
PCE	**0.153**	**0.0367**	0.0273 U
TCE	0.0224 U	**0.0518**	0.0218 U
cDCE	0.0224 U	0.0202 U	0.0218 U
tDCE	0.0224 U	**0.0239**	0.0218 U
VC	0.0279 U	0.0253 U	0.0273 U

SB-34

8/7/20	0.5
PCE	**0.0954**
TCE	0.0218 U
cDCE	0.0218 U
tDCE	0.0232 U
VC	0.0272 U

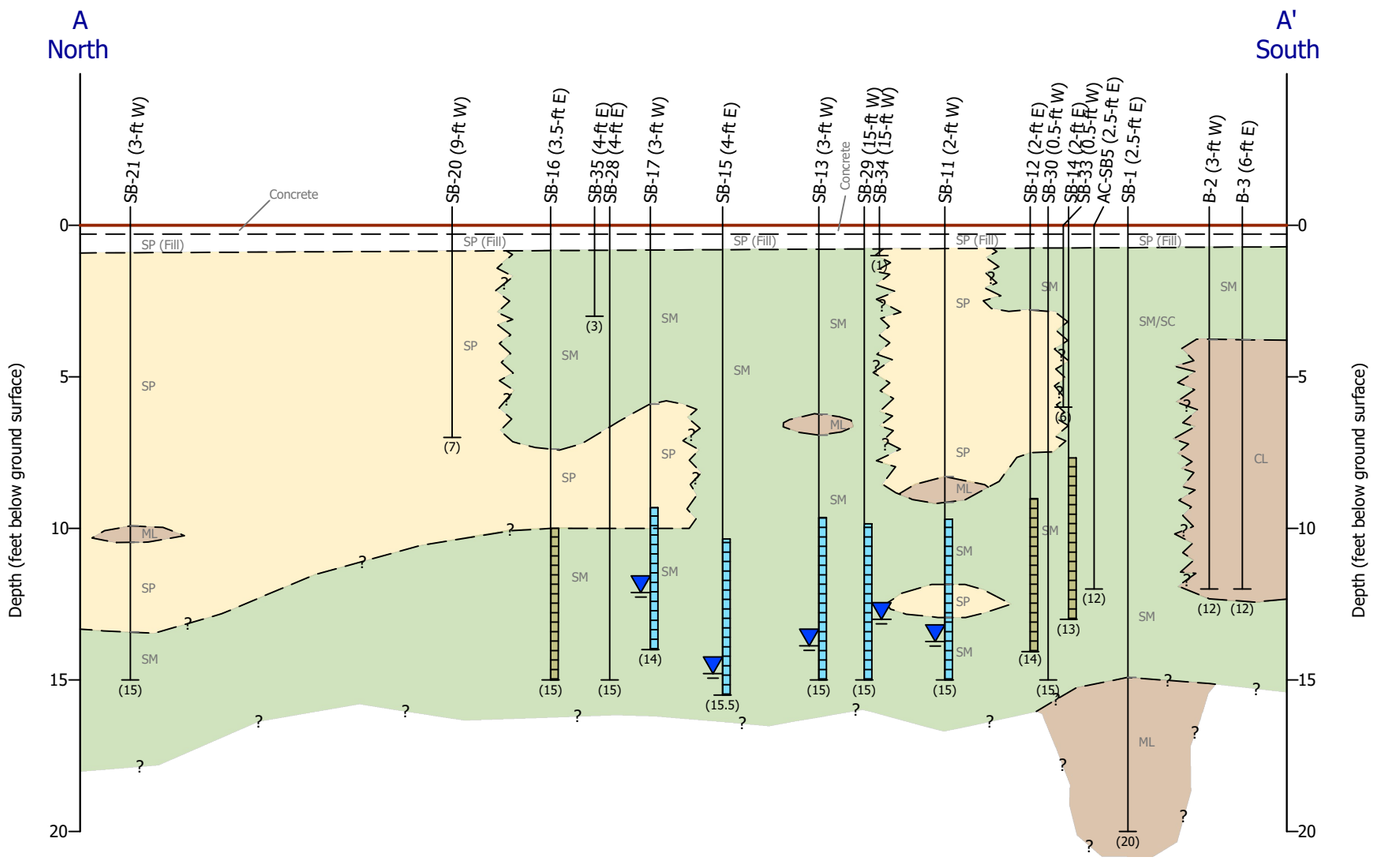
Safeway
The UPS Store 107
Amy's Cleaners 105
Vacant Suite 103
Mailboxes
Clothing Rack
Work Area
Clothing Rack
Counter
Counter
Dry Cleaning Unit
Washing Machine and Dryer
Drain
Boiler Room
Restroom
Restroom
Asphalt Ramp
Trench 3-1*
Trench 4-4*
Trench 5-4*
Trench 1-1*
Trench 2-4*
HSVE-1
HSVE-2
VP-1
VP-2
VP-3
VP-4 (SB-18)*
VP-5 (SB-20)*
VP-6 (SB-21)*
VP-7 (SB-23)*
VP-8
VP-9
VP-10
VP-11
VP-12
WB-1
WB-2
SB-1*
SB-2*
SB-3*
SB-7*
SB-8*
SB-9*
SB-10*
SB-11*
SB-12*
SB-13*
SB-14*
SB-15*
SB-16*
SB-17*
SB-19*
SB-22*
SB-24*
SB-25*
SB-26*
SB-27
SB-28
SB-29
SB-30
SB-31
SB-32
SB-33
SB-34
SB-35
AC-SB4*
AC-SB5*
AC-SB6*
B-1*
B-2*
B-3*
A
A'

PES Environmental, Inc.
Engineering & Environmental Services

Compliance Soil Sample Results
September 2019 and August 2020
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE 6

1246.030.03.004	124603003004_CAP20_6	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- Approximate Ground Surface Elevation
- Geologic Contact
- Perched Groundwater elevation at time of drilling
- SB-12 — Soil Boring
- SB-13 (40.5) — Grab Groundwater Sample Interval from Temporary Well
- (2-ft. E) — Approximate direction and distance from cross section of projected feature
- SB-16 (15) — Temporary Well Screen (Dry)

Soil Description based on Unified Soil Classification System	
Predominantly coarse-grained deposits	(GP) Poorly Graded Gravel (GW) Well-Graded Gravel (GM) Silty Gravel (GC) Clayey Gravel (SP) Poorly Graded Sand (SW) Well-Graded Sand (SC) Clayey Sand (SM) Silty Sand
Predominantly fine-grained deposits	(ML) Silt with or without sand and gravel (CL) Clay with or without sand and gravel

5 — 0 Vertical Scale in Feet

0 — 10 Horizontal Scale in Feet

Vertical Exaggeration 2:1

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

FIGURE 7

1246.030.03.004	124603003004_CAP20_7	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

N

0 10

APPROXIMATE SCALE IN FEET

Explanation

- SB-7 — Soil Boring
- Trench 1-1 — Trench Sample
- Vapor Probe Location
- VP-8 — Decommissioned Vapor Monitoring Probe
- HSVE-1 — Horizontal SVE Well
- Groundwater Contaminant of Concern (COC) Concentration previously above applicable Cleanup Levels (CULs)
- Groundwater COC Concentration below applicable CULs or Method Reporting Limits (MRLs)
- Dry Boring Location
- * Sample collected prior to SVE system operation The historical results are included in the report table
- Pre-SVE Estimated Extent of Area of Soil Contamination
- Pre-SVE Estimated Extent of Area of Groundwater Contamination
- Estimated Extent of SVE System Capture Zone

Compliance Sample Results		Applicable Cleanup Levels
0.5	Sample depth (ft)	Groundwater
PCE	Tetrachloroethene	5
TCE	Trichloroethene	5
cDCE	cis-1,2-Dichloroethene	16
tDCE	trans-1,2-Dichloroethene	160
VC	Vinyl Chloride	0.2

Groundwater concentrations in micrograms per liter (µg/L)
Shaded cells = exceeds applicable cleanup level

SB-29	14
PCE	1.00 U
TCE	0.500 U
cDCE	**7.66**
tDCE	1.00 U
VC	0.200 U

SB-27	13
PCE	1.00 U
TCE	0.500 U
cDCE	1.00 U
tDCE	1.00 U
VC	0.200 U

Notes:

1. Borings with gray halos represent locations where groundwater was not encountered at depths of up to 15 ft below ground surface
2. Borings without shading were advanced to a depth that was not sufficient to determine the presence or absence of groundwater

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Compliance Groundwater Sample Results
September 2019
Cleanup Action Report - Amy's Cleaners
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE 8

1246.030.03.004	124603003004_CAP20_8	BLO	11/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX A

SVE SYSTEM AS-BUILTS

Directed Technologies Drilling Incorporated

August 2, 2017

Matt Dahl, PE
PES Environmental, Inc.
PES Environmental, Inc.
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161
mdahl@pesenv.com

RE: Well Completion Report – Horizontal SVE Wells, Bethel Junction Shopping Center, Pt. Orchard, WA

Dear Matt:

Thank you again for selecting DTD to install the horizontal SVE well for your project at Bethel Junction. We are pleased that the installation was successfully concluded. This letter is to document various aspects of the well completion for your project records.

Prior to mobilization to the site, DTD filed appropriate Notice of Intent with the Washington State Department of Ecology to install Resource Protection Wells.

We have documented construction details for the well in the table below. A summary of the well installation activities is included in this report, with well profiles and locating data included as an attachment.

Well Construction Details – Bethel Jct. Shopping Center			
	HSVE-1		
Well Length:	100 ft.		
Screened Length	50 ft.		
Screen Depth below floor slab surface	Nominal 6 ft. below floor slab		
Grouted Interval	None – PES to excavate at edge of sidewalk and install seal there		
Other Seals	None – PES to use DTD-supplied shale trap and hydrated bentonite chips		
End Cap: Pointed PVC threaded			
Screen and Riser Material: 3-inch Sch. 80 PVC			
Slot Specifications (as installed) (0.012 x 1.25" [nominal] slots, 3 rows of 8 slots each, cross-cut.			
Wellhead Components: Capped with 3" PVC threaded cap; pit backfilled and pavement patched			
Drilling Fluid: Polymer drilling fluid			
Well Development additives: CETCO LEB-CD			
Surface completion: Backfilled with compacted soil; pavement patched with cold patch			

The well was installed by DTD using a Vermeer 24x40 Navigator drill rig. Locating was accomplished with a Digital Control Digi-Trak F5 locator and battery powered sonde to provide walkover locating capabilities. The rig was selected on the basis of power and size requirements to fit into the site, after a smaller rig was unable to penetrate gravelly sand formation. The pilot boring was advanced using a polymer drilling fluid.

Activities Narrative

A previous attempt was made to drill and install this well on July 12-13, 2017. DTD mobilized a Vermeer 7x11 drill rig to the site, making the rig selection on the basis of photos of excavations and well logs available from prior vertical drilling. The rig was unable to maintain pitch in gravelly sand. After several hours of attempted work, the rig was demobilized and a larger rig was scheduled to perform the drilling.

The Vermeer 24x40 Series II Navigator rig and crew were mobilized to the site on August 1, 2017. All work was performed on August 1, during daylight hours. The site activities began at approximately 0700, continuing until 1830, when the crew departed with all DTD equipment.

Drilling and support equipment supplied by DTD included:

- Vermeer D24x40 Series II Navigator drill rig with 10-foot rods.
- Vermeer ST 750 mud mixing unit, a skid-mounted mixer with 750 gallon capacity
- Ford utility truck with drilling equipment, pumps, and supplies
- DTD tooling and equipment trailer
- Rental equipment from United Rentals included a small mini-excavator, pavement saw, and 4K variable reach forklift

In addition to the DTD supplied equipment, PES Environmental provided an open topped waste tank to contain drill cuttings and slurry generated by the project.

Rig setup was completed after a tailgate safety meeting, and drilling commenced at 1045. Drilling continued until approximately 1300, starting in firm clayey silt, transitioning to gravelly silty sand. The coarse-grained soil was moderately difficult to drill, and constant drilling input was required to maintain the bore path in the desired direction. Numerous "swabbing" passes were made (moving the drill rods back and forth in the bore while pumping drilling fluid) to flush cuttings from the bore. After completion of the bore, the drill rods were tripped out; the bit showed moderate wear, and several carbide cutters were snapped off in drilling the gravelly formation.

Due to the variable consistency in drilling the gravel, there are some deviations in the well depth, however the was installed within an approximate tolerance of ± 0.5 foot from the desired 6-foot depth. The bore was slightly right of the planned bore path, and passed near but did not touch or show hydraulic connection to a vapor monitor at approximately 92 feet from entry.

The well materials were inserted into the open bore, pushed in by manual pressure initially, subsequently with moderate downpressure by the drill rig, with supplemental pressure by the mini-excavator on one longer section of pipe. 50 feet of well screen and 50 feet of blank were installed.

After the well materials were installed, the drilling mud tank was emptied to the waste rolloff and refilled with clear water. Two pints of CETCO LEB-CD enzyme breaker were added to the water, to facilitate well development. The well was flushed with 350 gallons of water by connecting a pressure hose from the mud system to the end of the well casing, and flushing down the interior of the well screen and back out of the bore annulus. Flushing was halted when the return water had visually cleared significantly.

The well was then jetted with a high-pressure sewer jet, with multiple passes through the well screen. Approximately 250 gallons of water was jetted into the well. Return of the jetting water diminished during this process, indicating that the well has hydraulic connectivity with the surrounding formation.

After jetting was concluded, a PVC "stinger" pipe was pushed inside the well casing to a depth of ~50 feet and connected to a diaphragm pump. The pump was started, and excess development water was pumped from the well until no more flow was detected. This step is completed to remove as much water as possible

from the well to reduce the amount of fluid that must be dried out by operation of the vacuum extraction system. Despite this step, it should be expected that water or water vapor may be drawn into the SVE system for some period of time after startup, until water vapor pressures in the formation are balanced.

After discussion with Matt Dahl from PES, the wellhead for this SVE well was not sealed at the entry point. PES will be excavating to the well at the edge of the sidewalk that crosses the well alignment to connect to the planned SVE system. A better seal can be placed at this location than would have been possible by using a tremie pipe to place grout from the entry. DTD left a shale trap packer and a bag of bentonite chips with Chris DeBoer to help with making this seal in the future.

The well was capped with a threaded PVC cap and the entry pit was pumped free of excess development water and backfilled with the previously excavated soil. After compaction, 2.5 bags of asphalt cold patch was distributed in thin lifts and hand-compacted to patch the parking lot pavement. DTD received final approval on the project completion from PES on-site supervisor, Chris DeBoer and subsequently departed from the site at approximately 1830.

Data tables and well profiles are provided in the Appendix. Bore elevations outside the building are based on an assumed reference point, referencing the floor slab as an elevation of zero. The elevations for the well screen are based on direct depth measurement with the DCI locating device, using calculated pitch measurements as confirmation. Profiles are generated from the data table using Microsoft Excel charting tools.

DTD is pleased to submit this report of the completed well installation at the Bethel Junction site. If you have any questions, please don't hesitate to call us.

Sincerely,

Directed Technologies Drilling, Inc.

Michael D. Lubrecht, LG
Senior Geologist

Cc: Matt Dahl, PE – PES Environmental
Chris DeBoer – PES Environmental
DTD File Copy

Attachment #1

Well Data and Profiles – HSVE-1

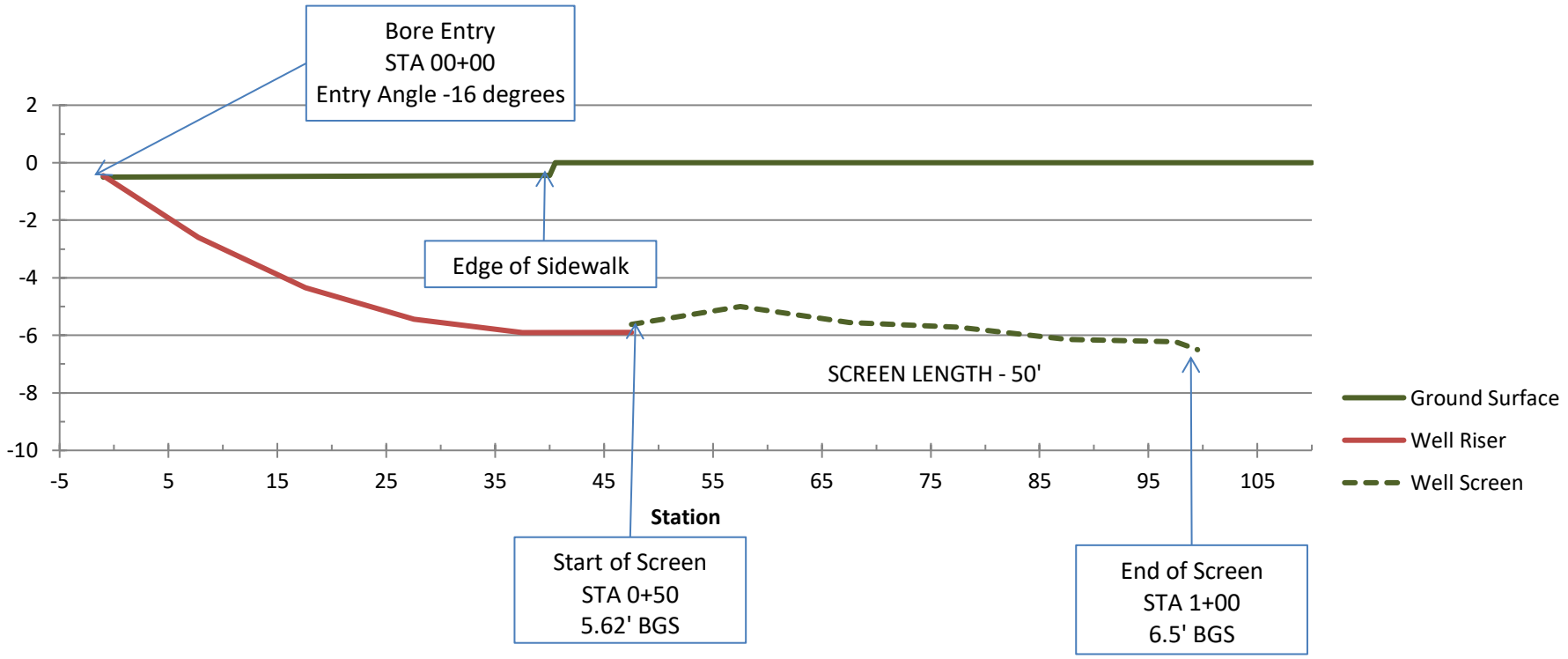
See Next Page

Client Name:	PES Environmental				
Job Name:	Bethel Junction dry cleaner				
Well Name:	SVE 1				
Location:	Bethel Junction Shopping Center, Pt. Orchard, WA				
Drill Rig:	Vermeer 24x40				
Drill bit:	5.5"				
Well Screen:	3" PVC				
Well Casing:	3" PVC				
Length of Drill Rods:	10	ft	Rig Entry Angle	-16	degrees
Length of Borehole:	104	ft (Horizontal Distance)	Assumed Elevation at Point of Entry	-0.45	ft
Length of Well:	100.0	ft	Station at Point of Entry	-+1	station
Entry Casing Length:	50.0	ft (includes vices to entry footage)	Horz distance from Transmitter to Point of Entry	1	ft
Screen Length:	50.0	ft	Height of Transmitter above Point of Entry	0.75	ft
Exit Casing Length	0	ft			

Rod	Rod Distance from Vices (ft)	Station (#+##)	Description	Percent Slope (%)	Vertical Angle (degrees)	Horizontal Distance (cumulative ft)	Calculated Depth (ft below entry)	Actual Depth BGS
Point of Entry	1	-+1	ENTRY AT 00+00	-28.7 %	-16.0	0.0	-0.5	0.00
1	10	+8		-20.6 %	-11.6	8.7	-2.6	2.00
2	20	+18		-14.9 %	-8.5	18.6	-4.3	3.79
3	30	+28		-7.3 %	-4.2	28.5	-5.4	4.80
4	40	+38	Edge of sidewalk	-1.9 %	-1.1	38.5	-5.9	6.09
5	50	+48	In bldg / Start of screen	2.0 %	1.2	48.5	-5.9	5.62
6	60	+58		2.4 %	1.4	58.5	-5.7	5.00
7	70	+68		-3.0 %	-1.7	68.5	-5.7	5.56
8	80	+78		-0.8 %	-0.5	78.5	-5.9	5.72
9	90	+88		-2.9 %	-1.7	88.5	-6.1	6.14
10	100	+98		-1.5 %	-0.9	98.5	-6.3	6.22
10.2	102	1+00	End of screen	3.2 %	1.9	100.5	-6.3	6.50

Well Profile
3" SVE Well
Bethel Jct., Pt. Orchard, WA
Prepared by Directed Technologies Drilling

BORE NOTES:
Drilled Length - 104'
Horizontal Well Length - 100'
Well Screen Length - 50'



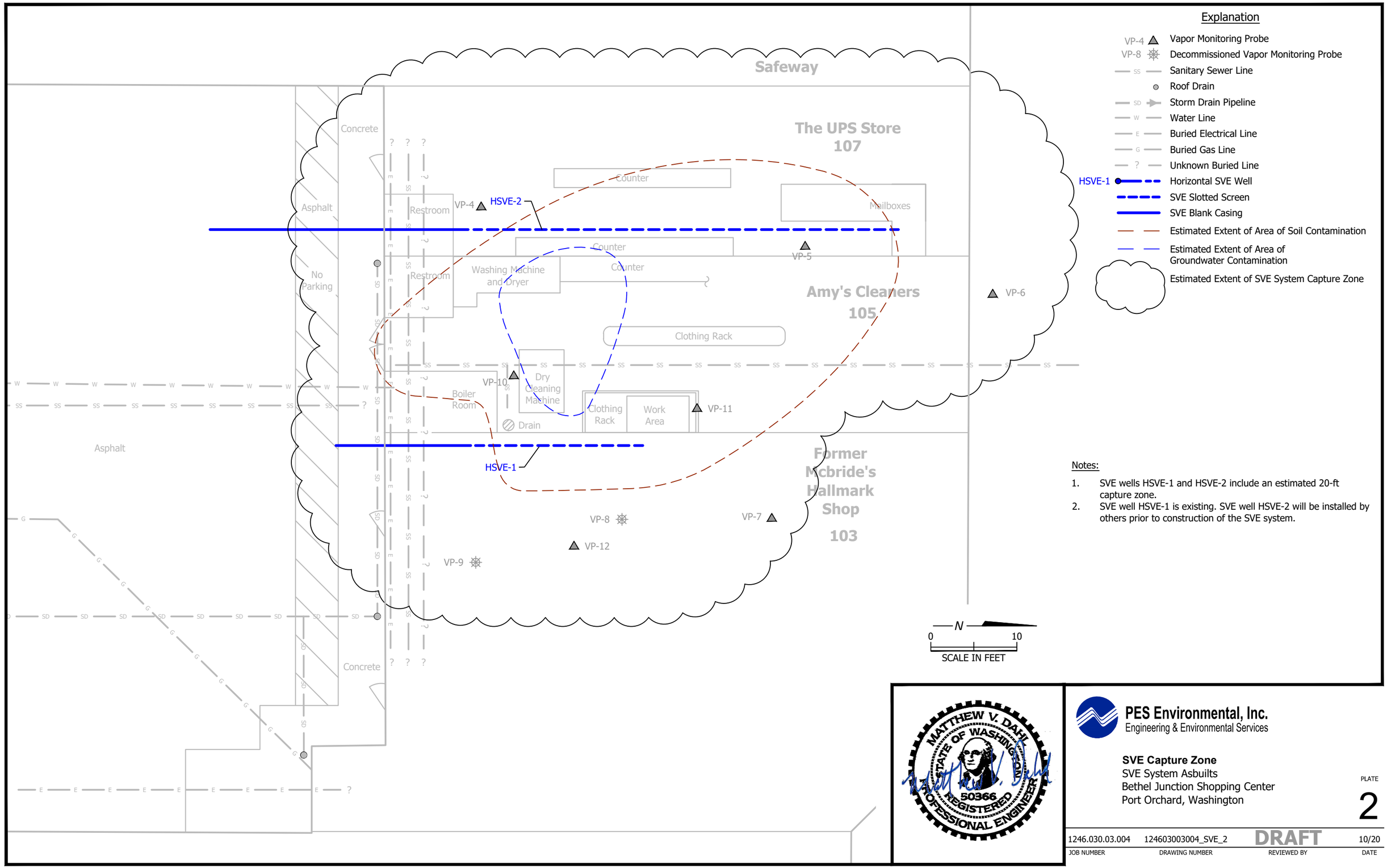
Aerial Photo: May 9, 2019 (Google 2020)

PES Environmental, Inc.
Engineering & Environmental Services

Site Location
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE
1

1246.030.03.004	124603003004_SVE_1	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



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.

MATTHEW V. DAHL
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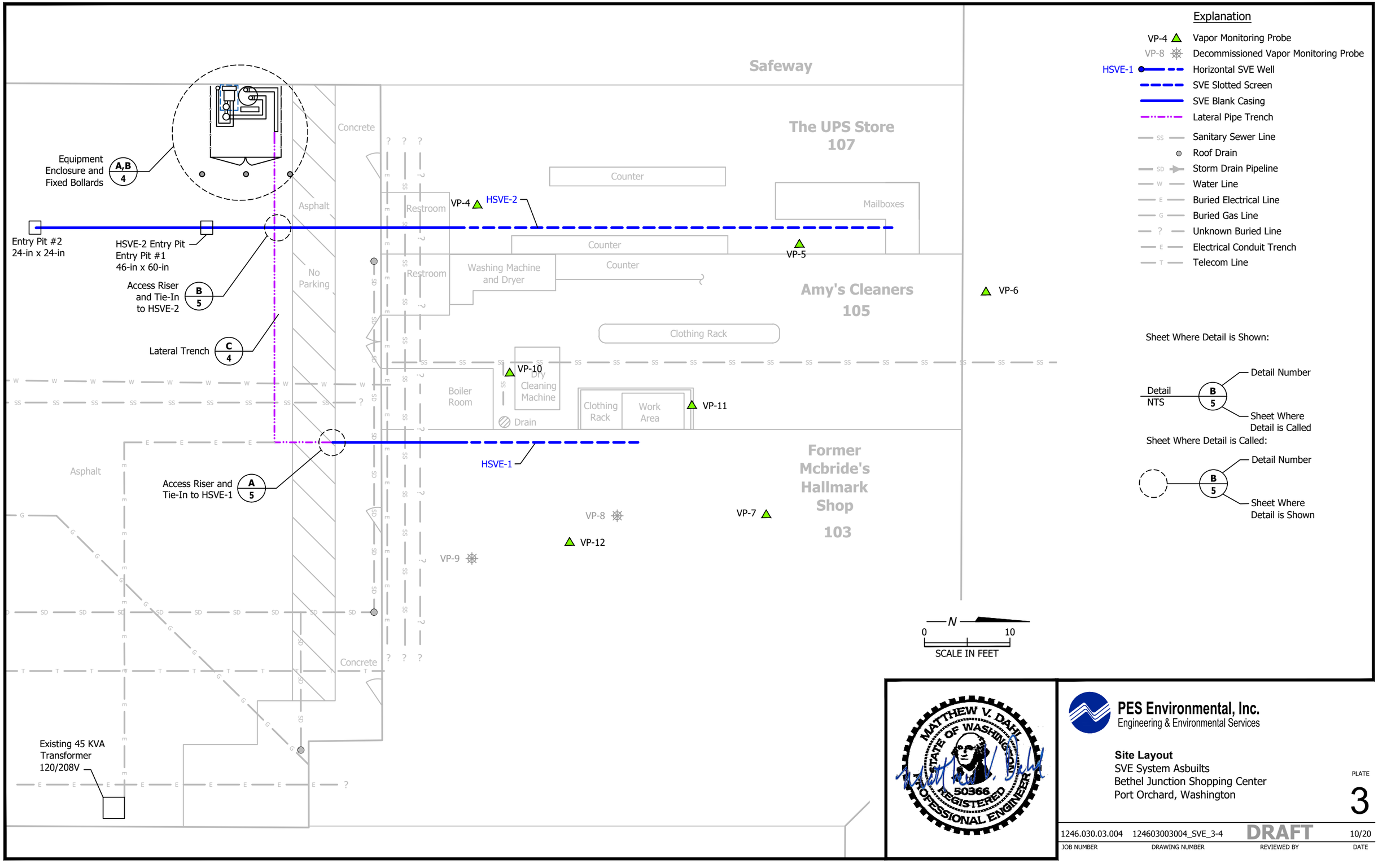
PROFESSIONAL ENGINEER

PES Environmental, Inc.
Engineering & Environmental Services

SVE Capture Zone
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE 2

1246.030.03.004	124603003004_SVE_2	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Explanation

- VP-4 — Vapor Monitoring Probe
- VP-8 — Decommissioned Vapor Monitoring Probe
- HSVE-1 — Horizontal SVE Well
- SVE Slotted Screen
- SVE Blank Casing
- Lateral Pipe Trench
- SS — Sanitary Sewer Line
- Roof Drain
- SD — Storm Drain Pipeline
- W — Water Line
- E — Buried Electrical Line
- G — Buried Gas Line
- ? — Unknown Buried Line
- E — Electrical Conduit Trench
- T — Telecom Line

Sheet Where Detail is Shown:

Detail NTS — B / 5 — Detail Number; Sheet Where Detail is Called

Sheet Where Detail is Called:

B / 5 — Detail Number; Sheet Where Detail is Shown

MATTHEW V. DAHL
STATE OF WASHINGTON
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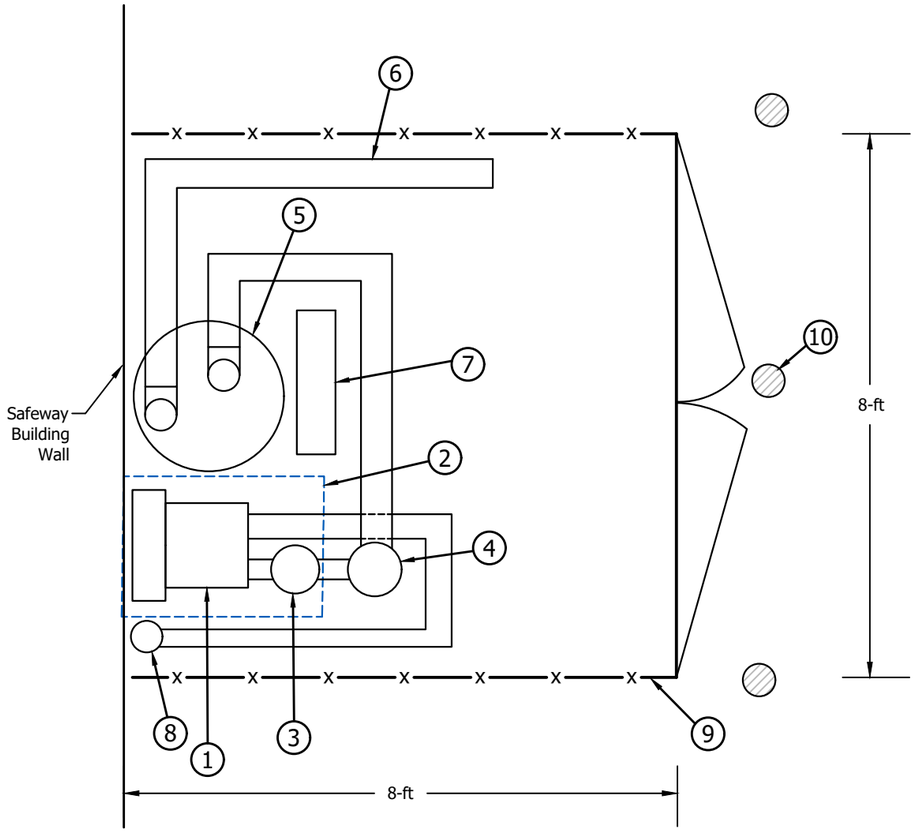
REGISTERED
PROFESSIONAL ENGINEER

PES Environmental, Inc.
Engineering & Environmental Services

Site Layout
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE 3

1246.030.03.004	124603003004_SVE_3-4	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

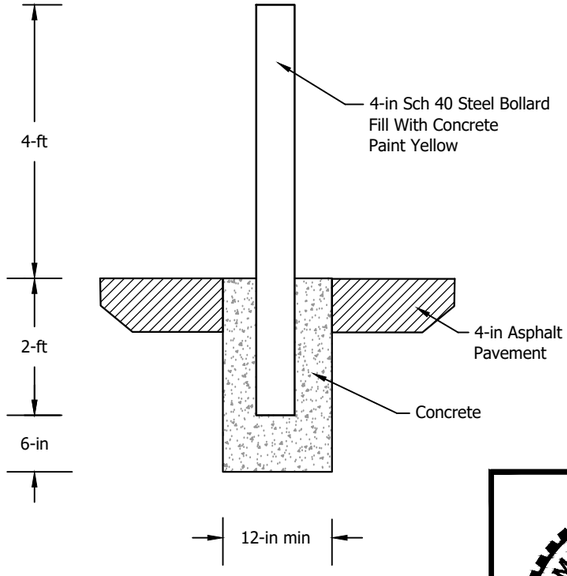


Equipment Enclosure A / 3
NTS

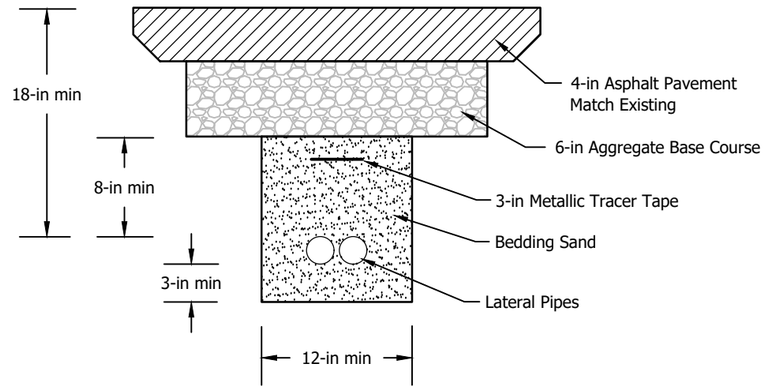
Equipment List:

1. Blower - Republic HRC30 - 2.4 hp
2. Galvanized steel noise enclosure with cooling fan. 65 dB max at 3-ft
3. Inline relief valve with air filter
4. Inline Filter
5. Condensate knockout with level switch and 1-in drain valve. Mounted on 6.5-in containment skid. 70 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

Fixed Bollard B / 3
NTS



Lateral Trench C / 3
NTS



Notes:

1. Install one or two 2-in Sch 40 PVC SVE lateral pipe in trench per Plate 3.
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.

MATTHEW V. DAHL
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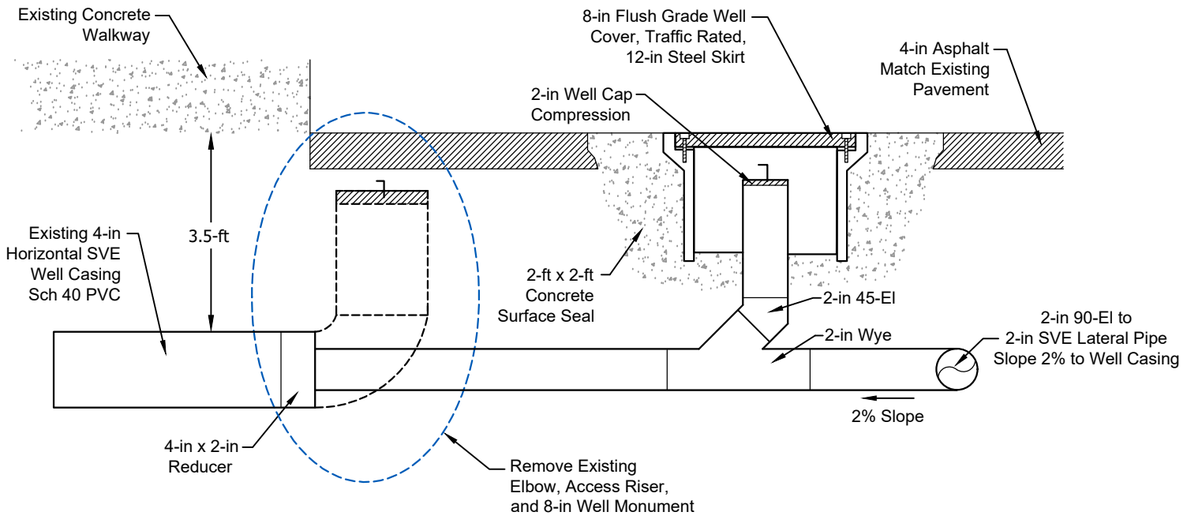
PES Environmental, Inc.
Engineering & Environmental Services

Equipment Layout and Details
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE
4

1246.030.03.004	124603003004_SVE_4-6	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

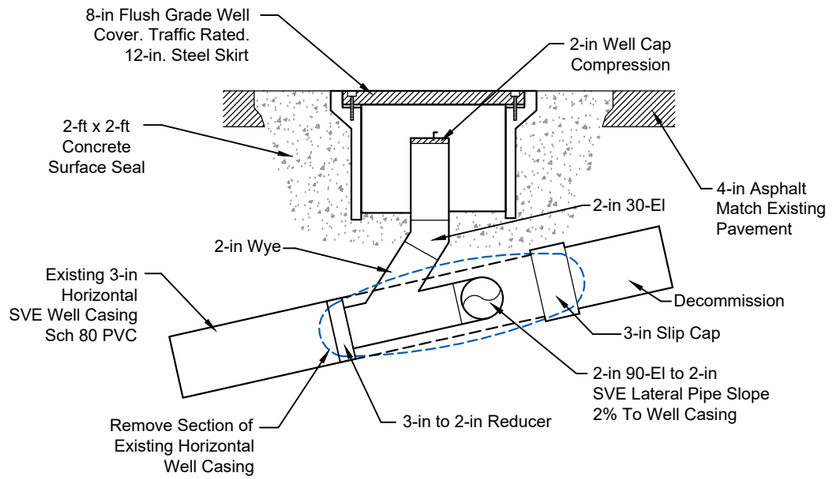
Access Riser and Tie-In To HSVE-1 (A/3)
NTS



Notes:

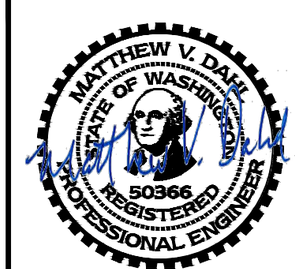
1. Existing HSVE-1 well blank casing and riser pipe are 4-in Sch 40 PVC.
2. Installed connections and piping to be Sch 40 PVC.
3. Existing casing is installed in 1-ft wide by 4-ft deep trench, and backfilled with pea gravel.
4. Excavate and expose horizontal SVE well casing and riser.
5. Remove existing 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 (B/3)
NTS



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.

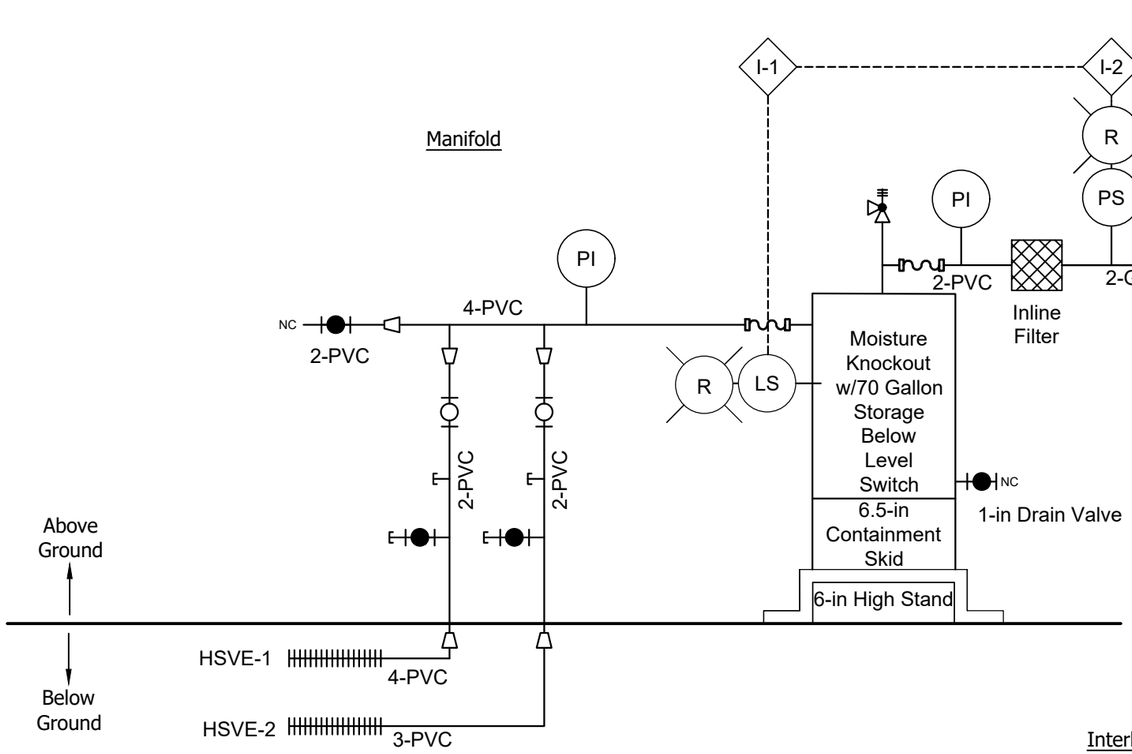


PES Environmental, Inc.
Engineering & Environmental Services

Horizontal SVE Well Access and Tie-In Details
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE 5

1246.030.03.004	124603003004_SVE_4-6	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Horizontal SVE Wells

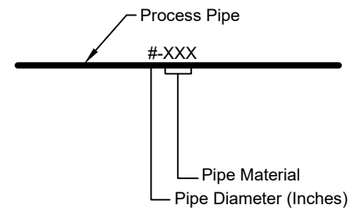
Notes:

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.

Explanation

- Ball Valve
- Normally Open
- NC Normally Closed
- Sample Port
- Threaded Plug
- Reducer
- Relief or Safety Valve
- Flexible Hose
- LS Liquid Level Switch
- PS Pressure/Vacuum Switch
- HOA Motor Control: Hand-Off-Auto
- PI Pressure/Vacuum Indicator
- TI Temperature Indicator
- R Pilot Light - Red
- I-1 Interlock

Process Pipe Identification



Interlock List

I-1. High liquid level in moisture knockout - Shut off SVE blower.
I-2. High vacuum at blower inlet pipe - Shut off SVE blower.

MATTHEW V. DAHL
STATE OF WASHINGTON
50366
REGISTERED
PROFESSIONAL ENGINEER

PES Environmental, Inc.
Engineering & Environmental Services

Process and Instrumentation Diagram
SVE System Asbuilts
Bethel Junction Shopping Center
Port Orchard, Washington

PLATE 6

1246.030.03.004	124603003004_SVE_4-6	DRAFT	10/20
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

APPENDIX B

LABORATORY REPORTS AND DATA VALIDATION MEMORANDA

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

April 10, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Your report number P1806968 has been amended for the sample submitted to our laboratory on December 18, 2018. The report has been amended to report the laboratory control spike duplicate. The revision has been indicated by the "Revised Report" footer located at the bottom right of each page.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Michael Conejo at 10:24 am, Apr 10, 2019

For Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1806968

CASE NARRATIVE

The sample was received intact under chain of custody on December 18, 2018 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in SIM mode in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1806968
Project ID: Bethel Junction / 1246.030.04

Date Received: 12/18/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
STACK-121418	P1806968-001	Air	12/14/2018	08:45	AS01373	-2.09	3.83	X

Revised Report

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) ~~10 Day Standard~~

ALS Project No. PT806968

Company Name & Address (Reporting Information)	PES ENVIRONMENTAL INC 1215 4TH AVE #1350 SEATTLE, WA 98161
Project Manager	MATT DAHL
Phone	206 529 3980
Fax	206529 3985
Email Address for Result Reporting	MDAHL@PESENV.COM
Project Name	BETHEL JUNCTION
Project Number	1246.030.04
P.O. # / Billing Information	
Sampler (Print & Sign)	SHANNON MCKERNAN
ALS Contact:	

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	HVOCS ONLY T015		Comments e.g. Actual Preservative or specific instructions
STACK-121418		12/14/18	0845	A501373		-30	-5		~~T01~~ X		

5 of 11

Revised Report

Report Tier Levels - please select
Tier I - Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) X
Tier II (Results + QC Summaries) X Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: EIM Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 12/14/18	Time: 1100	Received by: (Signature)	Date: 12/18/18	Time: 0930	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1806968

Project: Bethel Junction / 1246.030.04

Sample(s) received on: 12/18/18 Date opened: 12/18/18 by: AARON GONZALEZ

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1806968-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-121418** ALS Project ID: P1806968
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1806968-001

Test Code: EPA TO-15 SIM Date Collected: 12/14/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/18/18
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/3/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AS01373

Initial Pressure (psig): -2.09 Final Pressure (psig): 3.83

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.78	ND	0.30	
156-60-5	trans-1,2-Dichloroethene	**3.7**	0.78	**0.94**	0.20	
156-59-2	cis-1,2-Dichloroethene	**76**	7.8	**19**	2.0	**D**
79-01-6	Trichloroethene	**3.7**	0.78	**0.69**	0.15	
127-18-4	Tetrachloroethene	**61**	0.78	**9.0**	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank**
Client Project ID: **Bethel Junction / 1246.030.04**

ALS Project ID: P1806968
ALS Sample ID: P190103-MB

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang/Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 1/3/19
Volume(s) Analyzed: 1.00 Liter(s)

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1806968

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 12/14/18
Analyst: Wida Ang/Topacio De Leon Date(s) Received: 12/18/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 1/3/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190103-MB	**84**	**97**	**119**	70-130	
Lab Control Sample	P190103-LCS	**89**	**96**	**122**	70-130	
Duplicate Lab Control Sample	P190103-DLCS	**90**	**96**	**122**	70-130	
STACK-121418	P1806968-001	**82**	**97**	**120**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1806968
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190103-LCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/3/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	8.55	**8.62**	**101**	56-138	
156-60-5	trans-1,2-Dichloroethene	8.55	**8.29**	**97**	80-117	
156-59-2	cis-1,2-Dichloroethene	8.43	**8.19**	**97**	79-116	
79-01-6	Trichloroethene	8.54	**8.76**	**103**	79-116	
127-18-4	Tetrachloroethene	8.51	**8.92**	**105**	77-117	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **Bethel Junction / 1246.030.04**

ALS Project ID: P1806968
ALS Sample ID: P190103-DLCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Wida Ang/Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 1/3/19
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.55	8.62	8.72	**101**	**102**	56-138	1	25	
156-60-5	trans-1,2-Dichloroethene	8.55	8.29	8.31	**97**	**97**	80-117	0	25	
156-59-2	cis-1,2-Dichloroethene	8.43	8.19	8.19	**97**	**97**	79-116	0	25	
79-01-6	Trichloroethene	8.54	8.76	8.72	**103**	**102**	79-116	1	25	
127-18-4	Tetrachloroethene	8.51	8.92	8.85	**105**	**104**	77-117	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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LABORATORY REPORT

January 11, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on December 27, 2018. For your reference, this analysis has been assigned our service request number P1807135.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 6:02 pm, 01/11/19
Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1807135

CASE NARRATIVE

The sample was received intact under chain of custody on December 27, 2018 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1807135
Project ID: Bethel Junction / 1246.030.04

Date Received: 12/27/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 Modified - VOC SIM
MANIFOLD-122118	P1807135-001	Air	12/21/2018	12:15	1SC00236	-0.97	5.18	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P1807135

Company Name & Address (Reporting Information)	PES ENVIRONMENTAL 1215 4TH AVE #1350 SEATTLE, WA 98161
Project Name	BETHEL JUNCTION
Project Number	1246.030.04
Project Manager	M. DAHL
P.O. # / Billing Information	
Phone	206 529 3980
Fax	206 529 3985
Email Address for Result Reporting	MDAHL@PESENV.COM
Sampler (Print & Sign)	S. MCKERNAN

ALS Contact:

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15 HVOCs ONLY (PROJECT LIST)		Comments e.g. Actual Preservative or specific instructions
MANIFOLD-122118		12/21/18	1215	ISC00236		-24	-5	1L	X		

5 of 11

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) X
Tier II (Results + QC Summaries) X Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: EIM Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 12/21/18	Time: 1400	Received by: (Signature)	Date: 12/27/18	Time: 0930	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1807135

Project: Bethel Junction / 1246.030.04

Sample(s) received on: 12/27/18 Date opened: 12/27/18 by: AARON GONZALEZ

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1807135-001.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **MANIFOLD-122118** ALS Project ID: P1807135
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1807135-001

Test Code: EPA TO-15 SIM Date Collected: 12/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/27/18
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/11/19
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.13 Liter(s)
Test Notes:
Container ID: 1SC00236
Initial Pressure (psig): -0.97 Final Pressure (psig): 5.18

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	5.9	ND	2.3	
156-60-5	trans-1,2-Dichloroethene	**8.4**	5.9	**2.1**	1.5	
156-59-2	cis-1,2-Dichloroethene	**170**	5.9	**43**	1.5	
79-01-6	Trichloroethene	**9.8**	5.9	**1.8**	1.1	
127-18-4	Tetrachloroethene	**130**	5.9	**20**	0.87	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1807135
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190111-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/11/19
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1807135

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 12/21/18
Analyst: Wida Ang/Topacio De Leon Date(s) Received: 12/27/18
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 1/11/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190111-MB	**89**	**97**	**119**	70-130	
Lab Control Sample	P190111-LCS	**89**	**95**	**123**	70-130	
Duplicate Lab Control Sample	P190111-DLCS	**89**	**95**	**123**	70-130	
MANIFOLD-122118	P1807135-001	**91**	**95**	**115**	70-130	
MANIFOLD-122118	P1807135-001DUP	**91**	**96**	**118**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1807135
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190111-DLCS

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/11/19
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.55	7.76	7.91	**91**	**93**	56-138	2	25	
156-60-5	trans-1,2-Dichloroethene	8.55	7.73	7.77	**90**	**91**	80-117	1	25	
156-59-2	cis-1,2-Dichloroethene	8.43	7.64	7.68	**91**	**91**	79-116	0	25	
79-01-6	Trichloroethene	8.54	8.37	8.32	**98**	**97**	79-116	1	25	
127-18-4	Tetrachloroethene	8.51	8.54	8.48	**100**	**100**	77-117	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **PES Environmental**
Client Sample ID: **MANIFOLD-122118** ALS Project ID: P1807135
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1807135-001DUP

Test Code: EPA TO-15 SIM Date Collected: 12/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 12/27/18
Analyst: Wida Ang/Topacio De Leon Date Analyzed: 1/11/19
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.13 Liter(s)
Test Notes:
Container ID: 1SC00236
Initial Pressure (psig): -0.97 Final Pressure (psig): 5.18

Container Dilution Factor: 1.45

CAS #	Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	ND	ND	ND	ND	-	-	25	
156-60-5	trans-1,2-Dichloroethene	8.36	2.11	8.52	2.15	8.44	**2**	25	
156-59-2	cis-1,2-Dichloroethene	170	42.9	174	43.9	172	**2**	25	
79-01-6	Trichloroethene	9.75	1.82	10.1	1.88	9.925	**4**	25	
127-18-4	Tetrachloroethene	133	19.6	137	20.2	135	**3**	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

April 9, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Your report number P1901330 has been amended for a second time for the sample submitted to our laboratory on March 13, 2019. The report has been amended to report a shorter analyte list and report surrogate recoveries. The report was also amended to fix project name on cover letter. The revision has been indicated by the "Revised Report 2" footer located at the bottom right of each page.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Michael Conejo at 2:26 pm, Apr 09, 2019

For Michael Conejo
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1901330

CASE NARRATIVE

The sample was received intact under chain of custody on March 13, 2019 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1901330
Project ID: Bethel Junction / 1246.030.04

Date Received: 3/13/2019
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
STACK-030819	P1901330-001	Air	3/8/19	10:45	SC02150	-4.24	3.72	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P1907330

Company Name & Address (Reporting Information):
PES ENVIRONMENTAL
1215 4TH AVE #1350
SEATTLE, WA 98161

Project Name

Project Number

Project Manager: MATT DAHL

P.O. # / Billing Information

Phone: 206 529 3980 Fax: 206 529 3985

Email Address for Result Reporting

Sampler (Print & Sign)

ALS Contact:

Analysis Method

Comments e.g. Actual Preservative or specific instructions

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15		
STACK-030918		3/9/18	1045	SC02150	—	-28	-9		X		

5 of 15

Revised Report 2

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) X

Tier II (Results + QC Summaries) X Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No Type: EIM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	3/9/18	1340	[signature]	3-12-18	0930
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				3-13-18	

Cooler / Blank Temperature ____°C

CG 3-13-18

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1901330

Project: Bethel Junction/ 1246.030.04

Sample(s) received on: 3/13/19 Date opened: 3/13/19 by: CHRIS.GLEASON

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☒	☐	☐
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1901330-001.01	6.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-030819** ALS Project ID: P1901330
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1901330-001

Test Code: EPA TO-15 Date Collected: 3/8/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 3/13/19
Analyst: Wida Ang Date Analyzed: 3/18/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02150

Initial Pressure (psig): -4.24 Final Pressure (psig): 3.72

Container Dilution Factor: 1.76

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.93	ND	0.37	
156-60-5	trans-1,2-Dichloroethene	**1.2**	0.93	**0.30**	0.24	
156-59-2	cis-1,2-Dichloroethene	**20**	0.93	**5.0**	0.24	
79-01-6	Trichloroethene	**2.8**	0.93	**0.52**	0.17	
127-18-4	Tetrachloroethene	**26**	0.93	**3.9**	0.14	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1901330
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190318-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 3/18/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1901330

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 3/8/19
Analyst: Wida Ang Date(s) Received: 3/13/19
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 3/18/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190318-MB	**112**	**95**	**99**	70-130	
Lab Control Sample	P190318-LCS	**111**	**93**	**100**	70-130	
STACK-030819	P1901330-001	**110**	**96**	**99**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **Bethel Junction / 1246.030.04**

ALS Project ID: P1901330
ALS Sample ID: P190318-DLCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/18/19
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	214	238	234	**111**	**109**	57-117	2	25	
156-60-5	trans-1,2-Dichloroethene	214	239	235	**112**	**110**	70-115	2	25	
156-59-2	cis-1,2-Dichloroethene	211	221	216	**105**	**102**	67-110	3	25	
79-01-6	Trichloroethene	213	199	196	**93**	**92**	66-108	1	25	
127-18-4	Tetrachloroethene	213	173	172	**81**	**81**	55-120	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Response Factor Report MS13

Method Path : I:\MS13\METHODS\
Method File : R13012319.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Jan 23 11:21:29 2019
Response Via : Initial Calibration

Calibration Files
0.1 =01231906.D 0.2 =01231907.D 0.5 =01231904.D 1.0 =01231905.D 5.0 =01231908.D 25 =01231909.D 50 =01231910.D
100 =01231911.D

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------ISTD----------									
2)	T	Propene	1.086	1.026	1.144	1.076	1.116	1.075	1.030	1.147	1.088	4.25
3)	T	Dichlorodifluo...	1.809	1.904	1.983	1.928	1.929	1.844	1.767	1.701	1.858	5.11
4)	T	Chloromethane	1.367	1.297	1.705	1.481	1.555	1.501	1.434	1.201	1.443	10.85
5)	T	1,2-Dichloro-1...	1.133	1.207	1.294	1.236	1.216	1.182	1.162	1.150	1.198	4.37
6)	T	Vinyl Chloride	1.155	1.181	1.541	1.425	1.493	1.456	1.420	1.394	1.383	10.16
7)	T	1,3-Butadiene	0.839	0.766	1.099	1.063	1.193	1.139	1.130	1.094	1.040	14.71
8)	T	Bromomethane	0.974	0.896	1.022	1.000	1.047	1.027	0.990	0.981	0.992	4.64
9)	T	Chloroethane		0.661	0.806	0.783	0.799	0.786	0.755	0.739	0.761	6.58
10)	T	Ethanol	0.911	0.684	0.807	0.723	0.751	0.725	0.683	0.649	0.741	11.27
11)	T	Acetonitrile			1.720	1.655	1.785	1.902	1.857	1.846	1.794	5.19
12)	T	Acrolein			0.478	0.578	0.638	0.674	0.656	0.654	0.613	12.08
13)	T	Acetone	0.982	0.849	0.832	0.785	0.777	0.745	0.696	0.636	0.788	13.31
14)	T	Trichlorofluor...	1.578	1.534	1.687	1.609	1.592	1.510	1.479	1.468	1.557	4.73
15)	T	2-Propanol (Is...	2.391	2.376	2.589	2.458	2.558	2.520	2.371	1.931	2.399	8.63
16)	T	Acrylonitrile			0.607	0.939	1.196	1.397	1.378	1.374	1.149	27.66
17)	T	1,1-Dichloroet...	0.916	0.965	1.102	1.059	1.091	1.081	1.057	1.042	1.039	6.27
18)	T	2-Methyl-2-Pro...	2.156	2.284	2.524	2.464	2.470	2.451	2.336	2.181	2.358	5.95
19)	T	Methylene Chlo...	0.813	0.834	1.045	1.041	1.089	1.092	1.059	1.016	0.999	11.11
20)	T	3-Chloro-1-pro...	1.150	1.232	1.363	1.307	1.435	1.433	1.410	1.377	1.338	7.65
21)	T	Trichlorotrifl...	1.080	1.074	1.186	1.111	1.119	1.090	1.067	1.062	1.099	3.70
22)	T	Carbon Disulfide		4.632	4.512	4.217	3.870	3.906	3.766	3.653	4.079	9.31
23)	T	trans-1,2-Dich...	0.797	0.909	1.278	1.306	1.364	1.394	1.357	1.323	1.216	18.81
24)	T	1,1-Dichloroet...	1.655	1.724	1.814	1.782	1.815	1.738	1.683	1.631	1.730	4.07
25)	T	Methyl tert-Bu...	2.784	2.946	3.175	3.042	3.063	2.981	2.866	2.785	2.955	4.70
26)	T	Vinyl Acetate			0.227	0.242	0.266	0.276	0.263	0.247	0.253	7.11
27)	T	2-Butanone (MEK)			0.655	0.676	0.731	0.772	0.757	0.743	0.722	6.47
28)	T	cis-1,2-Dichlo...	0.980	1.145	1.394	1.307	1.349	1.337	1.291	1.259	1.258	10.69
29)	T	Diisopropyl Ether	0.828	1.007	1.104	1.080	1.089	1.048	1.001	0.953	1.014	8.96
30)	T	Ethyl Acetate			0.354	0.361	0.386	0.376	0.352	0.317	0.358	6.66
31)	T	n-Hexane	1.711	1.805	1.894	1.762	1.738	1.540	1.477	1.354	1.660	11.07
32)	T	Chloroform	1.574	1.527	1.735	1.661	1.672	1.656	1.611	1.575	1.626	4.12
33)	S	1,2-Dichloroet...	1.071	1.072	1.080	1.077	1.066	1.048	1.051	1.061	1.066	1.09
34)	T	Tetrahydrofura...	0.744	0.728	0.765	0.749	0.745	0.731	0.707	0.695	0.733	3.15
35)	T	Ethyl tert-But...	1.153	1.191	1.333	1.335	1.301	1.285	1.248	1.225	1.259	5.27
36)	T	1,2-Dichloroet...	0.877	0.970	1.089	1.066	1.085	1.092	1.051	1.028	1.032	7.24
37)	IR	1,4-Difluorobenzen...	----------ISTD----------									
38)	T	1,1,1-Trichlor...	0.312	0.333	0.341	0.331	0.341	0.340	0.328	0.315	0.330	3.42
39)	T	Isopropyl Acetate	0.156	0.166	0.173	0.164	0.164	0.160	0.149	0.135	0.159	7.45
40)	T	1-Butanol	0.226	0.166	0.225	0.207	0.226	0.243	0.227	0.207	0.216	10.78
41)	T	Benzene	1.172	1.072	1.088	1.054	1.046	1.017	0.954	0.856	1.032	9.16
42)	T	Carbon Tetrach...	0.273	0.287	0.314	0.310	0.310	0.321	0.311	0.302	0.304	5.24

VOA 1/23/19

Revised Report 2

Method Path : I:\MS13\METHODS\
Method File : R13012319.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

43)	T	Cyclohexane	0.426	0.420	0.439	0.416	0.413	0.403	0.380	0.348	0.406	7.13
44)	T	tert-Amyl Meth...	0.678	0.651	0.721	0.679	0.685	0.690	0.660	0.625	0.674	4.29
45)	T	1,2-Dichloropr...	0.231	0.230	0.253	0.241	0.245	0.241	0.230	0.218	0.236	4.61
46)	T	Bromodichlorom...	0.259	0.263	0.291	0.282	0.299	0.307	0.298	0.287	0.286	6.04
47)	T	Trichloroethene	0.276	0.295	0.318	0.297	0.306	0.308	0.299	0.288	0.298	4.31
48)	T	1,4-Dioxane	0.174	0.209	0.215	0.213	0.219	0.219	0.212	0.203	0.208	7.11
49)	T	2,2,4-Trimethy...	1.112	1.075	1.125	1.030	1.029	0.979	0.925	0.847	1.015	9.36
50)	T	Methyl Methacr...	0.066	0.083	0.103	0.104	0.110	0.115	0.112	0.106	0.100	16.93
51)	T	n-Heptane	0.253	0.254	0.268	0.250	0.257	0.248	0.238	0.223	0.249	5.39
52)	T	cis-1,3-Dichlo...			0.351	0.354	0.379	0.402	0.388	0.370	0.374	5.29
53)	T	4-Methyl-2-pen...	0.190	0.198	0.219	0.223	0.218	0.230	0.218	0.206	0.213	6.41
54)	T	trans-1,3-Dich...			0.265	0.263	0.325	0.355	0.345	0.333	0.314	12.77
55)	T	1,1,2-Trichlor...	0.212	0.228	0.255	0.243	0.251	0.252	0.244	0.235	0.240	6.04
56)	IR	Chlorobenzene-d5 (...	----------	----------	----------	ISTD	----------	----------	----------	----------	----------	
57)	S	Toluene-d8 (SS2)	2.709	2.667	2.686	2.684	2.659	2.667	2.697	2.647	2.677	0.78
58)	T	Toluene	3.569	3.054	3.117	2.710	2.713	2.647	2.581	2.371	2.845	13.36
59)	T	2-Hexanone	1.016	0.984	1.177	1.131	1.162	1.212	1.175	1.087	1.118	7.34
60)	T	Dibromochlorom...	0.567	0.610	0.682	0.676	0.736	0.771	0.764	0.740	0.693	10.69
61)	T	1,2-Dibromoethane	0.500	0.541	0.666	0.643	0.687	0.721	0.710	0.684	0.644	12.51
62)	T	n-Butyl Acetate	1.351	1.230	1.328	1.275	1.299	1.371	1.315	1.212	1.298	4.33
63)	T	n-Octane	0.639	0.526	0.539	0.516	0.521	0.507	0.488	0.446	0.523	10.53
64)	T	Tetrachloroethene	0.899	0.856	0.899	0.866	0.877	0.872	0.862	0.836	0.871	2.46
65)	T	Chlorobenzene	2.099	1.980	1.951	1.847	1.858	1.871	1.804	1.687	1.887	6.56
66)	T	Ethylbenzene	3.471	3.201	3.189	2.987	3.071	3.034	2.893	2.653	3.062	7.86
67)	T	m- & p-Xylenes	2.904	2.484	2.444	2.292	2.308	2.288	2.200	1.993	2.364	11.20
68)	T	Bromoform	0.510	0.516	0.587	0.587	0.669	0.737	0.736	0.724	0.633	15.11
69)	T	Styrene	1.735	1.728	1.842	1.740	1.943	2.016	1.956	1.824	1.848	6.08
70)	T	o-Xylene	2.815	2.470	2.499	2.262	2.304	2.281	2.196	2.020	2.356	10.14
71)	T	n-Nonane	1.296	1.341	1.217	1.136	1.168	1.110	1.035	0.910	1.152	12.08
72)	T	1,1,2,2-Tetrac...	1.151	1.109	1.120	1.089	1.120	1.137	1.092	1.014	1.104	3.80
73)	S	Bromofluoroben...	0.951	0.952	0.964	0.966	0.975	0.968	0.971	0.963	0.964	0.89
74)	T	Cumene	4.039	3.577	3.252	3.091	3.121	3.070	2.928	2.641	3.215	13.24
75)	T	alpha-Pinene	1.583	1.666	1.507	1.443	1.553	1.590	1.545	1.425	1.539	5.17
76)	T	n-Propylbenzene	4.309	3.923	3.746	3.483	3.571	3.520	3.335	2.961	3.606	11.13
77)	T	3-Ethyltoluene	3.393	3.262	3.058	2.956	3.092	3.023	3.040	2.621	3.056	7.40
78)	T	4-Ethyltoluene	3.821	3.378	3.085	2.892	2.962	3.011	2.714	2.565	3.053	12.89
79)	T	1,3,5-Trimethy...	3.551	3.021	2.644	2.458	2.558	2.529	2.437	2.241	2.680	15.54
80)	T	alpha-Methylst...	1.239	1.204	1.192	1.141	1.458	1.514	1.472	1.364	1.323	11.07
81)	T	2-Ethyltoluene	4.069	3.458	3.397	2.986	3.033	3.007	2.883	2.606	3.180	14.17
82)	T	1,2,4-Trimethy...	3.299	2.774	2.702	2.437	2.554	2.535	2.395	2.102	2.600	13.41
83)	T	n-Decane	1.426	1.437	1.289	1.214	1.301	1.262	1.176	1.016	1.265	10.76
84)	T	Benzyl Chloride			1.612	1.503	1.912	2.206	2.171	2.005	1.901	15.22
85)	T	1,3-Dichlorobe...	1.822	1.622	1.645	1.478	1.603	1.674	1.651	1.557	1.631	6.06
86)	T	1,4-Dichlorobe...	2.044	1.716	1.776	1.575	1.653	1.699	1.670	1.568	1.713	8.82
87)	T	sec-Butylbenzene	4.377	4.182	3.654	3.422	3.532	3.473	3.303	2.930	3.609	12.97
88)	T	4-Isopropyltol...	3.963	3.909	3.479	3.234	3.401	3.315	3.076	2.574	3.369	13.26
89)	T	1,2,3-Trimethy...	3.027	2.856	2.585	2.417	2.580	2.563	2.431	2.117	2.572	10.79
90)	T	1,2-Dichlorobe...	1.866	1.629	1.643	1.471	1.553	1.601	1.552	1.425	1.592	8.38
91)	T	d-Limonene	0.921	0.995	0.823	0.795	0.987	1.001	0.938	0.799	0.907	9.79
92)	T	1,2-Dibromo-3-...	0.588	0.498	0.569	0.501	0.584	0.630	0.626	0.609	0.576	8.91
93)	T	n-Undecane	1.106	1.062	1.086	1.030	1.352	1.349	1.256	1.092	1.167	11.25
94)	T	1,2,4-Trichlor...	1.429	0.899	1.295	0.974	1.227	1.320	1.301	1.254	1.212	14.95

Method Path : I:\MS13\METHODS\
Method File : R13012319.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

95)	T	Naphthalene		2.338	3.658	2.347	3.720	4.006	3.800	3.281	3.307	20.98
96)	T	n-Dodecane			1.159	0.696	1.263	1.298	1.178	0.952	1.091	20.92
97)	T	Hexachlorobuta...	1.262	0.980	0.893	0.755	0.816	0.834	0.840	0.829	0.901	17.74
98)	T	Cyclohexanone	1.010	0.860	0.896	0.836	0.762	0.872	0.854	0.802	0.862	8.50
99)	T	tert-Butylbenzene	3.242	3.109	2.704	2.543	2.601	2.548	2.391	2.067	2.651	14.23
100)	T	n-Butylbenzene	2.961	2.833	2.655	2.498	2.706	2.682	2.550	2.272	2.645	7.96

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : I:\MS13\DATA\2019 03\18\03181901.D Vial: 2
Acq On : 18 Mar 2019 2:42 Operator: WA
Sample : CCV R13031819 25ng Inst : MS13
Misc : S31-02211904/S31-02281905

Quant Time: Mar 18 06:29:15 2019
Quant Method : I:\MS13\METHODS\R13012319.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jan 23 11:21:29 2019
Response via : Initial Calibration
DataAcq Meth:TO15.M

WA 3/18/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	74	-0.01
2	T	Propene	1.088	1.092	-0.4	75	-0.01
3	T	Dichlorodifluoromethane (CF	1.858	1.780	4.2	71	-0.01
4	T	Chloromethane	1.443	1.559	-8.0	77	-0.01
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.198	1.101	8.1	69	-0.01
6	T	Vinyl Chloride	1.383	1.464	-5.9	74	-0.01
7	T	1,3-Butadiene	1.040	1.166	-12.1	76	-0.02
8	T	Bromomethane	0.992	0.941	5.1	68	-0.02
9	T	Chloroethane	0.761	0.731	3.9	69	-0.02
10	T	Ethanol	0.741	0.738	0.4	75	-0.07
11	T	Acetonitrile	1.794	1.913	-6.6	74	-0.05
12	T	Acrolein	0.613	0.657	-7.2	72	-0.02
13	T	Acetone	0.788	0.710	9.9	70	-0.04
14	T	Trichlorofluoromethane	1.557	1.420	8.8	69	-0.02
15	T	2-Propanol (Isopropanol)	2.399	2.499	-4.2	73	-0.05
16	T	Acrylonitrile	1.149	1.355	-17.9	72	-0.03
17	T	1,1-Dichloroethene	1.039	0.960	7.6	66	-0.01
18	T	2-Methyl-2-Propanol (tert-B	2.358	2.375	-0.7	72	-0.05
19	T	Methylene Chloride	0.999	0.984	1.5	67	-0.02
20	T	3-Chloro-1-propene (Allyl C	1.338	1.350	-0.9	70	-0.02
21	T	Trichlorotrifluoroethane	1.099	0.932	15.2	63	-0.01
22	T	Carbon Disulfide	4.079	3.619	11.3	68	-0.02
23	T	trans-1,2-Dichloroethene	1.216	1.274	-4.8	68	-0.01
24	T	1,1-Dichloroethane	1.730	1.579	8.7	67	-0.01
25	T	Methyl tert-Butyl Ether	2.955	2.690	9.0	67	-0.01
26	T	Vinyl Acetate	0.253	0.242	4.3	65	-0.03
27	T	2-Butanone (MEK)	0.722	0.684	5.3	65	-0.02
28	T	cis-1,2-Dichloroethene	1.258	1.239	1.5	68	-0.02
29	T	Diisopropyl Ether	1.014	0.923	9.0	65	-0.01
30	T	Ethyl Acetate	0.358	0.347	3.1	68	-0.02
31	T	n-Hexane	1.660	1.289	22.3	62	0.00
32	T	Chloroform	1.626	1.515	6.8	68	-0.02
33	S	1,2-Dichloroethane-d4(SS1)	1.066	1.192	-11.8	84	-0.01
34	T	Tetrahydrofuran (THF)	0.733	0.648	11.6	66	0.00
35	T	Ethyl tert-Butyl Ether	1.259	1.139	9.5	65	-0.01
36	T	1,2-Dichloroethane	1.032	1.027	0.5	69	0.00
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	72	0.00
38	T	1,1,1-Trichloroethane	0.330	0.318	3.6	67	-0.01
39	T	Isopropyl Acetate	0.159	0.153	3.8	69	0.00
40	T	1-Butanol	0.216	0.251	-16.2	74	-0.03
41	T	Benzene	1.032	0.923	10.6	65	0.00
42	T	Carbon Tetrachloride	0.304	0.302	0.7	67	0.00
43	T	Cyclohexane	0.406	0.368	9.4	66	0.00
44	T	tert-Amyl Methyl Ether	0.674	0.639	5.2	67	0.00
45	T	1,2-Dichloropropane	0.236	0.226	4.2	67	-0.01
46	T	Bromodichloromethane	0.286	0.289	-1.0	68	0.00
47	T	Trichloroethene	0.298	0.267	10.4	62	0.00
48	T	1,4-Dioxane	0.208	0.205	1.4	67	0.00
49	T	2,2,4-Trimethylpentane (Iso	1.015	0.914	10.0	67	0.00
50	T	Methyl Methacrylate	0.100	0.100	0.0	63	-0.01
51	T	n-Heptane	0.249	0.218	12.4	63	0.00
52	T	cis-1,3-Dichloropropene	0.374	0.372	0.5	67	0.00
53	T	4-Methyl-2-pentanone	0.213	0.219	-2.8	68	0.00
54	T	trans-1,3-Dichloropropene	0.314	0.333	-6.1	67	0.00
55	T	1,1,2-Trichloroethane	0.240	0.227	5.4	65	0.00

Revised Report 2

Evaluate Continuing Calibration Report

Data File : I:\MS13\DATA\2019 03\18\03181901.D Vial: 2
Acq On : 18 Mar 2019 2:42 Operator: WA
Sample : CCV R13031819 25ng Inst : MS13
Misc : S31-02211904/S31-02281905

Quant Time: Mar 18 06:29:15 2019
Quant Method : I:\MS13\METHODS\R13012319.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Jan 23 11:21:29 2019
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	81	0.00
57	S	Toluene-d8 (SS2)	2.677	2.497	6.7	75	0.00
58	T	Toluene	2.845	2.133	25.0	65	0.00
59	T	2-Hexanone	1.118	1.102	1.4	73	0.00
60	T	Dibromochloromethane	0.693	0.625	9.8	65	0.00
61	T	1,2-Dibromoethane	0.644	0.584	9.3	65	0.00
62	T	n-Butyl Acetate	1.298	1.227	5.5	72	0.00
63	T	n-Octane	0.523	0.420	19.7	67	0.00
64	T	Tetrachloroethene	0.871	0.668	23.3	62	0.00
65	T	Chlorobenzene	1.887	1.492	20.9	64	0.00
66	T	Ethylbenzene	3.062	2.454	19.9	65	0.00
67	T	m- & p-Xylenes	2.364	1.871	20.9	66	0.00
68	T	Bromoform	0.633	0.592	6.5	65	0.00
69	T	Styrene	1.848	1.591	13.9	64	0.00
70	T	o-Xylene	2.356	1.869	20.7	66	0.00
71	T	n-Nonane	1.152	0.987	14.3	72	0.00
72	T	1,1,2,2-Tetrachloroethane	1.104	0.955	13.5	68	0.00
73	S	Bromofluorobenzene (SS3)	0.964	0.957	0.7	80	0.00
74	T	Cumene	3.215	2.489	22.6	65	0.00
75	T	alpha-Pinene	1.539	1.267	17.7	64	0.00
76	T	n-Propylbenzene	3.606	2.898	19.6	66	0.00
77	T	3-Ethyltoluene	3.056	2.486	18.7	66	0.00
78	T	4-Ethyltoluene	3.053	2.382	22.0	64	0.00
79	T	1,3,5-Trimethylbenzene	2.680	2.059	23.2	66	0.00
80	T	alpha-Methylstyrene	1.323	1.182	10.7	63	0.00
81	T	2-Ethyltoluene	3.180	2.451	22.9	66	0.00
82	T	1,2,4-Trimethylbenzene	2.600	2.096	19.4	67	0.00
83	T	n-Decane	1.265	1.081	14.5	69	0.00
84	T	Benzyl Chloride	1.901	1.871	1.6	68	0.00
85	T	1,3-Dichlorobenzene	1.631	1.323	18.9	64	0.00
86	T	1,4-Dichlorobenzene	1.713	1.342	21.7	64	0.00
87	T	sec-Butylbenzene	3.609	2.826	21.7	66	0.00
88	T	4-Isopropyltoluene (p-Cymen	3.369	2.745	18.5	67	0.00
89	T	1,2,3-Trimethylbenzene	2.572	2.136	17.0	67	0.00
90	T	1,2-Dichlorobenzene	1.592	1.278	19.7	64	0.00
91	T	d-Limonene	0.907	0.838	7.6	67	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.576	0.509	11.6	65	0.00
93	T	n-Undecane	1.167	1.174	-0.6	70	0.00
94	T	1,2,4-Trichlorobenzene	1.212	1.042	14.0	64	0.00
95	T	Naphthalene	3.307	3.244	1.9	65	0.00
96	T	n-Dodecane	1.091	1.178	-8.0	73	0.00
97	T	Hexachlorobutadiene	0.901	0.663	26.4	64	0.01
98	T	Cyclohexanone	0.862	0.807	6.4	75	0.00
99	T	tert-Butylbenzene	2.651	2.086	21.3	66	0.00
100	T	n-Butylbenzene	2.645	2.235	15.5	67	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

MEMORANDUM

TO: Project File **DATE:** April 10, 2019

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Bethel Junction - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1246.030.04.003

TASK: EIM Data Validation Level EPA2A – December 14 and 21, 2018 and March 8, 2019 Air Samples

LAB: ALS Environmental P1806968R, P1807135, and P1901330R2

Three (3) soil vapor extraction samples were collected on December 14 and 21, 2018 and March 8, 2019 as part of a remediation system startup and operation at Amy's Cleaners in the Bethel Junction Shopping Center in Port Orchard, Washington. One soil vapor extraction sample was placed on hold. The remaining sample was analyzed for five VOCs (vinyl chloride, trans-1,2-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and tetrachloroethene) by USEPA Method TO-15 (*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*, Second Edition, EPA/625/R-96/010B, January 1999). Laboratory analytical services were provided by ALS Environmental (ALS) (also known as ALS Global (ALS)) of Simi Valley, California. Analytical data are reported under ALS's service request numbers P1806968R, P1807135, and P1901330R2.

The quality assurance review of the laboratory data is summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation 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 Superfund Organic Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

The samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report with the following discussion:

- SDG P1901330R1 report was revised on March 28, 2019 by ALS per PES's request to report project selected VOC results.

- SDG P1901330R2 report was revised on April 9, 2019 by ALS per PES's request to revise sections of the laboratory report headers to read "Bethel Junction/1246.030.04" and to provide a summary of surrogate recoveries.

- SDG P1806968R report was revised on April 10, 2019 per PES's request to include a measure of precision (laboratory control sample duplicate).

Sample Collection and Preservation

The laboratory supplied either Silonite or Source Can canisters (6-Liter or 1-Liter) for the air sample. The sample was shipped, delivered by FedEx, and received in good condition by the laboratory. The sample was collected, handled, and delivered in an appropriate manner. Review of the Sample Acceptance Check Form indicates that signed chain of custody seals were not placed on the exterior of the cooler. No action is taken other than to note that the samples were received in good condition. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by Method TO-15 was performed within the 30-day recommended holding time limit for the air samples collected in the canisters. 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. Case narrative and laboratory notes do not indicate that there are any issues with calibration.

Method Blank Results

Laboratory method blanks were included with the analytical batch per method requirement. The method blank results did not report any compounds at concentrations at or above the method reporting limits (MRLs).

Trip Blank Results

A trip blank was not required for the VOCs by 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/Replicate Analyses

A laboratory duplicate was performed on one sample (MANIFOLD-122118) from SDG P1807135. Relative percent differences (RPDs) are less than the laboratory control limit criteria of 25%. Refer to the Laboratory Control Sample section for additional information for accuracy and/or precision.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air samples, method blanks, and laboratory control samples are within the laboratory surrogate control limits of 70 - 130% R. No data qualifications were warranted.

Laboratory Control Samples

Laboratory control samples/laboratory control sample duplicates (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. LCS/LCSD %Rs and relative percent differences (RPDs) are within QC criteria with the following discussion:

- SDG P1806968R: An LCSD was requested and submitted for review. LCS/LCSD %Rs and relative percent differences (RPDs) are within QC criteria.

Matrix Spike/Matrix Spike Duplicates

A matrix spike/matrix spike duplicate (MS/MSD) is not required for the VOCs by TO-15 method.

Other Quality Control Issues

No other laboratory quality control issues were identified in the laboratory report.

Quantitation Limits

Results of the VOCs by TO-15 analysis are reported based on laboratory MRLs (assuming standard temperature and pressure is equal to 24.45) and reported in units of ppbv and $\mu g/m^3$.

The MRLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. Sample STACK-121418 MRL for cis-1,2-dichloroethene is elevated due to a method-required dilution. The MRLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

No data qualifiers are assigned. All data are judged to be acceptable for their intended use.

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LABORATORY REPORT

May 3, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: BETHEL JUNCTION / 1246.030.04.003

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on April 19, 2019. For your reference, this analysis has been assigned our service request number P1902206.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 6:01 pm, 05/03/19

Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: BETHEL JUNCTION / 1246.030.04.003

Service Request No: P1902206

CASE NARRATIVE

The sample was received intact under chain of custody on April 19, 2019 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental Service Request: P1902206

Project ID: BETHEL JUNCTION / 1246.030.04.003

Date Received: 4/19/2019

Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
STACK-041619	P1902206-001	Air	4/16/2019	12:45	AS01222	-2.03	3.76	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Phone (805) 526-7161
Fax (805) 526-7270

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No. P190 2206

Company Name & Address (Reporting Information)	PES ENVIRONMENTAL 1415 4TH AVE #1350 SEATTLE, WA 98161
Project Manager	MATT DAHL
Phone	206 529 3980
Fax	206 529 3985
Email Address for Result Reporting	MDAHL@PESENV.COM
Project Name	BETHEL JUNCTION
Project Number	1246.030.04.003
P.O. # / Billing Information	
Sampler (Print & Sign)	SHANNON McKERNAN
ALS Contact:	

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 (PROJECT ANALYTE LIST)		Comments e.g. Actual Preservative or specific instructions
STACK-041619	1	4/16/19	1245	AS01222		-29	-4		X		

5 of 10

Report Tier Levels - please select

Tier I - Results (Default if not specified) _____
Tier II (Results + QC Summaries) X
Tier III (Results + QC & Calibration Summaries) X
Tier IV (Data Validation Package) 10% Surcharge _____

EDD required Yes / No
Type: EIM Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 4/16/19	Time: 1335	Received by: (Signature)	Date:	Time:	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 4/17/19	Time: 0930	Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1902206

Project: BETHEL JUNCTION / 1246.030.04.003

Sample(s) received on: 4/19/19 Date opened: 4/19/19 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1902206-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-041619** ALS Project ID: P1902206
Client Project ID: **BETHEL JUNCTION / 1246.030.04.003** ALS Sample ID: P1902206-001

Test Code: EPA TO-15 Date Collected: 4/16/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 4/19/19
Analyst: Lusine Hakobyan Date Analyzed: 4/30/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01222

Initial Pressure (psig): -2.03 Final Pressure (psig): 3.76

Container Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.77	ND	0.30	
156-60-5	trans-1,2-Dichloroethene	**0.94**	0.77	**0.24**	0.20	
156-59-2	cis-1,2-Dichloroethene	**15**	0.77	**3.8**	0.20	
79-01-6	Trichloroethene	**2.5**	0.77	**0.47**	0.14	
127-18-4	Tetrachloroethene	**21**	0.77	**3.1**	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1902206
Client Project ID: **BETHEL JUNCTION / 1246.030.04.003** ALS Sample ID: P190429-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 4/29/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **BETHEL JUNCTION / 1246.030.04.003** ALS Project ID: P1902206

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 4/16/19
Analyst: Lusine Hakobyan Date(s) Received: 4/19/19
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 4/29 - 4/30/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190429-MB	**104**	**99**	**91**	70-130	
Lab Control Sample	P190429-LCS	**103**	**97**	**92**	70-130	
Duplicate Lab Control Sample	P190429-DLCS	**104**	**97**	**91**	70-130	
STACK-041619	P1902206-001	**106**	**83**	**84**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1902206
Client Project ID: **BETHEL JUNCTION / 1246.030.04.003** ALS Sample ID: P190429-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 4/29/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	214	217	221	**101**	**103**	57-117	2	25	
156-60-5	trans-1,2-Dichloroethene	214	223	225	**104**	**105**	70-115	1	25	
156-59-2	cis-1,2-Dichloroethene	211	216	217	**102**	**103**	67-110	1	25	
79-01-6	Trichloroethene	213	196	192	**92**	**90**	66-108	2	25	
127-18-4	Tetrachloroethene	213	188	186	**88**	**87**	55-120	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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LABORATORY REPORT

June 13, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Juction / 1246.030.04

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on May 30, 2019. For your reference, this analysis has been assigned our service request number P1903122.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Michael Conejo at 4:46 pm, Jun 13, 2019

Michael Conejo
Project Manager

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Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Juction / 1246.030.04

Service Request No: P1903122

CASE NARRATIVE

The sample was received intact under chain of custody on May 30, 2019 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-18-9
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272018-9
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1903122
Project ID: Bethel Juction / 1246.030.04

Date Received: 5/30/2019
Time Received: 10:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
STACK-052319	P1903122-001	Air	5/23/2019	12:15	AS01370	-2.36	3.73	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No: 1903122

ALS Contact:

Company Name & Address (Reporting Information)
PES ENVIRONMENTAL
1215 4TH AVE #1350
SEATTLE, WA 98161

Project Name: BETHEL JUNCTION

Project Number: 1246.030.04

Project Manager: M. DAHL

P.O. # / Billing Information

Phone: 206 529 3980 Fax: 206 529 3985

Email Address for Result Reporting: MDAHL@PESENV.COM

Sampler (Print & Sign): SHANNON MCKERNAN

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	TO-15 (PROJECT LIST)		Comments e.g. Actual Preservative or specific instructions
STACK-052319		5/23/19	1215	AS01370	—	28	3		X		

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Report Tier Levels - please select
Tier I - Results (Default in not specified) ____ Tier III (Results + QC & Calibration Summaries) X
Tier II (Results + QC Summaries ____ Tier IV (Date Validation Package) 10% Surcharge ____

EDD required YES / No
Type: EFM Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	5/24/19	04:15P		5/30/19	1000
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____°C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1903122

Project: Bethel Juction / 1246.030.04

Sample(s) received on: 5/30/19 Date opened: 5/30/19 by: HAYDEN.AKERS

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1903122-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-052319** ALS Project ID: P1903122
Client Project ID: **Bethel Juction / 1246.030.04** ALS Sample ID: P1903122-001

Test Code: EPA TO-15 Date Collected: 5/23/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 5/30/19
Analyst: Wida Ang Date Analyzed: 6/10/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01370

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.73

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
156-59-2	cis-1,2-Dichloroethene	**11**	0.79	**2.9**	0.20	
79-01-6	Trichloroethene	**3.0**	0.79	**0.55**	0.15	
127-18-4	Tetrachloroethene	**28**	0.79	**4.1**	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1903122
Client Project ID: **Bethel Juction / 1246.030.04** ALS Sample ID: P190610-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 6/10/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Juction / 1246.030.04** ALS Project ID: P1903122

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 5/23/19
Analyst: Wida Ang Date(s) Received: 5/30/19
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 6/10/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190610-MB	**100**	**104**	**106**	70-130	
Lab Control Sample	P190610-LCS	**98**	**102**	**111**	70-130	
Duplicate Lab Control Sample	P190610-DLCS	**96**	**102**	**110**	70-130	
STACK-052319	P1903122-001	**100**	**101**	**114**	70-130	
STACK-052319	P1903122-001DUP	**100**	**101**	**113**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1903122
Client Project ID: **Bethel Juction / 1246.030.04** ALS Sample ID: P190610-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 6/10/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	214	210	216	**98**	**101**	57-117	3	25	
156-60-5	trans-1,2-Dichloroethene	214	207	205	**97**	**96**	70-115	1	25	
156-59-2	cis-1,2-Dichloroethene	211	195	195	**92**	**92**	67-110	0	25	
79-01-6	Trichloroethene	213	215	211	**101**	**99**	66-108	2	25	
127-18-4	Tetrachloroethene	213	222	221	**104**	**104**	55-120	0	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **PES Environmental**
Client Sample ID: **STACK-052319** ALS Project ID: P1903122
Client Project ID: **Bethel Juction / 1246.030.04** ALS Sample ID: P1903122-001DUP

Test Code: EPA TO-15 Date Collected: 5/23/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 5/30/19
Analyst: Wida Ang Date Analyzed: 6/10/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS01370

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.73

Container Dilution Factor: 1.49

Compound	Sample Result µg/m³	Sample Result ppbV	Duplicate Sample Result µg/m³	Duplicate Sample Result ppbV	Average µg/m³	% RPD	RPD Limit	Data Qualifier
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
cis-1,2-Dichloroethene	11.4	2.88	11.8	2.98	11.6	**3**	25	
Trichloroethene	2.96	0.551	3.01	0.561	2.985	**2**	25	
Tetrachloroethene	28.0	4.13	28.5	4.20	28.25	**2**	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

July 15, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04.003

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on June 28, 2019. For your reference, this analysis has been assigned our service request number P1903836.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 4:44 pm, 07/15/19

For Hayden Akers
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Juction / 1246.030.04.003

Service Request No: P1903836

CASE NARRATIVE

The sample was received intact under chain of custody on June 28, 2019 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental Service Request: P1903836

Project ID: Bethel Juction / 1246.030.04.003

Date Received: 6/28/2019

Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
STACK-062519	P1903836-001	Air	6/25/2019	10:40	AC02407	-2.52	3.67	X

ALS

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P1903836

ALS Contact:

Company Name & Address (Reporting Information): PES Environmental, 1215 4th Ave Suite 1350, Seattle, WA 98161

Project Name: Bethel Junction

Project Number: 1246.030.04.003

Project Manager: Matt Dahl

P.O. # / Billing Information:

Phone: (206) 529-3980

Fax: (206) 529-3985

Email Address for Result Reporting: MDAHL@PESENV.COM

Sampler (Print & Sign): Ben Hecht [signature]

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 Project List		Comments e.g. Actual Preservative or specific instructions
STACK-062519	1	6/25/19	1040	AC02407		-28	-4		X		

BSH 6-25-19

Report Tier Levels - please select
Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) ✓
Tier IV (Data Validation Package) 10% Surcharge ____

EDD required (Yes) / No
Type: EIM Units: ____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	6/25/19	1200			
			[signature]	6/28/19	0830

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1903836

Project: Bethel Juction / 1246.030.04.003

Sample(s) received on: 6/28/19 Date opened: 6/28/19 by: KATE.KANEKO

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1903836-001.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-062519** ALS Project ID: P1903836
Client Project ID: **Bethel Juction / 1246.030.04.003** ALS Sample ID: P1903836-001

Test Code: EPA TO-15 Date Collected: 6/25/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 6/28/19
Analyst: Lusine Hakobyan Date Analyzed: 7/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02407

Initial Pressure (psig): -2.52 Final Pressure (psig): 3.67

Container Dilution Factor: 1.51

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
156-59-2	cis-1,2-Dichloroethene	**11**	0.80	**2.7**	0.20	
79-01-6	Trichloroethene	**3.0**	0.80	**0.57**	0.15	
127-18-4	Tetrachloroethene	**25**	0.80	**3.7**	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1903836
Client Project ID: **Bethel Juction / 1246.030.04.003** ALS Sample ID: P190710-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 7/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Juction / 1246.030.04.003** ALS Project ID: P1903836

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 6/25/19
Analyst: Lusine Hakobyan Date(s) Received: 6/28/19
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 7/10/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190710-MB	**95**	**96**	**102**	70-130	
Lab Control Sample	P190710-LCS	**93**	**94**	**104**	70-130	
STACK-062519	P1903836-001	**93**	**94**	**105**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1903836
Client Project ID: **Bethel Juction / 1246.030.04.003** ALS Sample ID: P190710-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 7/10/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	214	**169**	**79**	57-117	
156-60-5	trans-1,2-Dichloroethene	214	**170**	**79**	70-115	
156-59-2	cis-1,2-Dichloroethene	211	**172**	**82**	67-110	
79-01-6	Trichloroethene	213	**170**	**80**	66-108	
127-18-4	Tetrachloroethene	213	**175**	**82**	55-120	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

MEMORANDUM

TO: Project File **DATE:** July 25, 2019

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Bethel Junction - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1246.030.04.003

TASK: EIM Data Validation Level EPA2A – April 16, May 23, and June 25, 2019 Air Samples

LAB: ALS Environmental Service Request Nos: P1902206, P1903122, and P1903836

Three (3) soil vapor extraction samples were collected on April 16, May 23, and June 25 of 2019 as part SVE system performance sampling in Port Orchard, Washington. Samples were analyzed for five VOCs (vinyl chloride, trans-1,2-dichloroethene, cis-1,2-dichloroethene, trichloroethene, and tetrachloroethene) by USEPA Method TO-15 (*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*, Second Edition, EPA/625/R-96/010B, January 1999). Laboratory analytical services were provided by ALS Environmental (ALS) (also known as ALS Global (ALS)) of Simi Valley, California. Analytical data are reported under ALS's service request P1902206, P1903122, and P1903836.

The quality assurance review of the laboratory data is summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation 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 Superfund Organic Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

The 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 either Silonite or Ambient Can canisters (6-Liter) for the air samples. The samples were shipped, delivered by FedEx, and received in good condition by the

laboratory. The samples were collected, handled, and delivered in an appropriate manner. Review of the Sample Acceptance Check Form indicates that signed chain of custody seals were not placed on the exterior of the cooler or container. No action is taken other than to note that the samples were received in good condition. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analyses for VOCs by Method TO-15 was performed within the 30-day recommended holding time limit for the air samples collected in the canisters. 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. Case narrative and laboratory notes do not indicate that there are any issues with calibration.

Method Blank Results

Laboratory method blanks were included with the analytical batch per method requirement. The method blank results did not report any compounds at concentrations at or above the method reporting limits (MRLs).

Trip Blank Results

A trip blank was not required for the VOCs by 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/Replicate Analyses

A laboratory duplicate was performed on one sample (STACK-052319) from SDG P1903122. Relative percent differences (RPDs) are less than the laboratory control limit criteria of 25%. Refer to the Laboratory Control Sample section for additional information for accuracy and/or precision.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air samples, laboratory duplicates, method blanks, and laboratory control samples are within the laboratory surrogate control limits of 70 -130% R. No data qualifications were warranted.

Laboratory Control Samples

Laboratory control samples/laboratory control sample duplicates (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. LCS/LCSD %Rs and relative percent differences (RPDs) are within QC criteria with the following discussion:

- SDG P1903836: An LCSD was not performed. No action was taken other than to note that no measure of precision was provided.

Matrix Spike/Matrix Spike Duplicates

A matrix spike/matrix spike duplicate (MS/MSD) is not required for the VOCs by TO-15 method.

Other Quality Control Issues

No other laboratory quality control issues were identified in the laboratory report.

Quantitation Limits

Results of the VOCs by TO-15 analysis are reported based on laboratory MRLs (assuming standard temperature and pressure is equal to 24.45) and reported in units of ppbv and $\mu g/m^3$.

The MRLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The MRLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

No data qualifiers are assigned. All data are judged to be acceptable for their intended use.

2655 Park Center Dr., Suite A
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T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

August 16, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on August 2, 2019. For your reference, this analysis has been assigned our service request number P1904551.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 11:34 am, Aug 16, 2019

For Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1904551

CASE NARRATIVE

The sample was received intact under chain of custody on August 2, 2019 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The container was cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1904551
Project ID: Bethel Junction / 1246.030.04

Date Received: 8/2/2019
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
HSVE-2-073019	P1904551-001	Air	7/30/2019	15:00	AC02228	-2.23	4.51	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. P1904551

Company Name & Address (Reporting Information)	PES Environmental, 1215 4th Ave, Suite 1350, Seattle, WA 98161	Project Name	Bethel Junction
Project Manager	Matt Dahl	Project Number	1246.030.04
Phone	(206) 529-3980	Fax	(206) 529-3985
Email Address for Result Reporting	MDAHL@PESENV.COM	P.O. # / Billing Information	
Sampler (Print & Sign)	Ben Hecht		

ALS Contact:

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
HSVE-2-073019		7-30-19	1500	AC02228		-30	-4	~6L	TO-15		

5 of 10

Report Tier Levels - please select

Tier I - Results (Default if not specified) _____
Tier II (Results + QC Summaries) _____
Tier III (Results + QC & Calibration Summaries) _____
Tier IV (Data Validation Package) 10% Surcharge _____

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 7-30-19	Time: 1530	Received by: (Signature)	Date: 8/2/19	Time: 0915	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1904551

Project: Bethel Junction / 1246.030.04

Sample(s) received on: 8/2/2019 Date opened: 8/2/2019 by: DENISE.POSADA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1904551-001.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **HSVE-2-073019** ALS Project ID: P1904551
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1904551-001

Test Code: EPA TO-15 Date Collected: 7/30/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 8/2/19
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC02228

Initial Pressure (psig): -2.23 Final Pressure (psig): 4.51

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
156-60-5	trans-1,2-Dichloroethene	**1.5**	0.82	**0.39**	0.21	
156-59-2	cis-1,2-Dichloroethene	**23**	0.82	**5.9**	0.21	
79-01-6	Trichloroethene	**6.7**	0.82	**1.3**	0.15	
127-18-4	Tetrachloroethene	**54**	0.82	**7.9**	0.12	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1904551
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190812-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1904551

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 7/30/19
Analyst: Lusine Hakobyan Date(s) Received: 8/2/19
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 8/12/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190812-MB	**81**	**99**	**112**	70-130	
Lab Control Sample	P190812-LCS	**80**	**99**	**113**	70-130	
HSVE-2-073019	P1904551-001	**77**	**99**	**116**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1904551
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190812-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	214	**162**	**76**	57-117	
156-60-5	trans-1,2-Dichloroethene	214	**162**	**76**	70-115	
156-59-2	cis-1,2-Dichloroethene	211	**161**	**76**	67-110	
79-01-6	Trichloroethene	213	**172**	**81**	66-108	
127-18-4	Tetrachloroethene	213	**201**	**94**	55-120	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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www.alsglobal.com

LABORATORY REPORT

August 16, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on August 2, 2019. For your reference, this analysis has been assigned our service request number P1904552.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Hayden Akers at 11:36 am, Aug 16, 2019

For Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1904552

CASE NARRATIVE

The sample was received intact under chain of custody on August 2, 2019 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

Volatile Organic Compound Analysis

The sample was analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1904552
Project ID: Bethel Junction / 1246.030.04

Date Received: 8/2/2019
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
HSVE-1-073019	P1904552-001	Air	7/30/2019	14:40	AS00560	-0.37	4.13	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Page 1 of 1

Requested Turnaround Time in Business Days (Surcharges) please circle
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No. 1904552

ALS Contact:

Company Name & Address (Reporting Information)
PES Environmental
1215 4th Ave NE, SEATTLE WA 98161

Project Name: Bethel Junction
Project Number: 1246.030.04
P.O. # / Billing Information:

Project Manager: Matt Dahl
Phone: (206) 529-3980
Fax: (206) 529-3985
Email Address for Result Reporting: MDAHL@PESENV.COM

Sampler (Print & Sign): Ben Hecht

Analysis Method

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method		Comments e.g. Actual Preservative or specific instructions
HSVE-1-073019		7-30-19	1440	A500560		-29	0	~6L	TO-15		

5 of 10

Report Tier Levels - please select

Results (Default if not specified) ____ Tier III (Results + QC & Calibration Summaries) ____
(Results + QC Summaries) ____ Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	7-30-19	1600			
	Date:	Time:	Received by: (Signature)	08/2/19	0915
				Date:	Time:

Project Requirements (MRLs, QAPP)

Cooler / Blank Temperature

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1904552

Project: Bethel Junction / 1246.030.04

Sample(s) received on: 8/2/2019 Date opened: 8/2/2019 by: DENISE.POSADA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1904552-001.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers):

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **HSVE-1-073019** ALS Project ID: P1904552
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1904552-001

Test Code: EPA TO-15 Date Collected: 7/30/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 8/2/19
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00560

Initial Pressure (psig): -0.37 Final Pressure (psig): 4.13

Container Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
156-60-5	trans-1,2-Dichloroethene	ND	0.69	ND	0.18	
156-59-2	cis-1,2-Dichloroethene	ND	0.69	ND	0.18	
79-01-6	Trichloroethene	**0.71**	0.69	**0.13**	0.13	
127-18-4	Tetrachloroethene	**10**	0.69	**1.5**	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1904552
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190812-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1904552

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 7/30/19
Analyst: Lusine Hakobyan Date(s) Received: 8/2/19
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 8/12/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190812-MB	**81**	**99**	**112**	70-130	
Lab Control Sample	P190812-LCS	**80**	**99**	**113**	70-130	
HSVE-1-073019	P1904552-001	**77**	**98**	**118**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1904552
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190812-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 8/12/19
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	214	**162**	**76**	57-117	
156-60-5	trans-1,2-Dichloroethene	214	**162**	**76**	70-115	
156-59-2	cis-1,2-Dichloroethene	211	**161**	**76**	67-110	
79-01-6	Trichloroethene	213	**172**	**81**	66-108	
127-18-4	Tetrachloroethene	213	**201**	**94**	55-120	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

2655 Park Center Dr., Suite A
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T: +1 805 526 7161
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LABORATORY REPORT

August 30, 2019

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04

Dear Matt:

Enclosed are the results of the samples submitted to our laboratory on August 29, 2019. For your reference, these analyses have been assigned our service request number P1905126.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
By Kate Kaneko at 2:29 pm, 08/30/19

Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04

Service Request No: P1905126

CASE NARRATIVE

The samples were received intact under chain of custody on August 29, 2019 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1521096
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-006
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P1905126
Project ID: Bethel Junction / 1246.030.04

Date Received: 8/29/2019
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
HSVE-1-082719	P1905126-001	Air	8/27/2019	12:10	1SS00011	-1.90	6.16	X
HSVE-2-082719	P1905126-002	Air	8/27/2019	12:15	1SS00741	-2.37	5.47	X
STACK-082719	P1905126-003	Air	8/27/2019	12:20	1SS00908	-1.05	5.10	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle: 10
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No: 1905126

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, 1215 4TH AVE STE 1350, SEATTLE, WA 98161	Project Name: BETHEL JUNCTION
Project Manager: M DAHL	Project Number: 1246.030.04
Phone: 206 529 3980	Fax: 206 529 3985
Email Address for Result Reporting: MDAHL@PESENV.COM	P.O. # / Billing Information
	Sampler (Print & Sign): SHANNON MCKERNAN

ALS Contact:

Analysis Method: TO-15 (Client List)

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
HSVE-1-082719	1550021	8/27/19	1210		—	-30	-3				
HSVE-2-082719	1550074	1	1215		—	-29	-4				
STACK-082719	1550096	V	1220		—	-30	-3				

Report Tier Levels - please select

Tier I - Results (Default if not specified) ____ Tier II (Results + QC & Calibration Summaries) X
Tier III (Results + QC Summaries) ____ Tier IV (Data Validation Package) 10% Surcharge ____

EDD required Yes / No
Type: CSV Units: ____

Chain of Custody Seal (Circle): INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP):

Relinquished by (Signature)	Date: 8/27/19	Time: 1245	Received by (Signature)	Date: 8/28/19	Time: 930	Cooler / Blank Temperature: °C
Relinquished by (Signature)	Date:	Time:	Received by (Signature)	Date	Time	

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1905126

Project: Bethel Junction / 1246.030.04

Sample(s) received on: 8/29/2019 Date opened: 8/29/2019 by: DENISE.POSADA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☐	☒
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1905126-001.01	1.0 L Source Silonite Canister					
P1905126-002.01	1.0 L Source Silonite Canister					
P1905126-003.01	1.0 L Source Silonite Canister					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **HSVE-1-082719** ALS Project ID: P1905126
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1905126-001

Test Code: EPA TO-15 Date Collected: 8/27/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 8/29/19
Analyst: Wida Ang Date Analyzed: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00011

Initial Pressure (psig): -1.90 Final Pressure (psig): 6.16

Container Dilution Factor: 1.63

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	2.2	ND	0.85	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	ND	0.54	
156-59-2	cis-1,2-Dichloroethene	ND	2.2	ND	0.54	
79-01-6	Trichloroethene	ND	2.2	ND	0.40	
127-18-4	Tetrachloroethene	**8.9**	2.2	**1.3**	0.32	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **HSVE-2-082719** ALS Project ID: P1905126
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1905126-002

Test Code: EPA TO-15 Date Collected: 8/27/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 8/29/19
Analyst: Wida Ang Date Analyzed: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00741

Initial Pressure (psig): -2.37 Final Pressure (psig): 5.47

Container Dilution Factor: 1.64

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	2.2	ND	0.85	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	ND	0.55	
156-59-2	cis-1,2-Dichloroethene	**25**	2.2	**6.4**	0.55	
79-01-6	Trichloroethene	**6.7**	2.2	**1.3**	0.40	
127-18-4	Tetrachloroethene	**46**	2.2	**6.8**	0.32	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **STACK-082719** ALS Project ID: P1905126
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P1905126-003

Test Code: EPA TO-15 Date Collected: 8/27/19
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 8/29/19
Analyst: Wida Ang Date Analyzed: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00908

Initial Pressure (psig): -1.05 Final Pressure (psig): 5.10

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	1.9	ND	0.75	
156-60-5	trans-1,2-Dichloroethene	ND	1.9	ND	0.48	
156-59-2	cis-1,2-Dichloroethene	**13**	1.9	**3.4**	0.48	
79-01-6	Trichloroethene	**3.7**	1.9	**0.68**	0.36	
127-18-4	Tetrachloroethene	**28**	1.9	**4.2**	0.28	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1905126
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190829-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04** ALS Project ID: P1905126

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 8/27/19
Analyst: Wida Ang Date(s) Received: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister(s) Date(s) Analyzed: 8/29/19
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P190829-MB	**90**	**108**	**94**	70-130	
Lab Control Sample	P190829-LCS	**106**	**88**	**76**	70-130	
HSVE-1-082719	P1905126-001	**97**	**103**	**79**	70-130	
HSVE-2-082719	P1905126-002	**100**	**97**	**76**	70-130	
STACK-082719	P1905126-003	**99**	**103**	**79**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1905126
Client Project ID: **Bethel Junction / 1246.030.04** ALS Sample ID: P190829-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 8/29/19
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount µg/m³	Result µg/m³	% Recovery	ALS Acceptance Limits	Data Qualifier
75-01-4	Vinyl Chloride	214	**239**	**112**	57-117	
156-60-5	trans-1,2-Dichloroethene	214	**198**	**93**	70-115	
156-59-2	cis-1,2-Dichloroethene	211	**185**	**88**	67-110	
79-01-6	Trichloroethene	213	**175**	**82**	66-108	
127-18-4	Tetrachloroethene	213	**180**	**85**	55-120	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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T: +1 805 526 7161
www.alsglobal.com

LABORATORY REPORT

March 24, 2020

Matt Dahl
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04.003

Dear Matt:

Enclosed are the results of the samples submitted to our laboratory on March 9, 2020. For your reference, these analyses have been assigned our service request number P2001333.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
Mar 24, 2020, 12:57 pm

Kate Kaneko
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04.003

Service Request No: P2001333

CASE NARRATIVE

The samples were received intact under chain of custody on March 9, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental Service Request: P2001333

Project ID: Bethel Junction / 1246.030.04.003

Date Received: 3/9/2020

Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC SIM
Indoor AS-030420	P2001333-001	Air	3/4/2020	15:10	AS00599	-1.46	3.80	X
HSVE-2-030420	P2001333-002	Air	3/4/2020	15:26	1SC00962	-1.50	5.38	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle:
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) (10 Day-Standard)

ALS Project No. 1700133

ALS Contact:

Company Name & Address (Reporting Information)	PES Environmental, Inc. 1215 4th Ave, #1350 Seattle WA, 98161
Project Name	Bethel Junction
Project Number	1246.030.04.003
Project Manager	Brian O'Neal
P.O. # / Billing Information	
Phone	206-529-3980
Fax	206-529-3985
Email Address for Result Reporting	boneal@pesenv.com
Sampler (Print & Sign)	Sean Kounovsky

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 Low Level	Analysis Method: PCE, TCE, cis-1,2-DCE, VC, cis-1,2-DCE, trans-1,2-DCE (Project Specific List)	Comments e.g. Actual Preservative or specific instructions
Indoor AS-030420		3/4/20	1510	AS00599	L4C00049	-35	-5	6L	X	X	
HSVE-2-030420		3/4/20	1526	1SC00962	n/a	-27	-7	1L	X	X	

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Report Tier Levels - please select

Tier I - Results (Default if not specified) _____
Tier II (Results + QC Summaries) _____
Tier III (Results + QC & Calibration Summaries) X
Tier IV (Data Validation Package) 10% Surcharge _____

EDD required (Yes) / No
Type: EIM/Epiphany Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN (ABSENT)

Project Requirements (MRLs, QAPP)

	Date	Time		Date	Time
Relinquished by: (Signature)	3/4/20	1600	Received by: (Signature)	3/9/20	915
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P2001333

Project: Bethel Junction / 1246.030.04.003

Sample(s) received on: 3/9/2020 Date opened: 3/9/2020 by: DENISE.POSADA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2001333-001.01	6.0 L Silonite Can					
P2001333-002.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **HSVE-2-030420** ALS Project ID: P2001333
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P2001333-002

Test Code: EPA TO-15 SIM Date Collected: 3/4/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 3/9/20
Analyst: Topacio De Leon Date Analyzed: 3/23/20
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00962
Initial Pressure (psig): -1.50 Final Pressure (psig): 5.38

Container Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	2.1	ND	0.80	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	ND	0.52	
156-59-2	cis-1,2-Dichloroethene	**7.0**	2.0	**1.8**	0.51	
79-01-6	Trichloroethene	**2.6**	2.1	**0.48**	0.38	
127-18-4	Tetrachloroethene	**16**	2.0	**2.4**	0.29	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Indoor AS-030420** ALS Project ID: P2001333
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P2001333-001

Test Code: EPA TO-15 SIM Date Collected: 3/4/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: 3/9/20
Analyst: Topacio De Leon Date Analyzed: 3/23/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00599

Initial Pressure (psig): -1.46 Final Pressure (psig): 3.80

Container Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.15	ND	0.060	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	ND	0.039	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	ND	0.039	
79-01-6	Trichloroethene	ND	0.15	ND	0.029	
127-18-4	Tetrachloroethene	**4.1**	0.14	**0.61**	0.021	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P2001333
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P200323-MB

Test Code: EPA TO-15 SIM Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date Received: NA
Analyst: Topacio De Leon Date Analyzed: 3/23/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.11	ND	0.043	
156-60-5	trans-1,2-Dichloroethene	ND	0.11	ND	0.028	
156-59-2	cis-1,2-Dichloroethene	ND	0.11	ND	0.028	
79-01-6	Trichloroethene	ND	0.11	ND	0.020	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Project ID: P2001333

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19 Date(s) Collected: 3/4/20
Analyst: Topacio De Leon Date(s) Received: 3/9/20
Sample Type: 6.0 L Silonite Canister(s) / 1.0 L Summa Canister(s) Date(s) Analyzed: 3/23/20
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 % Recovered	Toluene-d8 % Recovered	Bromofluorobenzene % Recovered	Acceptance Limits	Data Qualifier
Method Blank	P200323-MB	**100**	**107**	**99**	70-130	
Lab Control Sample	P200323-LCS	**99**	**103**	**109**	70-130	
Duplicate Lab Control Sample	P200323-DLCS	**99**	**103**	**109**	70-130	
Indoor AS-030420	P2001333-001	**95**	**106**	**105**	70-130	
HSVE-2-030420	P2001333-002	**98**	**108**	**102**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample**
Client Project ID: **Bethel Junction / 1246.030.04.003**

ALS Project ID: P2001333
ALS Sample ID: P200323-DLCS

Test Code: EPA TO-15 SIM
Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
Analyst: Topacio De Leon
Sample Type: 6.0 L Silonite Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/23/20
Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	8.48	7.57	7.56	**89**	**89**	61-134	0	25	
156-60-5	trans-1,2-Dichloroethene	8.56	8.35	8.37	**98**	**98**	71-123	0	25	
156-59-2	cis-1,2-Dichloroethene	8.48	8.13	8.14	**96**	**96**	72-122	0	25	
79-01-6	Trichloroethene	8.64	8.32	8.29	**96**	**96**	77-117	0	25	
127-18-4	Tetrachloroethene	8.32	8.26	8.18	**99**	**98**	74-117	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

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www.alsglobal.com

LABORATORY REPORT

September 22, 2020

Brian O' Neal
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction / 1246.030.04.003

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on September 8, 2020. For your reference, these analyses have been assigned our service request number P2004993.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

Kate Kaneko
Sep 22, 2020, 3:55 pm

Kate Kaneko
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
www.alsglobal.com

Client: PES Environmental
Project: Bethel Junction / 1246.030.04.003

Service Request No: P2004993

CASE NARRATIVE

The samples were received intact under chain of custody on September 8, 2020 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	http://dec.alaska.gov/eh/lab.aspx	17-019
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/page/la-lab-accreditation	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml	2018027
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1776326
New Jersey DEP (NELAP)	http://www.nj.gov/dep/enforcement/oqa.html	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-007
Pennsylvania DEP	http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704413-19-10
Utah DOH (NELAP)	http://health.utah.gov/lab/lab_cert_env	CA016272019-10
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: PES Environmental
Service Request: P2004993
Project ID: Bethel Junction / 1246.030.04.003

Date Received: 9/8/2020
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
Ambient-Air-090220	P2004993-001	Air	9/2/2020	13:21	AS00890	-0.44	4.09	X
Indoor-Air-090220	P2004993-002	Air	9/2/2020	13:29	AS00830	-2.12	4.57	X

Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A
Simi Valley, California 93065
Phone (805) 526-7161

Requested Turnaround Time in Business Days (Surcharges) please circle:
1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

ALS Project No: P004993

ALS Contact:

Company Name & Address (Reporting Information)	Project Name	Project Number	P.O. # / Billing Information
PES Environmental, Inc. 1215 4th Ave, #1350 Seattle, WA, 98161	Bethel Junction	1246.030.04.003	

Project Manager	Phone	Fax	Email Address for Result Reporting	Sampler (Print & Sign)
Brian O'Neal	206-529-3980	206-529-3985	boneal@pesenv.com	Sean Kouvovsky

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method: TO-15 SIM	Analysis Method: PCE; TCE; cis-1,2-DCE; Trans-1,2-DCE; Vinyl Chloride	Comments e.g. Actual Preservative or specific instructions
~~Ambient-Air-090220~~	~~SK~~	9/2/20	1321	~~AS00890~~		SK					
~~Indoor-Air-090220~~		9/2/20	1329	AS00890							
Ambient-Air-090220	2	9/2/20	1321	AS00890	EFC000064	-26	-1	6L			
Indoor-Air-090220		9/2/20	1329	AS00830	EFC00059	-30	-5	6L			

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Report Tier Levels - please select

Tier I - Results (Default if not specified) ____
Tier II (Results + QC Summaries) ____
Tier III (Results + QC & Calibration Summaries) X
Tier IV (Data Validation Package) 10% Surcharge ____

EDD required (Yes) / No — EIM/Epiphany
Type: _____ Units: _____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Sean Kouvovsky	9/2/20	1400			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				9-8-20	0915

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P2004993

Project: Bethel Junction / 1246.030.04.003

Sample(s) received on: 9/8/20 Date opened: 9/8/20 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		Yes	No	N/A
1	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
2	Did **sample containers** arrive in good condition?	☒	☐	☐
3	Were **chain-of-custody** papers used and filled out?	☒	☐	☐
4	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
5	Was **sample volume** received adequate for analysis?	☒	☐	☐
6	Are samples within specified holding times?	☒	☐	☐
7	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
8	Were **custody seals** on outside of cooler/Box/Container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
9	Do containers have appropriate **preservation**, according to method/SOP or Client specified information?	☐	☐	☒
	Is there a client indication that the submitted samples are **pH** preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes:** Are the tubes capped and intact?	☐	☐	☒
11	**Badges:** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P2004993-001.01	6.0 L Silonite Can					
P2004993-002.01	6.0 L Silonite Can					
P2004993-003.01	6.0 L Ambient Can					

Explain any discrepancies: (include lab sample ID numbers): _____

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Ambient-Air-090220**
Client Project ID: **Bethel Junction / 1246.030.04.003**

ALS Project ID: P2004993
ALS Sample ID: P2004993-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Simon Cao
Sample Type: 6.0 L Silonite Canister
Test Notes:
Container ID: AS00890

Date Collected: 9/2/20
Date Received: 9/8/20
Date Analyzed: 9/11/20
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.44 Final Pressure (psig): 4.09

Canister Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.15	ND	0.057	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	ND	0.037	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	ND	0.037	
79-01-6	Trichloroethene	ND	0.15	ND	0.027	
127-18-4	Tetrachloroethene	ND	0.13	ND	0.019	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Indoor-Air-090220** ALS Project ID: P2004993
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P2004993-002

Test Code: EPA TO-15 Date Collected: 9/2/20
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 9/8/20
Analyst: Simon Cao Date Analyzed: 9/11/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AS00830

Initial Pressure (psig): -2.12 Final Pressure (psig): 4.57

Canister Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.17	ND	0.066	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	ND	0.042	
156-59-2	cis-1,2-Dichloroethene	ND	0.17	ND	0.042	
79-01-6	Trichloroethene	ND	0.17	ND	0.031	
127-18-4	Tetrachloroethene	**2.4**	0.15	**0.35**	0.023	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P2004993
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P200910-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 9/10/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.11	ND	0.043	
156-60-5	trans-1,2-Dichloroethene	ND	0.11	ND	0.028	
156-59-2	cis-1,2-Dichloroethene	ND	0.11	ND	0.028	
79-01-6	Trichloroethene	ND	0.11	ND	0.020	
127-18-4	Tetrachloroethene	ND	0.10	ND	0.015	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Client: **PES Environmental**
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Project ID: P2004993

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 9/2/20
Analyst: Simon Cao Date(s) Received: 9/8/20
Sample Type: 6.0 L Silonite Canister(s) Date(s) Analyzed: 9/10 - 9/11/20
Test Notes:

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4 Percent Recovered	Toluene-d8 Percent Recovered	Bromofluorobenzene Percent Recovered	Acceptance Limits	Data Qualifier
Method Blank	P200910-MB	**97**	**102**	**116**	70-130	
Lab Control Sample	P200910-LCS	**97**	**101**	**117**	70-130	
Ambient-Air-090220	P2004993-001	**97**	**102**	**117**	70-130	
Indoor-Air-090220	P2004993-002	**96**	**102**	**117**	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P2004993
Client Project ID: **Bethel Junction / 1246.030.04.003** ALS Sample ID: P200910-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 9/10/20
Sample Type: 6.0 L Silonite Canister Volume(s) Analyzed: 0.125 Liter(s)
Test Notes:

CAS #	Compound	Spike Amount LCS / DLCS µg/m³	Result LCS µg/m³	Result DLCS µg/m³	% Recovery LCS	% Recovery DLCS	ALS Acceptance Limits	RPD	RPD Limit	Data Qualifier
75-01-4	Vinyl Chloride	212	175	177	**83**	**83**	61-129	0	25	
156-60-5	trans-1,2-Dichloroethene	214	186	185	**87**	**86**	65-122	1	25	
156-59-2	cis-1,2-Dichloroethene	212	176	176	**83**	**83**	64-120	0	25	
79-01-6	Trichloroethene	216	196	194	**91**	**90**	70-114	1	25	
127-18-4	Tetrachloroethene	208	205	203	**99**	**98**	64-120	1	25	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

Response Factor Report MS09

Method Path : I:\MS09\Methods\
Method File : R9061120.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Jun 11 21:23:59 2020
Response Via : Initial Calibration

6/12/20

Calibration Files
0.1 =06112026.D 0.2 =06112027.D 0.5 =06112028.D 1.0 =06112029.D 5.0 =06112030.D 25 =06112
100 =06112033.D

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------ISTD----------									
2)	T	Propene	0.842	0.800	0.902	0.823	0.950	0.863	0.913	0.898	0.874	5.82
3)	T	Dichlorodifluo...	1.868	1.774	1.939	1.755	1.640	1.705	1.561	1.460	1.713	9.18
4)	T	Chloromethane	1.146	1.035	1.256	1.124	0.968	1.172	0.986	0.705	1.049	16.21
5)	T	1,2-Dichloro-1...	0.963	0.928	1.080	0.984	0.899	0.939	0.906	0.869	0.946	6.90
6)	T	Vinyl Chloride	1.038	1.018	1.222	1.118	1.063	1.113	1.064	1.021	1.082	6.28
7)	T	1,3-Butadiene	0.655	0.587	0.798	0.732	0.741	0.830	0.796	0.763	0.738	10.96
8)	T	Bromomethane	0.812	0.813	0.967	0.910	0.792	0.905	0.843	0.800	0.855	7.51
9)	T	Chloroethane	0.653	0.577	0.685	0.652	0.617	0.648	0.608	0.567	0.626	6.52
10)	T	Ethanol	0.641	0.622	0.674	0.607	0.566	0.596	0.536	0.467	0.589	11.04
11)	T	Acetonitrile	1.085	1.233	1.494	1.420	1.377	1.472	1.353	1.260	1.337	10.26
12)	T	Acrolein	0.237	0.333	0.516	0.496	0.534	0.583	0.543	0.510	0.469	25.41
13)	T	Acetone	0.709	0.689	0.717	0.674	0.620	0.630	0.553	0.470	0.633	13.49
14)	T	Trichlorofluor...	1.693	1.590	1.750	1.622	1.506	1.581	1.465	1.387	1.574	7.57
15)	T	2-Propanol (Is...	1.842	1.935	2.149	2.039	1.620	1.981	1.490	1.125	1.773	19.18
16)	T	Acrylonitrile			1.087	1.090	1.096	1.199	1.106	1.036	1.103	4.82
17)	T	1,1-Dichloroet...	0.981	0.954	1.044	0.979	0.925	0.982	0.913	0.863	0.955	5.74
18)	T	2-Methyl-2-Pro...	2.106	1.995	2.327	2.168	2.049	2.135	1.905	1.057	1.968	19.75
19)	T	Methylene Chlo...	0.921	0.937	1.064	0.977	0.949	1.007	0.924	0.863	0.955	6.38
20)	T	3-Chloro-1-pro...	1.102	1.219	1.290	1.210	1.197	1.248	1.120	1.036	1.178	7.16
21)	T	Trichlorotrifl...	0.977	0.964	1.041	0.974	0.900	0.948	0.884	0.834	0.940	6.91
22)	T	Carbon Disulfide	3.373	3.322	3.701	3.448	3.440	3.564	3.239	2.930	3.377	6.81
23)	T	trans-1,2-Dich...	0.932	1.011	1.268	1.216	1.197	1.295	1.199	1.119	1.155	10.92
24)	T	1,1-Dichloroet...	1.586	1.515	1.688	1.589	1.497	1.593	1.460	1.347	1.534	6.76
25)	T	Methyl tert-Bu...	2.584	2.492	2.914	2.688	2.532	2.713	2.538	2.394	2.607	6.18
26)	T	Vinyl Acetate	0.133	0.165	0.218	0.212	0.220	0.237	0.213	0.186	0.198	17.41
27)	T	2-Butanone (MEK)			0.596	0.590	0.612	0.670	0.623	0.579	0.612	5.29
28)	T	cis-1,2-Dichlo...	1.069	1.092	1.287	1.220	1.165	1.242	1.144	1.063	1.160	7.21
29)	T	Diisopropyl Ether	0.964	0.950	0.958	0.843	0.786	0.796	0.707	0.616	0.827	15.34
30)	T	Ethyl Acetate			0.316	0.315	0.312	0.322	0.275	0.223	0.294	13.13
31)	T	n-Hexane	1.600	1.532	1.672	1.551	1.436	1.420	1.203	0.971	1.423	16.26
32)	T	Chloroform	1.715	1.615	1.764	1.637	1.548	1.623	1.498	1.401	1.600	7.28
33)	S	1,2-Dichloroet...	1.251	1.261	1.255	1.259	1.251	1.251	1.242	1.225	1.249	0.93
34)	T	Tetrahydrofura...	0.552	0.539	0.636	0.619	0.586	0.639	0.589	0.545	0.588	6.89
35)	T	Ethyl tert-But...	1.064	1.074	1.248	1.154	1.103	1.174	1.092	1.010	1.115	6.67
36)	T	1,2-Dichloroet...	1.085	1.064	1.181	1.108	1.050	1.125	1.037	0.986	1.080	5.53
37)	IR	1,4-Difluorobenzen...	----------ISTD----------									
38)	T	1,1,1-Trichlor...	0.352	0.322	0.366	0.341	0.319	0.339	0.314	0.299	0.331	6.61
39)	T	Isopropyl Acetate	0.106	0.126	0.145	0.136	0.130	0.135	0.119	0.102	0.125	12.09
40)	T	1-Butanol			0.157	0.163	0.182	0.212	0.190	0.168	0.179	11.46
41)	T	Benzene	0.957	0.916	1.024	0.937	0.885	0.917	0.835	0.765	0.905	8.67
42)	T	Carbon Tetrach...	0.294	0.297	0.336	0.312	0.297	0.321	0.298	0.285	0.305	5.42
43)	T	Cyclohexane	0.383	0.357	0.404	0.370	0.347	0.355	0.319	0.281	0.352	10.80
44)	T	tert-Amyl Meth...	0.611	0.584	0.666	0.622	0.597	0.633	0.582	0.539	0.604	6.29
45)	T	1,2-Dichloropr...	0.223	0.204	0.234	0.220	0.205	0.218	0.199	0.182	0.211	7.75
46)	T	Bromodichlorom...	0.299	0.271	0.313	0.296	0.281	0.305	0.279	0.261	0.288	6.22
47)	T	Trichloroethene	0.280	0.260	0.294	0.273	0.256	0.273	0.255	0.239	0.266	6.45
48)	T	1,4-Dioxane	0.156	0.168	0.189	0.185	0.173	0.196	0.180	0.163	0.176	7.79
49)	T	2,2,4-Trimethy...	0.960	0.904	0.990	0.904	0.850	0.872	0.782	0.695	0.870	10.96
50)	T	Methyl Methacr...			0.089	0.090	0.090	0.101	0.093	0.085	0.091	5.93
51)	T	n-Heptane	0.244	0.220	0.252	0.232	0.216	0.228	0.208	0.190	0.224	8.85
52)	T	cis-1,3-Dichlo...	0.276	0.304	0.370	0.354	0.355	0.392	0.360	0.333	0.343	10.88
53)	T	4-Methyl-2-pen...			0.181	0.180	0.184	0.200	0.181	0.163	0.181	6.51
54)	T	trans-1,3-Dich...			0.294	0.291	0.310	0.351	0.327	0.307	0.313	7.11

55)	T	1,1,2-Trichlor...	0.210	0.213	0.248	0.232	0.219	0.238	0.219	0.204	0.223	6.73
56)	IR	Chlorobenzene-d5 (...	----------ISTD----------									
57)	S	Toluene-d8 (SS2)	2.593	2.599	2.592	2.577	2.565	2.561	2.573	2.566	2.578	0.56
58)	T	Toluene	2.529	2.275	2.557	2.325	2.173	2.241	2.057	1.867	2.253	10.18
59)	T	2-Hexanone			0.821	0.769	0.858	0.971	0.880	0.786	0.848	8.66
60)	T	Dibromochlorom...	0.577	0.581	0.645	0.622	0.627	0.681	0.641	0.607	0.623	5.53
61)	T	1,2-Dibromoethane	0.495	0.539	0.638	0.606	0.595	0.650	0.608	0.570	0.588	8.73
62)	T	n-Butyl Acetate			0.865	0.873	0.929	1.075	0.973	0.865	0.930	8.94
63)	T	n-Octane	0.427	0.407	0.465	0.436	0.406	0.424	0.381	0.337	0.410	9.38
64)	T	Tetrachloroethene	0.762	0.711	0.788	0.729	0.678	0.712	0.669	0.626	0.709	7.33
65)	T	Chlorobenzene	1.712	1.609	1.745	1.600	1.515	1.585	1.809	1.354	1.616	8.85
66)	T	Ethylbenzene	2.640	2.485	2.759	2.540	2.443	2.531	2.325	2.107	2.479	7.99
67)	T	m- & p-Xylenes	2.095	1.987	2.185	2.003	1.926	1.985	1.811	1.619	1.951	8.90
68)	T	Bromoform	0.441	0.466	0.535	0.515	0.532	0.603	0.572	0.547	0.527	10.01
69)	T	Styrene	1.491	1.315	1.615	1.558	1.573	1.681	1.549	1.413	1.524	7.63
70)	T	o-Xylene	2.046	1.987	2.181	2.010	1.924	1.969	1.805	1.622	1.943	8.63
71)	T	n-Nonane	0.903	0.861	0.957	0.884	0.859	0.866	0.759	0.645	0.842	11.49
72)	T	1,1,2,2-Tetrac...	0.958	0.884	1.020	0.949	0.917	0.954	0.865	0.765	0.914	8.41
73)	S	Bromofluoroben...	0.882	0.880	0.886	0.879	0.888	0.900	0.904	0.909	0.891	1.30
74)	T	Cumene	2.732	2.541	2.846	2.627	2.510	2.585	2.346	2.106	2.537	9.02
75)	T	alpha-Pinene	1.300	1.216	1.406	1.316	1.301	1.343	1.236	1.108	1.278	7.11
76)	T	n-Propylbenzene	3.051	2.995	3.291	3.048	2.947	3.035	2.737	2.433	2.942	8.68
77)	T	3-Ethyltoluene	2.446	2.442	2.627	2.513	2.472	2.517	2.367	2.173	2.445	5.43
78)	T	4-Ethyltoluene	2.512	2.404	2.779	2.522	2.426	2.594	2.275	1.971	2.435	9.80
79)	T	1,3,5-Trimethy...	2.311	2.194	2.432	2.224	2.103	2.168	1.979	1.793	2.150	9.16
80)	T	alpha-Methylst...	1.085	1.108	1.234	1.175	1.179	1.259	1.155	1.039	1.154	6.45
81)	T	2-Ethyltoluene	2.643	2.508	2.826	2.578	2.461	2.515	2.284	2.049	2.483	9.42
82)	T	1,2,4-Trimethy...	2.180	2.136	2.308	2.189	2.096	2.129	1.877	1.622	2.067	10.50
83)	T	n-Decane	1.022	1.005	1.147	1.066	1.037	1.021	0.880	0.725	0.988	13.09
84)	T	Benzyl Chloride	1.051	1.241	1.432	1.445	1.639	1.880	1.709	1.515	1.489	17.64
85)	T	1,3-Dichlorobe...	1.263	1.305	1.367	1.300	1.267	1.352	1.237	1.117	1.276	6.11
86)	T	1,4-Dichlorobe...	1.449	1.385	1.423	1.326	1.278	1.371	1.272	1.169	1.334	6.91
87)	T	sec-Butylbenzene	3.099	2.938	3.177	2.961	2.848	2.894	2.599	2.298	2.852	9.90
88)	T	4-Isopropyltol...	2.932	2.732	2.963	2.761	2.666	2.635	2.290	1.914	2.612	13.39
89)	T	1,2,3-Trimethy...	2.151	2.149	2.389	2.201	2.106	2.130	1.879	1.617	2.078	11.18
90)	T	1,2-Dichlorobe...	1.349	1.322	1.357	1.283	1.241	1.302	1.183	1.048	1.261	8.19
91)	T	d-Limonene	0.730	0.748	0.859	0.794	0.780	0.787	0.689	0.572	0.745	11.50
92)	T	1,2-Dibromo-3-...	0.344	0.371	0.428	0.427	0.455	0.516	0.485	0.462	0.436	13.02
93)	T	n-Undecane	1.072	1.013	1.107	1.055	1.055	1.064	0.934	0.793	1.012	10.11
94)	T	1,2,4-Trichlor...	0.848	0.910	0.832	0.860	0.910	1.047	0.976	0.907	0.911	7.81
95)	T	Naphthalene	2.376	2.668	2.387	2.463	2.729	3.141	2.889	2.583	2.655	9.95
96)	T	n-Dodecane	0.945	1.028	0.986	1.004	1.035	1.035	0.905	0.763	0.963	9.65
97)	T	Hexachlorobuta...	0.700	0.681	0.667	0.636	0.609	0.648	0.606	0.570	0.640	6.75
98)	T	Cyclohexanone	0.558	0.635	0.667	0.644	0.660	0.742	0.679	0.618	0.651	8.14
99)	T	tert-Butylbenzene	2.264	2.157	2.395	2.223	2.111	2.104	1.848	1.587	2.086	12.25
100)	T	n-Butylbenzene	2.139	2.147	2.361	2.228	2.185	2.269	2.026	1.792	2.143	8.08

(#) = Out of Range

R9061120.M Fri Jun 12 13:28:49 2020

Evaluate Continuing Calibration Report

Data File : I:\MS09\Data\2020 09\10\09102001.D Vial: 2
Acq On : 10 Sep 2020 14:53 Operator: SC
Sample : CCV R9091020 25ng Inst : MS09
Misc : S34-07222001/S34-08242001 (9/22)

Quant Time: Sep 10 15:18:20 2020
Quant Method : I:\MS09\Methods\R9061120.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jun 11 21:23:59 2020
Response via : Initial Calibration
DataAcq Meth:TO15.M

9/10/20

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	146	-0.02
2	T	Propene	0.874	0.648	25.9	110	-0.02
3	T	Dichlorodifluoromethane (CF	1.713	1.294	24.5	111	-0.01
4	T	Chloromethane	1.049	0.811	22.7	101	-0.01
5	T	1,2-Dichloro-1,1,2,2-tetraf	0.946	0.800	15.4	124	-0.01
6	T	Vinyl Chloride	1.082	0.863	20.2	113	-0.01
7	T	1,3-Butadiene	0.738	0.652	11.7	115	-0.02
8	T	Bromomethane	0.855	0.706	17.4	114	-0.02
9	T	Chloroethane	0.626	0.472	24.6	106	-0.02
10	T	Ethanol	0.589	0.401	31.9#	98	-0.04
11	T	Acetonitrile	1.337	0.972	27.3	96	-0.03
12	T	Acrolein	0.469	0.415	11.5	104	-0.02
13	T	Acetone	0.633	0.455	28.1	105	-0.03
14	T	Trichlorofluoromethane	1.574	1.261	19.9	116	-0.01
15	T	2-Propanol (Isopropanol)	1.773	1.290	27.2	95	-0.03
16	T	Acrylonitrile	1.103	0.844	23.5	103	-0.03
17	T	1,1-Dichloroethene	0.955	0.770	19.4	114	-0.02
18	T	2-Methyl-2-Propanol (tert-B	1.968	1.599	18.8	109	-0.03
19	T	Methylene Chloride	0.955	0.757	20.7	110	-0.02
20	T	3-Chloro-1-propene (Allyl C	1.178	0.842	28.5	98	-0.02
21	T	Trichlorotrifluoroethane	0.940	0.786	16.4	121	-0.01
22	T	Carbon Disulfide	3.377	2.681	20.6	110	-0.01
23	T	trans-1,2-Dichloroethene	1.155	0.941	18.5	106	-0.02
24	T	1,1-Dichloroethane	1.534	1.163	24.2	106	-0.02
25	T	Methyl tert-Butyl Ether	2.607	2.099	19.5	113	-0.01
26	T	Vinyl Acetate	0.198	0.181	8.6	112	-0.02
27	T	2-Butanone (MEK)	0.612	0.494	19.3	108	-0.02
28	T	cis-1,2-Dichloroethene	1.160	0.908	21.7	107	-0.01
29	T	Diisopropyl Ether	0.827	0.618	25.3	113	-0.01
30	T	Ethyl Acetate	0.294	0.231	21.4	105	-0.02
31	T	n-Hexane	1.423	1.006	29.3	103	0.00
32	T	Chloroform	1.600	1.263	21.1	114	-0.02
33	S	1,2-Dichloroethane-d4(SS1)	1.249	1.209	3.2	141	-0.02
34	T	Tetrahydrofuran (THF)	0.588	0.471	19.9	107	-0.01
35	T	Ethyl tert-Butyl Ether	1.115	0.913	18.1	113	0.00
36	T	1,2-Dichloroethane	1.080	0.877	18.8	114	-0.01
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	145	-0.01
38	T	1,1,1-Trichloroethane	0.331	0.272	17.8	116	-0.01
39	T	Isopropyl Acetate	0.125	0.097	22.4	104	-0.01
40	T	1-Butanol	0.179	0.150	16.2	103	-0.03
41	T	Benzene	0.905	0.706	22.0	112	-0.02
42	T	Carbon Tetrachloride	0.305	0.263	13.8	119	-0.01
43	T	Cyclohexane	0.352	0.272	22.7	111	-0.01
44	T	tert-Amyl Methyl Ether	0.604	0.467	22.7	107	-0.01
45	T	1,2-Dichloropropane	0.211	0.157	25.6	104	-0.01
46	T	Bromodichloromethane	0.288	0.237	17.7	113	-0.01
47	T	Trichloroethene	0.266	0.229	13.9	121	-0.01
48	T	1,4-Dioxane	0.176	0.147	16.5	109	-0.01
49	T	2,2,4-Trimethylpentane (Iso	0.870	0.627	27.9	104	-0.01
50	T	Methyl Methacrylate	0.091	0.080	12.1	115	-0.01
51	T	n-Heptane	0.224	0.168	25.0	106	0.00
52	T	cis-1,3-Dichloropropene	0.343	0.293	14.6	109	0.00
53	T	4-Methyl-2-pentanone	0.181	0.143	21.0	104	-0.01
54	T	trans-1,3-Dichloropropene	0.313	0.267	14.7	110	0.00
55	T	1,1,2-Trichloroethane	0.223	0.186	16.6	113	-0.01

Evaluate Continuing Calibration Report

Data File : I:\MS09\Data\2020 09\10\09102001.D Vial: 2
Acq On : 10 Sep 2020 14:53 Operator: SC
Sample : CCV R9091020 25ng Inst : MS09
Misc : S34-07222001/S34-08242001 (9/22)

Quant Time: Sep 10 15:18:20 2020
Quant Method : I:\MS09\Methods\R9061120.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Jun 11 21:23:59 2020
Response via : Initial Calibration
DataAcq Meth:TO15.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
56	IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	137	0.00
57	S	Toluene-d8 (SS2)	2.578	2.605	-1.0	140	0.00
58	T	Toluene	2.253	1.826	19.0	112	-0.01
59	T	2-Hexanone	0.848	0.709	16.4	100	-0.01
60	T	Dibromochloromethane	0.623	0.590	5.3	119	0.00
61	T	1,2-Dibromoethane	0.588	0.547	7.0	115	-0.01
62	T	n-Butyl Acetate	0.930	0.783	15.8	100	-0.01
63	T	n-Octane	0.410	0.321	21.7	104	-0.01
64	T	Tetrachloroethene	0.709	0.652	8.0	126	0.00
65	T	Chlorobenzene	1.616	1.366	15.5	118	0.00
66	T	Ethylbenzene	2.479	2.088	15.8	113	0.00
67	T	m- & p-Xylenes	1.951	1.622	16.9	112	-0.01
68	T	Bromoform	0.527	0.550	-4.4	125	-0.01
69	T	Styrene	1.524	1.442	5.4	118	-0.01
70	T	o-Xylene	1.943	1.634	15.9	114	-0.01
71	T	n-Nonane	0.842	0.640	24.0	101	0.00
72	T	1,1,2,2-Tetrachloroethane	0.914	0.759	17.0	109	0.00
73	S	Bromofluorobenzene (SS3)	0.891	1.042	-16.9	159	0.00
74	T	Cumene	2.537	2.183	14.0	116	0.00
75	T	alpha-Pinene	1.278	1.051	17.8	107	0.00
76	T	n-Propylbenzene	2.942	2.495	15.2	113	-0.01
77	T	3-Ethyltoluene	2.445	2.152	12.0	117	-0.01
78	T	4-Ethyltoluene	2.435	2.154	11.5	114	-0.01
79	T	1,3,5-Trimethylbenzene	2.150	1.837	14.6	116	0.00
80	T	alpha-Methylstyrene	1.154	1.076	6.8	117	0.00
81	T	2-Ethyltoluene	2.483	2.122	14.5	116	0.00
82	T	1,2,4-Trimethylbenzene	2.067	1.802	12.8	116	-0.01
83	T	n-Decane	0.988	0.777	21.4	104	-0.01
84	T	Benzyl Chloride	1.489	1.536	-3.2	112	-0.01
85	T	1,3-Dichlorobenzene	1.276	1.207	5.4	122	-0.01
86	T	1,4-Dichlorobenzene	1.334	1.250	6.3	125	-0.01
87	T	sec-Butylbenzene	2.852	2.442	14.4	116	0.00
88	T	4-Isopropyltoluene (p-Cymen	2.612	2.303	11.8	120	-0.01
89	T	1,2,3-Trimethylbenzene	2.078	1.795	13.6	116	0.00
90	T	1,2-Dichlorobenzene	1.261	1.161	7.9	122	0.00
91	T	d-Limonene	0.745	0.564	24.3	98	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.436	0.465	-6.7	124	0.00
93	T	n-Undecane	1.012	0.802	20.8	103	0.00
94	T	1,2,4-Trichlorobenzene	0.911	0.973	-6.8	128	0.00
95	T	Naphthalene	2.655	2.797	-5.3	122	-0.01
96	T	n-Dodecane	0.963	0.757	21.4	100	0.00
97	T	Hexachlorobutadiene	0.640	0.617	3.6	131	0.00
98	T	Cyclohexanone	0.651	0.516	20.7	95	-0.02
99	T	tert-Butylbenzene	2.086	1.837	11.9	120	-0.01
100	T	n-Butylbenzene	2.143	1.861	13.2	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

MEMORANDUM

TO: Project File **DATE:** October 8, 2020

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Gerrity Bethel Site - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1246.030.04.003

TASK: EIM Data Validation Level EPA2A – July and August of 2019 and March and September of 2020 – Soil Vapor Extraction, Stack/Ambient/Indoor Air Samples

LAB: ALS Environmental Service Request Numbers: P1904551, P1904552, P1905126, P2001333, and P2004993

Seven soil vapor extraction samples and three ambient/indoor air were collected in 2019 (July 30 and August 27) and in 2020 (March 4 and September 2) at the Gerrity Bethel Site in Port Orchard, Washington. The samples were analyzed for 75 VOCs by USEPA Method TO-15 (*Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air*, Second Edition, EPA/625/R-96/010B, January 1999). Laboratory analytical services were provided by ALS Environmental (ALS) (also known as ALS Global (ALS)) of Simi Valley, California. Analytical data are reported under ALS's service request numbers P1904551, P1904552, P1905126, P2001333, and P2004993.

The quality assurance review of the analytical data is summarized below.

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation 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 Superfund Organic Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

The 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 Silonite or Source Cans (1-Liter or 6-Liter) for the air samples. The samples were shipped, delivered by FedEx, and received in good condition by the laboratory. 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 VOCs by Method TO-15 were performed within the 30-day recommended holding time limit for the air samples collected in a Source Can. 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. Case narrative and laboratory notes do not indicate that there are any issues with calibrations.

Method Blank Results

Laboratory method blanks were included with the analytical batch per method requirement. The method blank results do not report any compounds at concentrations at or above the reporting detection limit (MRLs).

Trip Blank Results

A trip blank was not required for the VOCs by 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/Replicate Analyses

Laboratory replicates were not performed. Refer to the Laboratory Control Sample section for additional precision information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air samples, method blanks, and laboratory control samples are within the laboratory surrogate control limits of 70 - 130% R. No data qualifications were warranted.

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control samples/laboratory control sample duplicates (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. LCS % Rs or LCS/LCSD %Rs and relative percent differences (RPDs) are within QC criteria with the following discussion:

- Service Request P1904551, P1904552, and P1905126: No measure of precision was provided. No action is taken other than to note this. All other laboratory QC are within criteria.

Matrix Spike/Matrix Spike Duplicates

A matrix spike/matrix spike duplicate (MS/MSD) is not required for the VOCs by TO-15 method.

Other Quality Control Issues

No other laboratory quality control issues were identified in the laboratory report.

Quantitation Limits

Results of the VOCs by TO-15 analysis are reported based on laboratory MRLs (assuming standard temperature and pressure is equal to 24.45) and reported in units of ppbv and $\mu g/m^3$.

The MRLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The MRLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

No data qualifiers are 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.
Matt Dahl
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Work Order Number: 1909411

October 01, 2019

Attention Matt Dahl:

Fremont Analytical, Inc. received 20 sample(s) on 9/26/2019 for the analyses presented in the following report.

Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260D

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,

Brianna Barnes
Project Manager

Date: *10/01/2019*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 1909411

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1909411-001	SB-27-0.5	09/24/2019 10:30 AM	09/26/2019 8:51 AM
1909411-002	SB-27-3	09/24/2019 10:45 AM	09/26/2019 8:51 AM
1909411-003	SB-27-6	09/24/2019 10:55 AM	09/26/2019 8:51 AM
1909411-004	SB-28-0.5	09/24/2019 2:50 PM	09/26/2019 8:51 AM
1909411-005	SB-28-3	09/24/2019 3:10 PM	09/26/2019 8:51 AM
1909411-006	SB-28-6	09/24/2019 3:40 PM	09/26/2019 8:51 AM
1909411-007	SB-29-0.5	09/24/2019 4:10 PM	09/26/2019 8:51 AM
1909411-008	SB-29-3	09/24/2019 4:20 PM	09/26/2019 8:51 AM
1909411-009	SB-29-6	09/24/2019 4:30 PM	09/26/2019 8:51 AM
1909411-010	SB-30-0.5	09/24/2019 5:10 PM	09/26/2019 8:51 AM
1909411-011	SB-30-3	09/24/2019 5:20 PM	09/26/2019 8:51 AM
1909411-012	SB-30-6	09/24/2019 5:30 PM	09/26/2019 8:51 AM
1909411-013	SB-27-W	09/24/2019 11:30 AM	09/26/2019 8:51 AM
1909411-014	SB-29-W	09/24/2019 5:00 PM	09/26/2019 8:51 AM
1909411-015	SB-31-0.5	09/25/2019 7:45 AM	09/26/2019 8:51 AM
1909411-016	SB-31-3	09/25/2019 7:50 AM	09/26/2019 8:51 AM
1909411-017	SB-31-6	09/25/2019 8:00 AM	09/26/2019 8:51 AM
1909411-018	SB-32-0.5	09/25/2019 8:30 AM	09/26/2019 8:51 AM
1909411-019	SB-32-3	09/25/2019 8:45 AM	09/26/2019 8:51 AM
1909411-020	SB-32-6	09/25/2019 9:00 AM	09/26/2019 8:51 AM

Case Narrative

WO#: **1909411**
Date: **10/1/2019**

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: 9/24/2019 10:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-001
Matrix: Soil
Client Sample ID: **SB-27-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Chloromethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Vinyl chloride	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Bromomethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Trichlorofluoromethane (CFC-11)	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Chloroethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Methylene chloride	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
trans-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Methyl tert-butyl ether (MTBE)	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1-Dichloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
cis-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Chloroform	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1,1-Trichloroethane (TCA)	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1-Dichloropropene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Carbon tetrachloride	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2-Dichloroethane (EDC)	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Benzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Trichloroethene (TCE)	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2-Dichloropropane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Bromodichloromethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Dibromomethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
cis-1,3-Dichloropropene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Toluene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
trans-1,3-Dichloropropylene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1,2-Trichloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,3-Dichloropropane	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Tetrachloroethene (PCE)	0.0415	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Dibromochloromethane	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2-Dibromoethane (EDB)	ND	0.00581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Chlorobenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1,1,2-Tetrachloroethane	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Ethylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
m,p-Xylene	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
o-Xylene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Styrene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Isopropylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Bromoform	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,1,2,2-Tetrachloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 10:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-001 **Matrix:** Soil
Client Sample ID: **SB-27-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Bromobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,3,5-Trimethylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
2-Chlorotoluene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
4-Chlorotoluene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
tert-Butylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2,3-Trichloropropane	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2,4-Trichlorobenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
sec-Butylbenzene	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
4-Isopropyltoluene	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,3-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,4-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
n-Butylbenzene	ND	0.0290		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2-Dibromo-3-chloropropane	ND	0.581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2,4-Trimethylbenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Hexachloro-1,3-butadiene	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Naphthalene	ND	0.0581		mg/Kg-dry	1	9/27/2019 12:43:41 PM
1,2,3-Trichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 12:43:41 PM
Surr: Dibromofluoromethane	89.5	56.5 - 129		%Rec	1	9/27/2019 12:43:41 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	9/27/2019 12:43:41 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	54.8 - 168		%Rec	1	9/27/2019 12:43:41 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	7.11	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 10:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-002
Matrix: Soil
Client Sample ID: SB-27-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Chloromethane	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Vinyl chloride	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Bromomethane	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Trichlorofluoromethane (CFC-11)	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Chloroethane	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1-Dichloroethene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Methylene chloride	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
trans-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Methyl tert-butyl ether (MTBE)	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1-Dichloroethane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
cis-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Chloroform	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1,1-Trichloroethane (TCA)	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1-Dichloropropene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Carbon tetrachloride	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2-Dichloroethane (EDC)	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Benzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Trichloroethene (TCE)	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2-Dichloropropane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Bromodichloromethane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Dibromomethane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
cis-1,3-Dichloropropene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Toluene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
trans-1,3-Dichloropropylene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1,2-Trichloroethane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,3-Dichloropropane	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Tetrachloroethene (PCE)	0.0336	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Dibromochloromethane	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2-Dibromoethane (EDB)	ND	0.00616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Chlorobenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1,1,2-Tetrachloroethane	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Ethylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
m,p-Xylene	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
o-Xylene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Styrene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Isopropylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Bromoform	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,1,2,2-Tetrachloroethane	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 10:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-002
Matrix: Soil
Client Sample ID: **SB-27-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Bromobenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,3,5-Trimethylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
2-Chlorotoluene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
4-Chlorotoluene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
tert-Butylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2,3-Trichloropropane	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2,4-Trichlorobenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
sec-Butylbenzene	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
4-Isopropyltoluene	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,3-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,4-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
n-Butylbenzene	ND	0.0308		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2-Dibromo-3-chloropropane	ND	0.616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2,4-Trimethylbenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Hexachloro-1,3-butadiene	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Naphthalene	ND	0.0616		mg/Kg-dry	1	9/27/2019 1:43:56 PM
1,2,3-Trichlorobenzene	ND	0.0247		mg/Kg-dry	1	9/27/2019 1:43:56 PM
Surr: Dibromofluoromethane	91.1	56.5 - 129		%Rec	1	9/27/2019 1:43:56 PM
Surr: Toluene-d8	95.3	64.5 - 151		%Rec	1	9/27/2019 1:43:56 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	54.8 - 168		%Rec	1	9/27/2019 1:43:56 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	18.5	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 10:55:00 AM
Project: Bethel Junction
Lab ID: 1909411-003
Matrix: Soil
Client Sample ID: SB-27-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Chloromethane	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Vinyl chloride	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Bromomethane	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Trichlorofluoromethane (CFC-11)	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Chloroethane	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1-Dichloroethene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Methylene chloride	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
trans-1,2-Dichloroethene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Methyl tert-butyl ether (MTBE)	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1-Dichloroethane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
cis-1,2-Dichloroethene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Chloroform	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1,1-Trichloroethane (TCA)	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1-Dichloropropene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Carbon tetrachloride	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2-Dichloroethane (EDC)	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Benzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Trichloroethene (TCE)	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2-Dichloropropane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Bromodichloromethane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Dibromomethane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
cis-1,3-Dichloropropene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Toluene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
trans-1,3-Dichloropropylene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1,2-Trichloroethane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,3-Dichloropropane	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Tetrachloroethene (PCE)	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Dibromochloromethane	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2-Dibromoethane (EDB)	ND	0.00481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Chlorobenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1,1,2-Tetrachloroethane	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Ethylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
m,p-Xylene	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
o-Xylene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Styrene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Isopropylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Bromoform	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,1,2,2-Tetrachloroethane	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 10:55:00 AM
Project: Bethel Junction
Lab ID: 1909411-003 **Matrix:** Soil
Client Sample ID: **SB-27-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Bromobenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,3,5-Trimethylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
2-Chlorotoluene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
4-Chlorotoluene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
tert-Butylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2,3-Trichloropropane	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2,4-Trichlorobenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
sec-Butylbenzene	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
4-Isopropyltoluene	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,3-Dichlorobenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,4-Dichlorobenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
n-Butylbenzene	ND	0.0241		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2-Dichlorobenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2-Dibromo-3-chloropropane	ND	0.481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2,4-Trimethylbenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Hexachloro-1,3-butadiene	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Naphthalene	ND	0.0481		mg/Kg-dry	1	9/27/2019 2:14:05 PM
1,2,3-Trichlorobenzene	ND	0.0193		mg/Kg-dry	1	9/27/2019 2:14:05 PM
Surr: Dibromofluoromethane	93.8	56.5 - 129		%Rec	1	9/27/2019 2:14:05 PM
Surr: Toluene-d8	96.2	64.5 - 151		%Rec	1	9/27/2019 2:14:05 PM
Surr: 1-Bromo-4-fluorobenzene	96.3	54.8 - 168		%Rec	1	9/27/2019 2:14:05 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	6.41	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 2:50:00 PM
Project: Bethel Junction
Lab ID: 1909411-004
Matrix: Soil
Client Sample ID: **SB-28-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Chloromethane	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Vinyl chloride	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Bromomethane	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Trichlorofluoromethane (CFC-11)	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Chloroethane	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1-Dichloroethene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Methylene chloride	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Methyl tert-butyl ether (MTBE)	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
cis-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Chloroform	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1,1-Trichloroethane (TCA)	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1-Dichloropropene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Carbon tetrachloride	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2-Dichloroethane (EDC)	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Benzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Dibromomethane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
cis-1,3-Dichloropropene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Toluene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
trans-1,3-Dichloropropylene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1,2-Trichloroethane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,3-Dichloropropane	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Tetrachloroethene (PCE)	0.0410	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Dibromochloromethane	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2-Dibromoethane (EDB)	ND	0.00608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Chlorobenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1,1,2-Tetrachloroethane	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Ethylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
m,p-Xylene	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
o-Xylene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Styrene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Isopropylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Bromoform	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 2:50:00 PM
Project: Bethel Junction
Lab ID: 1909411-004 **Matrix:** Soil
Client Sample ID: **SB-28-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Bromobenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,3,5-Trimethylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
2-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
4-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
tert-Butylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2,3-Trichloropropane	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2,4-Trichlorobenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
sec-Butylbenzene	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
4-Isopropyltoluene	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
n-Butylbenzene	ND	0.0304		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2-Dibromo-3-chloropropane	ND	0.608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Hexachloro-1,3-butadiene	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Naphthalene	ND	0.0608		mg/Kg-dry	1	9/27/2019 2:44:12 PM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	9/27/2019 2:44:12 PM
Surr: Dibromofluoromethane	93.3	56.5 - 129		%Rec	1	9/27/2019 2:44:12 PM
Surr: Toluene-d8	95.8	64.5 - 151		%Rec	1	9/27/2019 2:44:12 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	54.8 - 168		%Rec	1	9/27/2019 2:44:12 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	7.85	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 3:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-005
Matrix: Soil
Client Sample ID: SB-28-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Chloromethane	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Vinyl chloride	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Bromomethane	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Trichlorofluoromethane (CFC-11)	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Chloroethane	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1-Dichloroethene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Methylene chloride	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
trans-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Methyl tert-butyl ether (MTBE)	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1-Dichloroethane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
cis-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Chloroform	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1,1-Trichloroethane (TCA)	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1-Dichloropropene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Carbon tetrachloride	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2-Dichloroethane (EDC)	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Benzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Trichloroethene (TCE)	0.114	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2-Dichloropropane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Bromodichloromethane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Dibromomethane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
cis-1,3-Dichloropropene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Toluene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
trans-1,3-Dichloropropylene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1,2-Trichloroethane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,3-Dichloropropane	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Tetrachloroethene (PCE)	0.0911	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Dibromochloromethane	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2-Dibromoethane (EDB)	ND	0.00555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Chlorobenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1,1,2-Tetrachloroethane	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Ethylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
m,p-Xylene	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
o-Xylene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Styrene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Isopropylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Bromoform	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,1,2,2-Tetrachloroethane	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 3:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-005 **Matrix:** Soil
Client Sample ID: **SB-28-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Bromobenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,3,5-Trimethylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
2-Chlorotoluene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
4-Chlorotoluene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
tert-Butylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2,3-Trichloropropane	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2,4-Trichlorobenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
sec-Butylbenzene	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
4-Isopropyltoluene	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,3-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,4-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
n-Butylbenzene	ND	0.0278		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2-Dibromo-3-chloropropane	ND	0.555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2,4-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Hexachloro-1,3-butadiene	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Naphthalene	ND	0.0555		mg/Kg-dry	1	9/27/2019 3:14:19 PM
1,2,3-Trichlorobenzene	ND	0.0222		mg/Kg-dry	1	9/27/2019 3:14:19 PM
Surr: Dibromofluoromethane	93.0	56.5 - 129		%Rec	1	9/27/2019 3:14:19 PM
Surr: Toluene-d8	95.5	64.5 - 151		%Rec	1	9/27/2019 3:14:19 PM
Surr: 1-Bromo-4-fluorobenzene	96.0	54.8 - 168		%Rec	1	9/27/2019 3:14:19 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	10.3	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 3:40:00 PM
Project: Bethel Junction
Lab ID: 1909411-006
Matrix: Soil
Client Sample ID: SB-28-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Chloromethane	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Vinyl chloride	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Bromomethane	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Trichlorofluoromethane (CFC-11)	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Chloroethane	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Methylene chloride	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
trans-1,2-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1-Dichloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
cis-1,2-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Chloroform	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1,1-Trichloroethane (TCA)	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1-Dichloropropene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Carbon tetrachloride	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2-Dichloroethane (EDC)	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Benzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Trichloroethene (TCE)	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2-Dichloropropane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Bromodichloromethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Dibromomethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
cis-1,3-Dichloropropene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Toluene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
trans-1,3-Dichloropropylene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1,2-Trichloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,3-Dichloropropane	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Tetrachloroethene (PCE)	0.0330	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Dibromochloromethane	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2-Dibromoethane (EDB)	ND	0.00506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Chlorobenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1,1,2-Tetrachloroethane	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Ethylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
m,p-Xylene	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
o-Xylene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Styrene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Isopropylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Bromoform	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,1,2,2-Tetrachloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 3:40:00 PM
Project: Bethel Junction
Lab ID: 1909411-006 **Matrix:** Soil
Client Sample ID: SB-28-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Bromobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,3,5-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
2-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
4-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
tert-Butylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2,3-Trichloropropane	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2,4-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
sec-Butylbenzene	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
4-Isopropyltoluene	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,3-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,4-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
n-Butylbenzene	ND	0.0253		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2-Dibromo-3-chloropropane	ND	0.506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2,4-Trimethylbenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Hexachloro-1,3-butadiene	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Naphthalene	ND	0.0506		mg/Kg-dry	1	9/27/2019 3:44:27 PM
1,2,3-Trichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 3:44:27 PM
Surr: Dibromofluoromethane	88.1	56.5 - 129		%Rec	1	9/27/2019 3:44:27 PM
Surr: Toluene-d8	91.4	64.5 - 151		%Rec	1	9/27/2019 3:44:27 PM
Surr: 1-Bromo-4-fluorobenzene	96.0	54.8 - 168		%Rec	1	9/27/2019 3:44:27 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	10.7	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 4:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-007
Matrix: Soil
Client Sample ID: **SB-29-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Chloromethane	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Vinyl chloride	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Bromomethane	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Trichlorofluoromethane (CFC-11)	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Chloroethane	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1-Dichloroethene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Methylene chloride	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
trans-1,2-Dichloroethene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Methyl tert-butyl ether (MTBE)	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1-Dichloroethane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
cis-1,2-Dichloroethene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Chloroform	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1,1-Trichloroethane (TCA)	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1-Dichloropropene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Carbon tetrachloride	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2-Dichloroethane (EDC)	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Benzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Trichloroethene (TCE)	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2-Dichloropropane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Bromodichloromethane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Dibromomethane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
cis-1,3-Dichloropropene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Toluene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
trans-1,3-Dichloropropylene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1,2-Trichloroethane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,3-Dichloropropane	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Tetrachloroethene (PCE)	0.141	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Dibromochloromethane	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2-Dibromoethane (EDB)	ND	0.00715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Chlorobenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1,1,2-Tetrachloroethane	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Ethylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
m,p-Xylene	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
o-Xylene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Styrene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Isopropylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Bromoform	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,1,2,2-Tetrachloroethane	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 4:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-007 **Matrix:** Soil
Client Sample ID: **SB-29-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Bromobenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,3,5-Trimethylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
2-Chlorotoluene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
4-Chlorotoluene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
tert-Butylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2,3-Trichloropropane	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2,4-Trichlorobenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
sec-Butylbenzene	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
4-Isopropyltoluene	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,3-Dichlorobenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,4-Dichlorobenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
n-Butylbenzene	ND	0.0358		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2-Dichlorobenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2-Dibromo-3-chloropropane	ND	0.715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2,4-Trimethylbenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Hexachloro-1,3-butadiene	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Naphthalene	ND	0.0715		mg/Kg-dry	1	9/27/2019 4:14:35 PM
1,2,3-Trichlorobenzene	ND	0.0286		mg/Kg-dry	1	9/27/2019 4:14:35 PM
Surr: Dibromofluoromethane	93.8	56.5 - 129		%Rec	1	9/27/2019 4:14:35 PM
Surr: Toluene-d8	95.6	64.5 - 151		%Rec	1	9/27/2019 4:14:35 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	54.8 - 168		%Rec	1	9/27/2019 4:14:35 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	21.8	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 4:20:00 PM
Project: Bethel Junction
Lab ID: 1909411-008
Matrix: Soil
Client Sample ID: SB-29-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Chloromethane	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Vinyl chloride	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Bromomethane	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Trichlorofluoromethane (CFC-11)	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Chloroethane	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Methylene chloride	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
trans-1,2-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Methyl tert-butyl ether (MTBE)	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1-Dichloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
cis-1,2-Dichloroethene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Chloroform	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1,1-Trichloroethane (TCA)	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1-Dichloropropene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Carbon tetrachloride	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2-Dichloroethane (EDC)	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Benzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Trichloroethene (TCE)	0.0231	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2-Dichloropropane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Bromodichloromethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Dibromomethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
cis-1,3-Dichloropropene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Toluene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
trans-1,3-Dichloropropylene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1,2-Trichloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,3-Dichloropropane	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Tetrachloroethene (PCE)	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Dibromochloromethane	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2-Dibromoethane (EDB)	ND	0.00508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Chlorobenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1,1,2-Tetrachloroethane	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Ethylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
m,p-Xylene	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
o-Xylene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Styrene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Isopropylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Bromoform	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,1,2,2-Tetrachloroethane	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 4:20:00 PM
Project: Bethel Junction
Lab ID: 1909411-008 **Matrix:** Soil
Client Sample ID: **SB-29-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Bromobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,3,5-Trimethylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
2-Chlorotoluene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
4-Chlorotoluene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
tert-Butylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2,3-Trichloropropane	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2,4-Trichlorobenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
sec-Butylbenzene	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
4-Isopropyltoluene	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,3-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,4-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
n-Butylbenzene	ND	0.0254		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2-Dichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2-Dibromo-3-chloropropane	ND	0.508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2,4-Trimethylbenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Hexachloro-1,3-butadiene	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Naphthalene	ND	0.0508		mg/Kg-dry	1	9/27/2019 4:44:43 PM
1,2,3-Trichlorobenzene	ND	0.0203		mg/Kg-dry	1	9/27/2019 4:44:43 PM
Surr: Dibromofluoromethane	95.1	56.5 - 129		%Rec	1	9/27/2019 4:44:43 PM
Surr: Toluene-d8	96.0	64.5 - 151		%Rec	1	9/27/2019 4:44:43 PM
Surr: 1-Bromo-4-fluorobenzene	95.4	54.8 - 168		%Rec	1	9/27/2019 4:44:43 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	13.7	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 4:30:00 PM
Project: Bethel Junction
Lab ID: 1909411-009
Matrix: Soil
Client Sample ID: SB-29-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Chloromethane	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Vinyl chloride	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Bromomethane	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Trichlorofluoromethane (CFC-11)	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Chloroethane	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1-Dichloroethene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Methylene chloride	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
trans-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Methyl tert-butyl ether (MTBE)	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1-Dichloroethane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
cis-1,2-Dichloroethene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Chloroform	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1,1-Trichloroethane (TCA)	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1-Dichloropropene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Carbon tetrachloride	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2-Dichloroethane (EDC)	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Benzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Trichloroethene (TCE)	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2-Dichloropropane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Bromodichloromethane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Dibromomethane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
cis-1,3-Dichloropropene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Toluene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
trans-1,3-Dichloropropylene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1,2-Trichloroethane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,3-Dichloropropane	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Tetrachloroethene (PCE)	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Dibromochloromethane	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2-Dibromoethane (EDB)	ND	0.00606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Chlorobenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1,1,2-Tetrachloroethane	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Ethylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
m,p-Xylene	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
o-Xylene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Styrene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Isopropylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Bromoform	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,1,2,2-Tetrachloroethane	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 4:30:00 PM
Project: Bethel Junction
Lab ID: 1909411-009 **Matrix:** Soil
Client Sample ID: **SB-29-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Bromobenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,3,5-Trimethylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
2-Chlorotoluene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
4-Chlorotoluene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
tert-Butylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2,3-Trichloropropane	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2,4-Trichlorobenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
sec-Butylbenzene	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
4-Isopropyltoluene	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,3-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,4-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
n-Butylbenzene	ND	0.0303		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2-Dichlorobenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2-Dibromo-3-chloropropane	ND	0.606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2,4-Trimethylbenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Hexachloro-1,3-butadiene	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Naphthalene	ND	0.0606		mg/Kg-dry	1	9/27/2019 5:14:52 PM
1,2,3-Trichlorobenzene	ND	0.0242		mg/Kg-dry	1	9/27/2019 5:14:52 PM
Surr: Dibromofluoromethane	92.4	56.5 - 129		%Rec	1	9/27/2019 5:14:52 PM
Surr: Toluene-d8	95.4	64.5 - 151		%Rec	1	9/27/2019 5:14:52 PM
Surr: 1-Bromo-4-fluorobenzene	96.4	54.8 - 168		%Rec	1	9/27/2019 5:14:52 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	12.5	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-010
Matrix: Soil
Client Sample ID: **SB-30-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Chloromethane	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Vinyl chloride	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Bromomethane	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Chloroethane	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1-Dichloroethene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Methylene chloride	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
trans-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1-Dichloroethane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
cis-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Chloroform	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1-Dichloropropene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Carbon tetrachloride	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2-Dichloroethane (EDC)	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Benzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Trichloroethene (TCE)	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2-Dichloropropane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Bromodichloromethane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Dibromomethane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
cis-1,3-Dichloropropene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Toluene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
trans-1,3-Dichloropropylene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1,2-Trichloroethane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,3-Dichloropropane	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Tetrachloroethene (PCE)	0.0830	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Dibromochloromethane	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2-Dibromoethane (EDB)	ND	0.00575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Chlorobenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Ethylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
m,p-Xylene	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
o-Xylene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Styrene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Isopropylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Bromoform	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,1,2,2-Tetrachloroethane	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 5:10:00 PM
Project: Bethel Junction
Lab ID: 1909411-010 **Matrix:** Soil
Client Sample ID: **SB-30-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Bromobenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,3,5-Trimethylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
2-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
4-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
tert-Butylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2,3-Trichloropropane	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2,4-Trichlorobenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
sec-Butylbenzene	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
4-Isopropyltoluene	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,3-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,4-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
n-Butylbenzene	ND	0.0288		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2-Dibromo-3-chloropropane	ND	0.575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2,4-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Hexachloro-1,3-butadiene	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Naphthalene	ND	0.0575		mg/Kg-dry	1	9/27/2019 5:45:00 PM
1,2,3-Trichlorobenzene	ND	0.0230		mg/Kg-dry	1	9/27/2019 5:45:00 PM
Surr: Dibromofluoromethane	92.7	56.5 - 129		%Rec	1	9/27/2019 5:45:00 PM
Surr: Toluene-d8	95.7	64.5 - 151		%Rec	1	9/27/2019 5:45:00 PM
Surr: 1-Bromo-4-fluorobenzene	96.2	54.8 - 168		%Rec	1	9/27/2019 5:45:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	9.20	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:20:00 PM
Project: Bethel Junction
Lab ID: 1909411-011
Matrix: Soil
Client Sample ID: SB-30-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Chloromethane	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Vinyl chloride	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Bromomethane	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Chloroethane	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Methylene chloride	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
trans-1,2-Dichloroethene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1-Dichloroethane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
cis-1,2-Dichloroethene	0.0375	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Chloroform	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Carbon tetrachloride	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2-Dichloroethane (EDC)	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Benzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Trichloroethene (TCE)	0.109	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2-Dichloropropane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Bromodichloromethane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Dibromomethane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
cis-1,3-Dichloropropene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Toluene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
trans-1,3-Dichloropropylene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1,2-Trichloroethane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,3-Dichloropropane	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Tetrachloroethene (PCE)	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Dibromochloromethane	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2-Dibromoethane (EDB)	ND	0.00514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Chlorobenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1,1,2-Tetrachloroethane	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Ethylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
m,p-Xylene	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
o-Xylene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Styrene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Isopropylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Bromoform	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,1,2,2-Tetrachloroethane	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 5:20:00 PM
Project: Bethel Junction
Lab ID: 1909411-011 **Matrix:** Soil
Client Sample ID: **SB-30-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Bromobenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,3,5-Trimethylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
2-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
4-Chlorotoluene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
tert-Butylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2,3-Trichloropropane	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2,4-Trichlorobenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
sec-Butylbenzene	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
4-Isopropyltoluene	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,3-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,4-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
n-Butylbenzene	ND	0.0257		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2-Dichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2-Dibromo-3-chloropropane	ND	0.514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2,4-Trimethylbenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Hexachloro-1,3-butadiene	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Naphthalene	ND	0.0514		mg/Kg-dry	1	9/27/2019 6:15:06 PM
1,2,3-Trichlorobenzene	ND	0.0206		mg/Kg-dry	1	9/27/2019 6:15:06 PM
Surr: Dibromofluoromethane	94.3	56.5 - 129		%Rec	1	9/27/2019 6:15:06 PM
Surr: Toluene-d8	95.8	64.5 - 151		%Rec	1	9/27/2019 6:15:06 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	54.8 - 168		%Rec	1	9/27/2019 6:15:06 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	9.81	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:30:00 PM
Project: Bethel Junction
Lab ID: 1909411-012
Matrix: Soil
Client Sample ID: SB-30-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Chloromethane	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Vinyl chloride	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Bromomethane	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Trichlorofluoromethane (CFC-11)	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Chloroethane	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1-Dichloroethene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Methylene chloride	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
trans-1,2-Dichloroethene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Methyl tert-butyl ether (MTBE)	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1-Dichloroethane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
cis-1,2-Dichloroethene	0.0481	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Chloroform	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1,1-Trichloroethane (TCA)	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1-Dichloropropene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Carbon tetrachloride	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2-Dichloroethane (EDC)	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Benzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Trichloroethene (TCE)	0.385	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2-Dichloropropane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Bromodichloromethane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Dibromomethane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
cis-1,3-Dichloropropene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Toluene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
trans-1,3-Dichloropropylene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1,2-Trichloroethane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,3-Dichloropropane	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Tetrachloroethene (PCE)	0.0570	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Dibromochloromethane	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2-Dibromoethane (EDB)	ND	0.00503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Chlorobenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1,1,2-Tetrachloroethane	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Ethylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
m,p-Xylene	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
o-Xylene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Styrene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Isopropylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Bromoform	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,1,2,2-Tetrachloroethane	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:30:00 PM
Project: Bethel Junction
Lab ID: 1909411-012
Matrix: Soil
Client Sample ID: **SB-30-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Bromobenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,3,5-Trimethylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
2-Chlorotoluene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
4-Chlorotoluene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
tert-Butylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2,3-Trichloropropane	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2,4-Trichlorobenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
sec-Butylbenzene	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
4-Isopropyltoluene	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,3-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,4-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
n-Butylbenzene	ND	0.0252		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2-Dichlorobenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2-Dibromo-3-chloropropane	ND	0.503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2,4-Trimethylbenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Hexachloro-1,3-butadiene	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Naphthalene	ND	0.0503		mg/Kg-dry	1	9/27/2019 6:45:13 PM
1,2,3-Trichlorobenzene	ND	0.0201		mg/Kg-dry	1	9/27/2019 6:45:13 PM
Surr: Dibromofluoromethane	94.6	56.5 - 129		%Rec	1	9/27/2019 6:45:13 PM
Surr: Toluene-d8	95.6	64.5 - 151		%Rec	1	9/27/2019 6:45:13 PM
Surr: 1-Bromo-4-fluorobenzene	95.7	54.8 - 168		%Rec	1	9/27/2019 6:45:13 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	9.52	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 11:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-013
Matrix: Groundwater
Client Sample ID: **SB-27-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	9/30/2019 5:54:38 PM
Chloromethane	ND	2.00		µg/L	1	9/30/2019 5:54:38 PM
Vinyl chloride	ND	0.200		µg/L	1	9/30/2019 5:54:38 PM
Bromomethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Chloroethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Methylene chloride	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Chloroform	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Carbon tetrachloride	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Benzene	2.79	1.00		µg/L	1	9/30/2019 5:54:38 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromodichloromethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Dibromomethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Toluene	15.7	1.00		µg/L	1	9/30/2019 5:54:38 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Dibromochloromethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	9/30/2019 5:54:38 PM
Chlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Ethylbenzene	1.35	1.00		µg/L	1	9/30/2019 5:54:38 PM
m,p-Xylene	4.85	1.00		µg/L	1	9/30/2019 5:54:38 PM
o-Xylene	1.82	1.00		µg/L	1	9/30/2019 5:54:38 PM
Styrene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Isopropylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromoform	ND	2.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 11:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-013
Matrix: Groundwater
Client Sample ID: **SB-27-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
2-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
4-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
tert-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	9/30/2019 5:54:38 PM
sec-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
n-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	9/30/2019 5:54:38 PM
Naphthalene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	9/30/2019 5:54:38 PM
Surr: Dibromofluoromethane	87.7	45.4 - 152		%Rec	1	9/30/2019 5:54:38 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	9/30/2019 5:54:38 PM
Surr: 1-Bromo-4-fluorobenzene	98.4	64.2 - 128		%Rec	1	9/30/2019 5:54:38 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:00:00 PM
Project: Bethel Junction
Lab ID: 1909411-014
Matrix: Groundwater
Client Sample ID: **SB-29-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	9/30/2019 6:26:36 PM
Chloromethane	ND	2.00		µg/L	1	9/30/2019 6:26:36 PM
Vinyl chloride	ND	0.200		µg/L	1	9/30/2019 6:26:36 PM
Bromomethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Chloroethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Methylene chloride	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
cis-1,2-Dichloroethene	7.66	1.00		µg/L	1	9/30/2019 6:26:36 PM
Chloroform	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Carbon tetrachloride	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Benzene	1.54	1.00		µg/L	1	9/30/2019 6:26:36 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromodichloromethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Dibromomethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Toluene	7.66	1.00		µg/L	1	9/30/2019 6:26:36 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Dibromochloromethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	9/30/2019 6:26:36 PM
Chlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Ethylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
m,p-Xylene	2.25	1.00		µg/L	1	9/30/2019 6:26:36 PM
o-Xylene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Styrene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Isopropylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromoform	ND	2.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:00:00 PM
Project: Bethel Junction
Lab ID: 1909411-014
Matrix: Groundwater
Client Sample ID: **SB-29-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
2-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
4-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
tert-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	9/30/2019 6:26:36 PM
sec-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
n-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	9/30/2019 6:26:36 PM
Naphthalene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	9/30/2019 6:26:36 PM
Surr: Dibromofluoromethane	90.7	45.4 - 152		%Rec	1	9/30/2019 6:26:36 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	9/30/2019 6:26:36 PM
Surr: 1-Bromo-4-fluorobenzene	97.7	64.2 - 128		%Rec	1	9/30/2019 6:26:36 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 7:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-015
Matrix: Soil
Client Sample ID: **SB-31-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Chloromethane	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Vinyl chloride	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Bromomethane	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Trichlorofluoromethane (CFC-11)	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Chloroethane	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1-Dichloroethene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Methylene chloride	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
trans-1,2-Dichloroethene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Methyl tert-butyl ether (MTBE)	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1-Dichloroethane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
cis-1,2-Dichloroethene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Chloroform	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1,1-Trichloroethane (TCA)	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1-Dichloropropene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Carbon tetrachloride	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2-Dichloroethane (EDC)	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Benzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Trichloroethene (TCE)	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2-Dichloropropane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Bromodichloromethane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Dibromomethane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
cis-1,3-Dichloropropene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Toluene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
trans-1,3-Dichloropropylene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1,2-Trichloroethane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,3-Dichloropropane	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Tetrachloroethene (PCE)	0.0397	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Dibromochloromethane	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2-Dibromoethane (EDB)	ND	0.00732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Chlorobenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1,1,2-Tetrachloroethane	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Ethylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
m,p-Xylene	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
o-Xylene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Styrene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Isopropylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Bromoform	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,1,2,2-Tetrachloroethane	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 7:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-015 **Matrix:** Soil
Client Sample ID: **SB-31-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Bromobenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,3,5-Trimethylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
2-Chlorotoluene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
4-Chlorotoluene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
tert-Butylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2,3-Trichloropropane	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2,4-Trichlorobenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
sec-Butylbenzene	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
4-Isopropyltoluene	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,3-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,4-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
n-Butylbenzene	ND	0.0366		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2-Dibromo-3-chloropropane	ND	0.732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2,4-Trimethylbenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Hexachloro-1,3-butadiene	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Naphthalene	ND	0.0732		mg/Kg-dry	1	9/27/2019 7:15:21 PM
1,2,3-Trichlorobenzene	ND	0.0293		mg/Kg-dry	1	9/27/2019 7:15:21 PM
Surr: Dibromofluoromethane	92.3	56.5 - 129		%Rec	1	9/27/2019 7:15:21 PM
Surr: Toluene-d8	94.8	64.5 - 151		%Rec	1	9/27/2019 7:15:21 PM
Surr: 1-Bromo-4-fluorobenzene	96.1	54.8 - 168		%Rec	1	9/27/2019 7:15:21 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	27.4	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 7:50:00 AM
Project: Bethel Junction
Lab ID: 1909411-016
Matrix: Soil
Client Sample ID: SB-31-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Chloromethane	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Vinyl chloride	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Bromomethane	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Trichlorofluoromethane (CFC-11)	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Chloroethane	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1-Dichloroethene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Methylene chloride	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
trans-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1-Dichloroethane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
cis-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Chloroform	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1,1-Trichloroethane (TCA)	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1-Dichloropropene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Carbon tetrachloride	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2-Dichloroethane (EDC)	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Benzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Trichloroethene (TCE)	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2-Dichloropropane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Bromodichloromethane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Dibromomethane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
cis-1,3-Dichloropropene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Toluene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
trans-1,3-Dichloropropylene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1,2-Trichloroethane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,3-Dichloropropane	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Tetrachloroethene (PCE)	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Dibromochloromethane	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2-Dibromoethane (EDB)	ND	0.00579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Chlorobenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1,1,2-Tetrachloroethane	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Ethylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
m,p-Xylene	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
o-Xylene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Styrene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Isopropylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Bromoform	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,1,2,2-Tetrachloroethane	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 7:50:00 AM
Project: Bethel Junction
Lab ID: 1909411-016 **Matrix:** Soil
Client Sample ID: **SB-31-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Bromobenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,3,5-Trimethylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
2-Chlorotoluene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
4-Chlorotoluene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
tert-Butylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2,3-Trichloropropane	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2,4-Trichlorobenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
sec-Butylbenzene	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
4-Isopropyltoluene	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,3-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,4-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
n-Butylbenzene	ND	0.0289		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2-Dibromo-3-chloropropane	ND	0.579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2,4-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Hexachloro-1,3-butadiene	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Naphthalene	ND	0.0579		mg/Kg-dry	1	9/27/2019 10:16:10 PM
1,2,3-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	9/27/2019 10:16:10 PM
Surr: Dibromofluoromethane	92.2	56.5 - 129		%Rec	1	9/27/2019 10:16:10 PM
Surr: Toluene-d8	95.0	64.5 - 151		%Rec	1	9/27/2019 10:16:10 PM
Surr: 1-Bromo-4-fluorobenzene	96.3	54.8 - 168		%Rec	1	9/27/2019 10:16:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	9.30	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 8:00:00 AM
Project: Bethel Junction
Lab ID: 1909411-017
Matrix: Soil
Client Sample ID: SB-31-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Chloromethane	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Vinyl chloride	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Bromomethane	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Trichlorofluoromethane (CFC-11)	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Chloroethane	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1-Dichloroethene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Methylene chloride	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
trans-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Methyl tert-butyl ether (MTBE)	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1-Dichloroethane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
cis-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Chloroform	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1,1-Trichloroethane (TCA)	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1-Dichloropropene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Carbon tetrachloride	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2-Dichloroethane (EDC)	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Benzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Trichloroethene (TCE)	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2-Dichloropropane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Bromodichloromethane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Dibromomethane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
cis-1,3-Dichloropropene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Toluene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
trans-1,3-Dichloropropylene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1,2-Trichloroethane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,3-Dichloropropane	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Tetrachloroethene (PCE)	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Dibromochloromethane	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2-Dibromoethane (EDB)	ND	0.00647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Chlorobenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1,1,2-Tetrachloroethane	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Ethylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
m,p-Xylene	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
o-Xylene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Styrene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Isopropylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Bromoform	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,1,2,2-Tetrachloroethane	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 8:00:00 AM
Project: Bethel Junction
Lab ID: 1909411-017 **Matrix:** Soil
Client Sample ID: **SB-31-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Bromobenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,3,5-Trimethylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
2-Chlorotoluene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
4-Chlorotoluene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
tert-Butylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2,3-Trichloropropane	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2,4-Trichlorobenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
sec-Butylbenzene	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
4-Isopropyltoluene	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,3-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,4-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
n-Butylbenzene	ND	0.0323		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2-Dibromo-3-chloropropane	ND	0.647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2,4-Trimethylbenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Hexachloro-1,3-butadiene	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Naphthalene	ND	0.0647		mg/Kg-dry	1	9/27/2019 10:46:17 PM
1,2,3-Trichlorobenzene	ND	0.0259		mg/Kg-dry	1	9/27/2019 10:46:17 PM
Surr: Dibromofluoromethane	93.3	56.5 - 129		%Rec	1	9/27/2019 10:46:17 PM
Surr: Toluene-d8	95.8	64.5 - 151		%Rec	1	9/27/2019 10:46:17 PM
Surr: 1-Bromo-4-fluorobenzene	96.8	54.8 - 168		%Rec	1	9/27/2019 10:46:17 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	20.1	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 8:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-018
Matrix: Soil
Client Sample ID: **SB-32-0.5**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Chloromethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Vinyl chloride	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Bromomethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Trichlorofluoromethane (CFC-11)	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Chloroethane	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Methylene chloride	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
trans-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Methyl tert-butyl ether (MTBE)	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1-Dichloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
cis-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Chloroform	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1,1-Trichloroethane (TCA)	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1-Dichloropropene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Carbon tetrachloride	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2-Dichloroethane (EDC)	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Benzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Trichloroethene (TCE)	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2-Dichloropropane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Bromodichloromethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Dibromomethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
cis-1,3-Dichloropropene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Toluene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
trans-1,3-Dichloropropylene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1,2-Trichloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,3-Dichloropropane	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Tetrachloroethene (PCE)	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Dibromochloromethane	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2-Dibromoethane (EDB)	ND	0.00581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Chlorobenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1,1,2-Tetrachloroethane	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Ethylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
m,p-Xylene	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
o-Xylene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Styrene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Isopropylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Bromoform	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,1,2,2-Tetrachloroethane	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 8:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-018 **Matrix:** Soil
Client Sample ID: **SB-32-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Bromobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,3,5-Trimethylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
2-Chlorotoluene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
4-Chlorotoluene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
tert-Butylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2,3-Trichloropropane	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2,4-Trichlorobenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
sec-Butylbenzene	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
4-Isopropyltoluene	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,3-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,4-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
n-Butylbenzene	ND	0.0291		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2-Dibromo-3-chloropropane	ND	0.581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2,4-Trimethylbenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Hexachloro-1,3-butadiene	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Naphthalene	ND	0.0581		mg/Kg-dry	1	9/27/2019 11:16:24 PM
1,2,3-Trichlorobenzene	ND	0.0232		mg/Kg-dry	1	9/27/2019 11:16:24 PM
Surr: Dibromofluoromethane	90.8	56.5 - 129		%Rec	1	9/27/2019 11:16:24 PM
Surr: Toluene-d8	95.2	64.5 - 151		%Rec	1	9/27/2019 11:16:24 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	54.8 - 168		%Rec	1	9/27/2019 11:16:24 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	6.16	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 8:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-019
Matrix: Soil
Client Sample ID: SB-32-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Chloromethane	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Vinyl chloride	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Bromomethane	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Trichlorofluoromethane (CFC-11)	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Chloroethane	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1-Dichloroethene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Methylene chloride	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
trans-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Methyl tert-butyl ether (MTBE)	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1-Dichloroethane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
cis-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Chloroform	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1,1-Trichloroethane (TCA)	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1-Dichloropropene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Carbon tetrachloride	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2-Dichloroethane (EDC)	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Benzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Trichloroethene (TCE)	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2-Dichloropropane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Bromodichloromethane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Dibromomethane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
cis-1,3-Dichloropropene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Toluene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
trans-1,3-Dichloropropylene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1,2-Trichloroethane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,3-Dichloropropane	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Tetrachloroethene (PCE)	0.0463	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Dibromochloromethane	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2-Dibromoethane (EDB)	ND	0.00704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Chlorobenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1,1,2-Tetrachloroethane	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Ethylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
m,p-Xylene	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
o-Xylene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Styrene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Isopropylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Bromoform	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,1,2,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 8:45:00 AM
Project: Bethel Junction
Lab ID: 1909411-019 **Matrix:** Soil
Client Sample ID: **SB-32-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Bromobenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,3,5-Trimethylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
2-Chlorotoluene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
4-Chlorotoluene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
tert-Butylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2,3-Trichloropropane	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2,4-Trichlorobenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
sec-Butylbenzene	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
4-Isopropyltoluene	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,3-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,4-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
n-Butylbenzene	ND	0.0352		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2-Dibromo-3-chloropropane	ND	0.704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2,4-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Hexachloro-1,3-butadiene	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Naphthalene	ND	0.0704		mg/Kg-dry	1	9/27/2019 11:46:30 PM
1,2,3-Trichlorobenzene	ND	0.0282		mg/Kg-dry	1	9/27/2019 11:46:30 PM
Surr: Dibromofluoromethane	92.5	56.5 - 129		%Rec	1	9/27/2019 11:46:30 PM
Surr: Toluene-d8	95.5	64.5 - 151		%Rec	1	9/27/2019 11:46:30 PM
Surr: 1-Bromo-4-fluorobenzene	96.3	54.8 - 168		%Rec	1	9/27/2019 11:46:30 PM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	15.7	0.500		wt%	1	9/27/2019 10:28:04 AM

Client: PES Environmental, Inc.
Collection Date: 9/25/2019 9:00:00 AM
Project: Bethel Junction
Lab ID: 1909411-020
Matrix: Soil
Client Sample ID: SB-32-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25958 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Chloromethane	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Vinyl chloride	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Bromomethane	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Trichlorofluoromethane (CFC-11)	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Chloroethane	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1-Dichloroethene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Methylene chloride	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
trans-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Methyl tert-butyl ether (MTBE)	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1-Dichloroethane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
cis-1,2-Dichloroethene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Chloroform	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1,1-Trichloroethane (TCA)	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1-Dichloropropene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Carbon tetrachloride	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2-Dichloroethane (EDC)	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Benzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Trichloroethene (TCE)	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2-Dichloropropane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Bromodichloromethane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Dibromomethane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
cis-1,3-Dichloropropene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Toluene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
trans-1,3-Dichloropropylene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1,2-Trichloroethane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,3-Dichloropropane	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Tetrachloroethene (PCE)	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Dibromochloromethane	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2-Dibromoethane (EDB)	ND	0.00552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Chlorobenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1,1,2-Tetrachloroethane	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Ethylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
m,p-Xylene	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
o-Xylene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Styrene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Isopropylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Bromoform	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,1,2,2-Tetrachloroethane	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM

Client: PES Environmental, Inc. **Collection Date:** 9/25/2019 9:00:00 AM
Project: Bethel Junction
Lab ID: 1909411-020 **Matrix:** Soil
Client Sample ID: **SB-32-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25958		Analyst: KT
n-Propylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Bromobenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,3,5-Trimethylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
2-Chlorotoluene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
4-Chlorotoluene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
tert-Butylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2,3-Trichloropropane	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2,4-Trichlorobenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
sec-Butylbenzene	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
4-Isopropyltoluene	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,3-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,4-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
n-Butylbenzene	ND	0.0276		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2-Dichlorobenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2-Dibromo-3-chloropropane	ND	0.552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2,4-Trimethylbenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Hexachloro-1,3-butadiene	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Naphthalene	ND	0.0552		mg/Kg-dry	1	9/28/2019 12:16:39 AM
1,2,3-Trichlorobenzene	ND	0.0221		mg/Kg-dry	1	9/28/2019 12:16:39 AM
Surr: Dibromofluoromethane	91.7	56.5 - 129		%Rec	1	9/28/2019 12:16:39 AM
Surr: Toluene-d8	95.0	64.5 - 151		%Rec	1	9/28/2019 12:16:39 AM
Surr: 1-Bromo-4-fluorobenzene	96.1	54.8 - 168		%Rec	1	9/28/2019 12:16:39 AM
Sample Moisture (Percent Moisture)				Batch ID: R54188		Analyst: ZR
Percent Moisture	9.07	0.500		wt%	1	9/27/2019 10:28:04 AM

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25958** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **LCSS** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074220**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.783	0.0200	1.000	0	78.3	14.3	167				
Chloromethane	0.920	0.0500	1.000	0	92.0	32	156				
Vinyl chloride	0.846	0.0250	1.000	0	84.6	43.4	151				
Bromomethane	1.57	0.0500	1.000	0	157	35	155				S
Trichlorofluoromethane (CFC-11)	0.942	0.0200	1.000	0	94.2	33.8	156				
Chloroethane	0.873	0.0500	1.000	0	87.3	33.1	147				
1,1-Dichloroethene	0.949	0.0200	1.000	0	94.9	30.9	145				
Methylene chloride	0.931	0.0200	1.000	0	93.1	46.3	140				
trans-1,2-Dichloroethene	0.951	0.0200	1.000	0	95.1	68	130				
Methyl tert-butyl ether (MTBE)	0.905	0.0500	1.000	0	90.5	44.1	152				
1,1-Dichloroethane	0.899	0.0200	1.000	0	89.9	61.9	137				
cis-1,2-Dichloroethene	0.945	0.0200	1.000	0	94.5	71.3	135				
Chloroform	0.902	0.0200	1.000	0	90.2	69	145				
1,1,1-Trichloroethane (TCA)	0.910	0.0250	1.000	0	91.0	69	132				
1,1-Dichloropropene	0.910	0.0200	1.000	0	91.0	72.7	131				
Carbon tetrachloride	0.918	0.0500	1.000	0	91.8	63.4	137				
1,2-Dichloroethane (EDC)	0.833	0.0200	1.000	0	83.3	50.9	162				
Benzene	0.921	0.0200	1.000	0	92.1	64.3	133				
Trichloroethene (TCE)	0.955	0.0200	1.000	0	95.5	65.5	137				
1,2-Dichloropropane	0.888	0.0200	1.000	0	88.8	63.2	142				
Bromodichloromethane	0.886	0.0200	1.000	0	88.6	53.4	131				
Dibromomethane	0.896	0.0200	1.000	0	89.6	60.1	146				
cis-1,3-Dichloropropene	0.902	0.0200	1.000	0	90.2	59.1	143				
Toluene	0.939	0.0200	1.000	0	93.9	67	144				
trans-1,3-Dichloropropylene	0.880	0.0200	1.000	0	88.0	49.2	149				
1,1,2-Trichloroethane	0.919	0.0200	1.000	0	91.9	56.9	147				
1,3-Dichloropropane	0.898	0.0250	1.000	0	89.8	56.1	153				
Tetrachloroethene (PCE)	1.03	0.0250	1.000	0	103	52.7	150				
Dibromochloromethane	0.921	0.0250	1.000	0	92.1	70.6	144				
1,2-Dibromoethane (EDB)	0.907	0.00500	1.000	0	90.7	50.5	154				
Chlorobenzene	0.997	0.0250	1.000	0	99.7	84.9	125				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25958** SampType: **LCS** Units: **mg/Kg** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **LCSS** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074220**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.975	0.0250	1.000	0	97.5	65.9	141				
Ethylbenzene	0.998	0.0250	1.000	0	99.8	74	129				
m,p-Xylene	2.04	0.0500	2.000	0	102	70	124				
o-Xylene	1.01	0.0250	1.000	0	101	68.1	139				
Styrene	1.01	0.0250	1.000	0	101	73.3	146				
Isopropylbenzene	1.02	0.0250	1.000	0	102	70	130				
Bromoform	0.951	0.0500	1.000	0	95.1	44.3	130				
1,1,2,2-Tetrachloroethane	0.814	0.0200	1.000	0	81.4	44.8	165				
n-Propylbenzene	1.02	0.0250	1.000	0	102	75.8	139				
Bromobenzene	1.02	0.0200	1.000	0	102	49.2	144				
1,3,5-Trimethylbenzene	1.03	0.0250	1.000	0	103	76.5	135				
2-Chlorotoluene	0.992	0.0250	1.000	0	99.2	76.7	129				
4-Chlorotoluene	0.987	0.0250	1.000	0	98.7	77.5	125				
tert-Butylbenzene	1.02	0.0250	1.000	0	102	66.2	130				
1,2,3-Trichloropropane	0.882	0.0250	1.000	0	88.2	67.9	136				
1,2,4-Trichlorobenzene	1.05	0.0250	1.000	0	105	65.5	150				
sec-Butylbenzene	1.02	0.0500	1.000	0	102	75.6	133				
4-Isopropyltoluene	1.02	0.0500	1.000	0	102	76.8	131				
1,3-Dichlorobenzene	1.01	0.0200	1.000	0	101	48.6	144				
1,4-Dichlorobenzene	1.01	0.0200	1.000	0	101	72.6	126				
n-Butylbenzene	0.976	0.0250	1.000	0	97.6	78.4	140				
1,2-Dichlorobenzene	1.01	0.0200	1.000	0	101	72.8	126				
1,2-Dibromo-3-chloropropane	0.846	0.500	1.000	0	84.6	40.2	155				
1,2,4-Trimethylbenzene	1.03	0.0200	1.000	0	103	77.5	129				
Hexachloro-1,3-butadiene	1.05	0.0500	1.000	0	105	42	151				
Naphthalene	0.968	0.0500	1.000	0	96.8	46.5	167				
1,2,3-Trichlorobenzene	1.01	0.0200	1.000	0	101	64.5	149				
Surr: Dibromofluoromethane	1.16		1.250		92.9	56.5	129				
Surr: Toluene-d8	1.20		1.250		95.8	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.6	54.8	168				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25958**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **9/27/2019**		RunNo: **54236**			
Client ID: **LCSS**	Batch ID: **25958**					Analysis Date: **9/27/2019**		SeqNo: **1074220**			
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.

Sample ID: **MB-25958**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **9/27/2019**		RunNo: **54236**			
Client ID: **MBLKS**	Batch ID: **25958**					Analysis Date: **9/27/2019**		SeqNo: **1074221**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
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									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0500									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25958** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **MBLKS** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25958** SampType: **MBLK** Units: **mg/Kg** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **MBLKS** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.14		1.250		91.1	56.5	129				
Surr: Toluene-d8	1.19		1.250		95.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.4	54.8	168				

Sample ID: **1909411-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-0.5** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074196**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0232						0		30	
Chloromethane	ND	0.0581						0		30	
Vinyl chloride	ND	0.0290						0		30	
Bromomethane	ND	0.0581						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0232						0		30	
Chloroethane	ND	0.0581						0		30	
1,1-Dichloroethene	ND	0.0232						0		30	
Methylene chloride	ND	0.0232						0		30	
trans-1,2-Dichloroethene	ND	0.0232						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0581						0		30	
1,1-Dichloroethane	ND	0.0232						0		30	
cis-1,2-Dichloroethene	ND	0.0232						0		30	
Chloroform	ND	0.0232						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0290						0		30	
1,1-Dichloropropene	ND	0.0232						0		30	
Carbon tetrachloride	ND	0.0581						0		30	
1,2-Dichloroethane (EDC)	ND	0.0232						0		30	
Benzene	ND	0.0232						0		30	
Trichloroethene (TCE)	ND	0.0232						0		30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-0.5** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074196**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloropropane	ND	0.0232						0		30	
Bromodichloromethane	ND	0.0232						0		30	
Dibromomethane	ND	0.0232						0		30	
cis-1,3-Dichloropropene	ND	0.0232						0		30	
Toluene	ND	0.0232						0		30	
trans-1,3-Dichloropropylene	ND	0.0232						0		30	
1,1,2-Trichloroethane	ND	0.0232						0		30	
1,3-Dichloropropane	ND	0.0290						0		30	
Tetrachloroethene (PCE)	0.0377	0.0290						0.04148	9.59	30	
Dibromochloromethane	ND	0.0290						0		30	
1,2-Dibromoethane (EDB)	ND	0.00581						0		30	
Chlorobenzene	ND	0.0290						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0290						0		30	
Ethylbenzene	ND	0.0290						0		30	
m,p-Xylene	ND	0.0581						0		30	
o-Xylene	ND	0.0290						0		30	
Styrene	ND	0.0290						0		30	
Isopropylbenzene	ND	0.0290						0		30	
Bromoform	ND	0.0581						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0232						0		30	
n-Propylbenzene	ND	0.0290						0		30	
Bromobenzene	ND	0.0232						0		30	
1,3,5-Trimethylbenzene	ND	0.0290						0		30	
2-Chlorotoluene	ND	0.0290						0		30	
4-Chlorotoluene	ND	0.0290						0		30	
tert-Butylbenzene	ND	0.0290						0		30	
1,2,3-Trichloropropane	ND	0.0290						0		30	
1,2,4-Trichlorobenzene	ND	0.0290						0		30	
sec-Butylbenzene	ND	0.0581						0		30	
4-Isopropyltoluene	ND	0.0581						0		30	
1,3-Dichlorobenzene	ND	0.0232						0		30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-0.5** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074196**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	0.0232						0		30	
n-Butylbenzene	ND	0.0290						0		30	
1,2-Dichlorobenzene	ND	0.0232						0		30	
1,2-Dibromo-3-chloropropane	ND	0.581						0		30	
1,2,4-Trimethylbenzene	ND	0.0232						0		30	
Hexachloro-1,3-butadiene	ND	0.0581						0		30	
Naphthalene	ND	0.0581						0		30	
1,2,3-Trichlorobenzene	ND	0.0232						0		30	
Surr: Dibromofluoromethane	1.35		1.452		93.1	56.5	129		0		
Surr: Toluene-d8	1.37		1.452		94.4	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.41		1.452		97.2	54.8	168		0		

Sample ID: **1909411-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074198**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.941	0.0247	1.233	0	76.3	43.5	121				
Chloromethane	1.10	0.0616	1.233	0	89.6	45	130				
Vinyl chloride	1.07	0.0308	1.233	0	87.1	43.6	150				
Bromomethane	2.11	0.0616	1.233	0	171	21.3	120				S
Trichlorofluoromethane (CFC-11)	1.21	0.0247	1.233	0	98.2	35	131				
Chloroethane	1.12	0.0616	1.233	0	91.2	31.9	123				
1,1-Dichloroethene	1.18	0.0247	1.233	0	95.8	47.3	147				
Methylene chloride	1.08	0.0247	1.233	0	87.3	54.7	142				
trans-1,2-Dichloroethene	1.17	0.0247	1.233	0	95.3	52	136				
Methyl tert-butyl ether (MTBE)	1.11	0.0616	1.233	0	90.0	58.5	167				
1,1-Dichloroethane	1.12	0.0247	1.233	0	91.1	51.8	141				
cis-1,2-Dichloroethene	1.17	0.0247	1.233	0	95.0	58.6	136				
Chloroform	1.13	0.0247	1.233	0	91.5	53.2	129				
1,1,1-Trichloroethane (TCA)	1.14	0.0308	1.233	0	92.3	58.3	145				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074198**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloropropene	1.12	0.0247	1.233	0	91.1	55.1	138				
Carbon tetrachloride	1.15	0.0616	1.233	0	93.6	53.3	144				
1,2-Dichloroethane (EDC)	1.04	0.0247	1.233	0	84.7	51.3	139				
Benzene	1.14	0.0247	1.233	0	92.6	63.5	133				
Trichloroethene (TCE)	1.22	0.0247	1.233	0	98.6	61.6	147				
1,2-Dichloropropane	1.10	0.0247	1.233	0	89.5	59	136				
Bromodichloromethane	1.11	0.0247	1.233	0	90.1	50.7	141				
Dibromomethane	1.14	0.0247	1.233	0	92.7	50.6	137				
cis-1,3-Dichloropropene	1.08	0.0247	1.233	0	87.2	50.4	138				
Toluene	1.17	0.0247	1.233	0	95.2	63.4	132				
trans-1,3-Dichloropropylene	1.05	0.0247	1.233	0	85.4	44.1	147				
1,1,2-Trichloroethane	1.15	0.0247	1.233	0	93.4	51.6	137				
1,3-Dichloropropane	1.12	0.0308	1.233	0	90.5	53.1	134				
Tetrachloroethene (PCE)	1.26	0.0308	1.233	0.03356	99.9	35.6	158				
Dibromochloromethane	1.14	0.0308	1.233	0	92.7	55.3	140				
1,2-Dibromoethane (EDB)	1.15	0.00616	1.233	0	93.3	50.4	136				
Chlorobenzene	1.24	0.0308	1.233	0	101	60	133				
1,1,1,2-Tetrachloroethane	1.23	0.0308	1.233	0	99.6	53.1	142				
Ethylbenzene	1.25	0.0308	1.233	0	102	54.5	134				
m,p-Xylene	2.54	0.0616	2.465	0	103	53.1	132				
o-Xylene	1.25	0.0308	1.233	0	101	53.3	139				
Styrene	1.25	0.0308	1.233	0	102	51.1	132				
Isopropylbenzene	1.27	0.0308	1.233	0	103	58.9	138				
Bromoform	1.20	0.0616	1.233	0	97.1	57.9	130				
1,1,2,2-Tetrachloroethane	1.02	0.0247	1.233	0	83.1	51.9	131				
n-Propylbenzene	1.25	0.0308	1.233	0	102	53.6	140				
Bromobenzene	1.27	0.0247	1.233	0	103	54.2	140				
1,3,5-Trimethylbenzene	1.28	0.0308	1.233	0	104	51.8	136				
2-Chlorotoluene	1.23	0.0308	1.233	0	100	51.6	136				
4-Chlorotoluene	1.22	0.0308	1.233	0	99.2	50.1	139				
tert-Butylbenzene	1.28	0.0308	1.233	0	104	50.5	135				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074198**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	1.10	0.0308	1.233	0	89.3	50.5	131				
1,2,4-Trichlorobenzene	1.27	0.0308	1.233	0	103	50.8	130				
sec-Butylbenzene	1.27	0.0616	1.233	0	103	52.6	141				
4-Isopropyltoluene	1.27	0.0616	1.233	0	103	52.9	134				
1,3-Dichlorobenzene	1.26	0.0247	1.233	0	103	52.6	131				
1,4-Dichlorobenzene	1.25	0.0247	1.233	0	101	52.9	129				
n-Butylbenzene	1.17	0.0308	1.233	0	95.2	52.6	130				
1,2-Dichlorobenzene	1.26	0.0247	1.233	0	103	55.8	129				
1,2-Dibromo-3-chloropropane	1.06	0.616	1.233	0	85.9	40.5	131				
1,2,4-Trimethylbenzene	1.28	0.0247	1.233	0	104	50.6	137				
Hexachloro-1,3-butadiene	1.29	0.0616	1.233	0	105	40.6	158				
Naphthalene	1.23	0.0616	1.233	0	100	52.3	124				
1,2,3-Trichlorobenzene	1.26	0.0247	1.233	0	103	54.4	124				
Surr: Dibromofluoromethane	1.45		1.541		93.9	56.5	129				
Surr: Toluene-d8	1.48		1.541		96.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.52		1.541		98.9	54.8	168				

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: **1909411-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.936	0.0247	1.233	0	75.9	43.5	121	0.9409	0.526	30	
Chloromethane	1.17	0.0616	1.233	0	94.8	45	130	1.105	5.61	30	
Vinyl chloride	1.13	0.0308	1.233	0	91.3	43.6	150	1.073	4.75	30	
Bromomethane	2.04	0.0616	1.233	0	166	21.3	120	2.107	3.05	30	S
Trichlorofluoromethane (CFC-11)	1.28	0.0247	1.233	0	104	35	131	1.211	5.77	30	
Chloroethane	1.16	0.0616	1.233	0	94.0	31.9	123	1.124	2.96	30	
1,1-Dichloroethene	1.23	0.0247	1.233	0	100	47.3	147	1.181	4.23	30	
Methylene chloride	1.19	0.0247	1.233	0	96.6	54.7	142	1.076	10.1	30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	1.19	0.0247	1.233	0	96.7	52	136	1.175	1.44	30	
Methyl tert-butyl ether (MTBE)	1.11	0.0616	1.233	0	90.0	58.5	167	1.110	0.00294	30	
1,1-Dichloroethane	1.20	0.0247	1.233	0	97.5	51.8	141	1.123	6.74	30	
cis-1,2-Dichloroethene	1.23	0.0247	1.233	0	99.7	58.6	136	1.172	4.79	30	
Chloroform	1.20	0.0247	1.233	0	97.4	53.2	129	1.128	6.19	30	
1,1,1-Trichloroethane (TCA)	1.22	0.0308	1.233	0	99.0	58.3	145	1.138	6.99	30	
1,1-Dichloropropene	1.18	0.0247	1.233	0	96.1	55.1	138	1.123	5.35	30	
Carbon tetrachloride	1.26	0.0616	1.233	0	102	53.3	144	1.153	8.46	30	
1,2-Dichloroethane (EDC)	1.10	0.0247	1.233	0	88.8	51.3	139	1.044	4.80	30	
Benzene	1.22	0.0247	1.233	0	98.6	63.5	133	1.141	6.27	30	
Trichloroethene (TCE)	1.31	0.0247	1.233	0	106	61.6	147	1.215	7.59	30	
1,2-Dichloropropane	1.18	0.0247	1.233	0	95.4	59	136	1.103	6.40	30	
Bromodichloromethane	1.18	0.0247	1.233	0	95.5	50.7	141	1.111	5.76	30	
Dibromomethane	1.20	0.0247	1.233	0	97.3	50.6	137	1.143	4.82	30	
cis-1,3-Dichloropropene	1.15	0.0247	1.233	0	93.0	50.4	138	1.075	6.43	30	
Toluene	1.25	0.0247	1.233	0	101	63.4	132	1.174	5.93	30	
trans-1,3-Dichloropropylene	1.13	0.0247	1.233	0	91.7	44.1	147	1.053	7.14	30	
1,1,2-Trichloroethane	1.21	0.0247	1.233	0	98.3	51.6	137	1.151	5.13	30	
1,3-Dichloropropane	1.17	0.0308	1.233	0	95.0	53.1	134	1.115	4.82	30	
Tetrachloroethene (PCE)	1.36	0.0308	1.233	0.03356	107	35.6	158	1.265	6.94	30	
Dibromochloromethane	1.23	0.0308	1.233	0	99.9	55.3	140	1.142	7.47	30	
1,2-Dibromoethane (EDB)	1.20	0.00616	1.233	0	97.0	50.4	136	1.150	3.91	30	
Chlorobenzene	1.31	0.0308	1.233	0	107	60	133	1.240	5.81	30	
1,1,1,2-Tetrachloroethane	1.29	0.0308	1.233	0	105	53.1	142	1.227	5.38	30	
Ethylbenzene	1.34	0.0308	1.233	0	109	54.5	134	1.252	6.84	30	
m,p-Xylene	2.71	0.0616	2.465	0	110	53.1	132	2.540	6.30	30	
o-Xylene	1.32	0.0308	1.233	0	107	53.3	139	1.247	5.57	30	
Styrene	1.33	0.0308	1.233	0	108	51.1	132	1.255	6.02	30	
Isopropylbenzene	1.36	0.0308	1.233	0	110	58.9	138	1.272	6.61	30	
Bromoform	1.28	0.0616	1.233	0	104	57.9	130	1.197	6.71	30	
1,1,2,2-Tetrachloroethane	1.07	0.0247	1.233	0	87.2	51.9	131	1.025	4.78	30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-27-3** Batch ID: **25958** Analysis Date: **9/27/2019** SeqNo: **1074199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	1.35	0.0308	1.233	0	110	53.6	140	1.255	7.60	30	
Bromobenzene	1.36	0.0247	1.233	0	110	54.2	140	1.266	6.99	30	
1,3,5-Trimethylbenzene	1.36	0.0308	1.233	0	111	51.8	136	1.277	6.68	30	
2-Chlorotoluene	1.32	0.0308	1.233	0	107	51.6	136	1.232	6.55	30	
4-Chlorotoluene	1.31	0.0308	1.233	0	106	50.1	139	1.223	6.59	30	
tert-Butylbenzene	1.37	0.0308	1.233	0	111	50.5	135	1.279	6.99	30	
1,2,3-Trichloropropane	1.16	0.0308	1.233	0	93.7	50.5	131	1.100	4.89	30	
1,2,4-Trichlorobenzene	1.35	0.0308	1.233	0	110	50.8	130	1.272	6.01	30	
sec-Butylbenzene	1.37	0.0616	1.233	0	111	52.6	141	1.268	7.57	30	
4-Isopropyltoluene	1.36	0.0616	1.233	0	110	52.9	134	1.268	6.85	30	
1,3-Dichlorobenzene	1.34	0.0247	1.233	0	108	52.6	131	1.264	5.50	30	
1,4-Dichlorobenzene	1.31	0.0247	1.233	0	107	52.9	129	1.250	4.91	30	
n-Butylbenzene	1.27	0.0308	1.233	0	103	52.6	130	1.174	7.59	30	
1,2-Dichlorobenzene	1.33	0.0247	1.233	0	108	55.8	129	1.264	5.42	30	
1,2-Dibromo-3-chloropropane	1.12	0.616	1.233	0	91.2	40.5	131	1.059	5.90	30	
1,2,4-Trimethylbenzene	1.36	0.0247	1.233	0	111	50.6	137	1.276	6.67	30	
Hexachloro-1,3-butadiene	1.39	0.0616	1.233	0	113	40.6	158	1.288	7.80	30	
Naphthalene	1.28	0.0616	1.233	0	104	52.3	124	1.233	3.51	30	
1,2,3-Trichlorobenzene	1.34	0.0247	1.233	0	108	54.4	124	1.264	5.61	30	
Surr: Dibromofluoromethane	1.44		1.541		93.8	56.5	129		0		
Surr: Toluene-d8	1.48		1.541		95.8	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.52		1.541		98.5	54.8	168		0		

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: **1909411-020BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-32-6** Batch ID: **25958** Analysis Date: **9/28/2019** SeqNo: **1074216**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0221						0		30	
Chloromethane	ND	0.0552						0		30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-020BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-32-6** Batch ID: **25958** Analysis Date: **9/28/2019** SeqNo: **1074216**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0276						0		30	
Bromomethane	ND	0.0552						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0221						0		30	
Chloroethane	ND	0.0552						0		30	
1,1-Dichloroethene	ND	0.0221						0		30	
Methylene chloride	ND	0.0221						0		30	
trans-1,2-Dichloroethene	ND	0.0221						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0552						0		30	
1,1-Dichloroethane	ND	0.0221						0		30	
cis-1,2-Dichloroethene	ND	0.0221						0		30	
Chloroform	ND	0.0221						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0276						0		30	
1,1-Dichloropropene	ND	0.0221						0		30	
Carbon tetrachloride	ND	0.0552						0		30	
1,2-Dichloroethane (EDC)	ND	0.0221						0		30	
Benzene	ND	0.0221						0		30	
Trichloroethene (TCE)	ND	0.0221						0		30	
1,2-Dichloropropane	ND	0.0221						0		30	
Bromodichloromethane	ND	0.0221						0		30	
Dibromomethane	ND	0.0221						0		30	
cis-1,3-Dichloropropene	ND	0.0221						0		30	
Toluene	ND	0.0221						0		30	
trans-1,3-Dichloropropylene	ND	0.0221						0		30	
1,1,2-Trichloroethane	ND	0.0221						0		30	
1,3-Dichloropropane	ND	0.0276						0		30	
Tetrachloroethene (PCE)	ND	0.0276						0		30	
Dibromochloromethane	ND	0.0276						0		30	
1,2-Dibromoethane (EDB)	ND	0.00552						0		30	
Chlorobenzene	ND	0.0276						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0276						0		30	
Ethylbenzene	ND	0.0276						0		30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909411-020BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **9/27/2019** RunNo: **54236**
Client ID: **SB-32-6** Batch ID: **25958** Analysis Date: **9/28/2019** SeqNo: **1074216**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	ND	0.0552						0		30	
o-Xylene	ND	0.0276						0		30	
Styrene	ND	0.0276						0		30	
Isopropylbenzene	ND	0.0276						0		30	
Bromoform	ND	0.0552						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0221						0		30	
n-Propylbenzene	ND	0.0276						0		30	
Bromobenzene	ND	0.0221						0		30	
1,3,5-Trimethylbenzene	ND	0.0276						0		30	
2-Chlorotoluene	ND	0.0276						0		30	
4-Chlorotoluene	ND	0.0276						0		30	
tert-Butylbenzene	ND	0.0276						0		30	
1,2,3-Trichloropropane	ND	0.0276						0		30	
1,2,4-Trichlorobenzene	ND	0.0276						0		30	
sec-Butylbenzene	ND	0.0552						0		30	
4-Isopropyltoluene	ND	0.0552						0		30	
1,3-Dichlorobenzene	ND	0.0221						0		30	
1,4-Dichlorobenzene	ND	0.0221						0		30	
n-Butylbenzene	ND	0.0276						0		30	
1,2-Dichlorobenzene	ND	0.0221						0		30	
1,2-Dibromo-3-chloropropane	ND	0.552						0		30	
1,2,4-Trimethylbenzene	ND	0.0221						0		30	
Hexachloro-1,3-butadiene	ND	0.0552						0		30	
Naphthalene	ND	0.0552						0		30	
1,2,3-Trichlorobenzene	ND	0.0221						0		30	
Surr: Dibromofluoromethane	1.29		1.380		93.1	56.5	129		0		
Surr: Toluene-d8	1.31		1.380		95.1	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.32		1.380		95.5	54.8	168		0		

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25977** SampType: **LCS** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074928**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	26.5	1.00	20.00	0	133	18.7	171				
Chloromethane	27.2	2.00	20.00	0	136	38.5	171				
Vinyl chloride	24.1	0.200	20.00	0	121	48	145				
Bromomethane	22.4	1.00	20.00	0	112	32.5	184				
Trichlorofluoromethane (CFC-11)	23.4	1.00	20.00	0	117	43.5	149				
Chloroethane	22.8	1.00	20.00	0	114	43.8	168				
1,1-Dichloroethene	22.2	1.00	20.00	0	111	57.5	150				
Methylene chloride	22.0	1.00	20.00	0	110	67.1	131				
trans-1,2-Dichloroethene	22.1	1.00	20.00	0	111	71.7	129				
Methyl tert-butyl ether (MTBE)	22.5	1.00	20.00	0	113	58	138				
1,1-Dichloroethane	22.7	1.00	20.00	0	113	67.9	134				
cis-1,2-Dichloroethene	21.7	1.00	20.00	0	108	70.2	139				
Chloroform	22.1	1.00	20.00	0	110	66.3	131				
1,1,1-Trichloroethane (TCA)	22.0	1.00	20.00	0	110	63	140				
1,1-Dichloropropene	22.6	1.00	20.00	0	113	69.9	124				
Carbon tetrachloride	22.2	1.00	20.00	0	111	66.2	134				
1,2-Dichloroethane (EDC)	22.3	1.00	20.00	0	112	67	126				
Benzene	22.0	1.00	20.00	0	110	69.3	132				
Trichloroethene (TCE)	21.3	0.500	20.00	0	107	65.2	136				
1,2-Dichloropropane	21.9	1.00	20.00	0	110	70.5	130				
Bromodichloromethane	21.6	1.00	20.00	0	108	67.2	137				
Dibromomethane	22.0	1.00	20.00	0	110	69.3	143				
cis-1,3-Dichloropropene	22.0	1.00	20.00	0	110	62.6	137				
Toluene	21.8	1.00	20.00	0	109	61.3	145				
trans-1,3-Dichloropropylene	22.3	1.00	20.00	0	111	56.5	163				
1,1,2-Trichloroethane	22.2	1.00	20.00	0	111	71.7	131				
1,3-Dichloropropane	22.4	1.00	20.00	0	112	73.5	127				
Tetrachloroethene (PCE)	21.6	1.00	20.00	0	108	47.5	147				
Dibromochloromethane	21.8	1.00	20.00	0	109	67.2	134				
1,2-Dibromoethane (EDB)	22.2	0.250	20.00	0	111	73.6	125				
Chlorobenzene	21.0	1.00	20.00	0	105	73.9	126				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25977** SampType: **LCS** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074928**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.6	1.00	20.00	0	103	76.8	124				
Ethylbenzene	21.1	1.00	20.00	0	105	72	130				
m,p-Xylene	42.1	1.00	40.00	0	105	70.3	134				
o-Xylene	20.7	1.00	20.00	0	104	62	125				
Styrene	21.0	1.00	20.00	0	105	64.3	140				
Isopropylbenzene	20.8	1.00	20.00	0	104	73.9	128				
Bromoform	21.5	2.00	20.00	0	107	55.3	141				
1,1,2,2-Tetrachloroethane	23.9	1.00	20.00	0	119	62.9	132				
n-Propylbenzene	21.1	1.00	20.00	0	106	74.5	127				
Bromobenzene	20.3	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	20.9	1.00	20.00	0	104	73.1	128				
2-Chlorotoluene	20.9	1.00	20.00	0	104	70.8	130				
4-Chlorotoluene	21.2	1.00	20.00	0	106	70.1	131				
tert-Butylbenzene	20.8	1.00	20.00	0	104	68.2	131				
1,2,3-Trichloropropane	23.5	1.00	20.00	0	117	67.7	131				
1,2,4-Trichlorobenzene	29.4	2.00	20.00	0	147	41	139				S
sec-Butylbenzene	21.2	1.00	20.00	0	106	72	129				
4-Isopropyltoluene	21.1	1.00	20.00	0	105	69.2	130				
1,3-Dichlorobenzene	21.0	1.00	20.00	0	105	69.5	128				
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	21.7	1.00	20.00	0	109	73.8	127				
1,2-Dichlorobenzene	22.2	1.00	20.00	0	111	69.7	119				
1,2-Dibromo-3-chloropropane	29.8	1.00	20.00	0	149	63.1	136				S
1,2,4-Trimethylbenzene	20.9	1.00	20.00	0	105	73.4	127				
Hexachloro-1,3-butadiene	25.4	4.00	20.00	0	127	58.6	138				
Naphthalene	32.9	1.00	20.00	0	165	41.8	165				
1,2,3-Trichlorobenzene	34.1	4.00	20.00	0	170	35.8	155				S
Surr: Dibromofluoromethane	28.0		25.00		112	45.4	152				
Surr: Toluene-d8	25.8		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.7		25.00		103	64.2	128				

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25977** SampType: **LCS** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074928**

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.

Sample ID: **LCSD-25977** SampType: **LCSD** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW02** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074929**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	25.4	1.00	20.00	0	127	18.7	171	26.52	4.13	20	
Chloromethane	20.0	2.00	20.00	0	99.9	38.5	171	27.16	30.4	20	R
Vinyl chloride	23.4	0.200	20.00	0	117	48	145	24.12	2.91	20	
Bromomethane	22.5	1.00	20.00	0	112	32.5	184	22.41	0.388	20	
Trichlorofluoromethane (CFC-11)	22.4	1.00	20.00	0	112	43.5	149	23.41	4.32	20	
Chloroethane	22.4	1.00	20.00	0	112	43.8	168	22.80	1.66	20	
1,1-Dichloroethene	21.8	1.00	20.00	0	109	57.5	150	22.21	2.07	20	
Methylene chloride	22.0	1.00	20.00	0	110	67.1	131	22.00	0.144	20	
trans-1,2-Dichloroethene	21.5	1.00	20.00	0	107	71.7	129	22.12	2.93	20	
Methyl tert-butyl ether (MTBE)	22.7	1.00	20.00	0	113	58	138	22.51	0.784	20	
1,1-Dichloroethane	22.3	1.00	20.00	0	111	67.9	134	22.67	1.80	20	
cis-1,2-Dichloroethene	21.5	1.00	20.00	0	107	70.2	139	21.68	1.05	20	
Chloroform	21.9	1.00	20.00	0	110	66.3	131	22.08	0.718	20	
1,1,1-Trichloroethane (TCA)	21.6	1.00	20.00	0	108	63	140	22.01	1.98	20	
1,1-Dichloropropene	21.5	1.00	20.00	0	107	69.9	124	22.60	5.21	20	
Carbon tetrachloride	21.6	1.00	20.00	0	108	66.2	134	22.17	2.70	20	
1,2-Dichloroethane (EDC)	22.6	1.00	20.00	0	113	68.8	123	22.34	0.949	20	
Benzene	21.6	1.00	20.00	0	108	69.3	132	22.01	1.95	20	
Trichloroethene (TCE)	20.9	0.500	20.00	0	104	65.2	136	21.33	2.27	20	
1,2-Dichloropropane	22.0	1.00	20.00	0	110	70.5	130	21.95	0.415	20	
Bromodichloromethane	21.6	1.00	20.00	0	108	74.6	127	21.64	0.0817	20	
Dibromomethane	21.7	1.00	20.00	0	109	69.3	143	22.01	1.19	20	
cis-1,3-Dichloropropene	21.5	1.00	20.00	0	107	62.6	137	22.01	2.57	20	
Toluene	21.4	1.00	20.00	0	107	61.3	145	21.77	1.63	20	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCSD-25977** SampType: **LCSD** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW02** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074929**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	22.1	1.00	20.00	0	110	56.5	163	22.26	0.885	20	
1,1,2-Trichloroethane	22.2	1.00	20.00	0	111	71.7	131	22.22	0.211	20	
1,3-Dichloropropane	22.2	1.00	20.00	0	111	73.5	127	22.35	0.744	20	
Tetrachloroethene (PCE)	20.6	1.00	20.00	0	103	47.5	147	21.62	4.64	20	
Dibromochloromethane	21.6	1.00	20.00	0	108	67.2	134	21.81	1.20	20	
1,2-Dibromoethane (EDB)	21.8	0.250	20.00	0	109	73.6	125	22.18	1.51	20	
Chlorobenzene	20.8	1.00	20.00	0	104	73.9	126	21.02	1.15	20	
1,1,1,2-Tetrachloroethane	20.6	1.00	20.00	0	103	76.8	124	20.64	0.208	20	
Ethylbenzene	20.8	1.00	20.00	0	104	72	130	21.08	1.21	20	
m,p-Xylene	41.7	1.00	40.00	0	104	70.3	134	42.13	0.981	20	
o-Xylene	20.5	1.00	20.00	0	102	62	125	20.71	1.02	20	
Styrene	20.8	1.00	20.00	0	104	64.3	140	20.99	0.859	20	
Isopropylbenzene	20.6	1.00	20.00	0	103	73.9	128	20.82	1.28	20	
Bromoform	21.6	2.00	20.00	0	108	55.3	141	21.48	0.780	20	
1,1,2,2-Tetrachloroethane	24.3	1.00	20.00	0	121	62.9	132	23.88	1.59	20	
n-Propylbenzene	20.8	1.00	20.00	0	104	74.5	127	21.13	1.43	20	
Bromobenzene	20.3	1.00	20.00	0	102	71	131	20.29	0.256	20	
1,3,5-Trimethylbenzene	20.5	1.00	20.00	0	103	73.1	128	20.88	1.70	20	
2-Chlorotoluene	20.6	1.00	20.00	0	103	70.8	130	20.86	1.26	20	
4-Chlorotoluene	20.8	1.00	20.00	0	104	70.1	131	21.21	1.78	20	
tert-Butylbenzene	20.4	1.00	20.00	0	102	68.2	131	20.79	2.14	20	
1,2,3-Trichloropropane	23.6	1.00	20.00	0	118	67.7	131	23.47	0.423	20	
1,2,4-Trichlorobenzene	29.5	2.00	20.00	0	148	41	139	29.38	0.531	20	S
sec-Butylbenzene	20.8	1.00	20.00	0	104	72	129	21.21	2.02	20	
4-Isopropyltoluene	20.7	1.00	20.00	0	103	69.2	130	21.06	1.97	20	
1,3-Dichlorobenzene	21.1	1.00	20.00	0	106	69.5	128	21.03	0.422	20	
1,4-Dichlorobenzene	21.5	1.00	20.00	0	108	66.8	119	21.24	1.26	20	
n-Butylbenzene	21.5	1.00	20.00	0	107	73.8	127	21.71	1.15	20	
1,2-Dichlorobenzene	22.5	1.00	20.00	0	113	69.7	119	22.25	1.24	20	
1,2-Dibromo-3-chloropropane	31.2	1.00	20.00	0	156	63.1	136	29.80	4.69	20	S
1,2,4-Trimethylbenzene	20.7	1.00	20.00	0	104	73.4	127	20.91	1.01	20	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCSD-25977** SampType: **LCSD** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **LCSW02** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074929**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	25.2	4.00	20.00	0	126	58.6	138	25.40	0.775	20	
Naphthalene	33.6	1.00	20.00	0	168	41.8	165	32.94	1.87	20	S
1,2,3-Trichlorobenzene	34.1	4.00	20.00	0	171	35.8	155	34.09	0.140	20	S
Surr: Dibromofluoromethane	27.4		25.00		110	45.4	152		0		
Surr: Toluene-d8	25.4		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.5		25.00		102	64.2	128		0		

NOTES:
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.
R - High RPD observed, spike recovery is within range.

Sample ID: **MB-25977** SampType: **MBLK** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **MBLKW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074930**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									
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									
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									

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25977** SampType: **MBLK** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **MBLKW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074930**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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-Dichloropropylene	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	0.250									
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	2.00									
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									

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25977** SampType: **MBLK** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **MBLKW** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074930**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	23.7		25.00		94.8	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.4		25.00		97.6	64.2	128				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **1909403-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074900**

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	2.00						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	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909403-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
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-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	9.29	1.00						8.776	5.67	30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						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	2.00						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	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909403-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.1		25.00		92.4	45.4	152		0		
Surr: Toluene-d8	25.4		25.00		102	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.3	64.2	128		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **1909414-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074916**

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	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909414-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074916**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
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	
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-Dichloropropylene	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	0.250						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	

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1909414-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **9/30/2019** RunNo: **54273**
Client ID: **BATCH** Batch ID: **25977** Analysis Date: **9/30/2019** SeqNo: **1074916**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.5		25.00		98.1	45.4	152		0		
Surr: Toluene-d8	25.4		25.00		102	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.4		25.00		97.5	64.2	128		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Work Order: 1909411
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: **1909411-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/27/2019** RunNo: **54188**
Client ID: **SB-27-0.5** Batch ID: **R54188** Analysis Date: **9/27/2019** SeqNo: **1073321**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	7.30	0.500						7.109	2.70	20	

Sample ID: **1909439-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **9/27/2019** RunNo: **54188**
Client ID: **BATCH** Batch ID: **R54188** Analysis Date: **9/27/2019** SeqNo: **1073340**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	7.25	0.500						7.554	4.12	20	

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1909411**
Logged by:	**Carissa True**	Date Received:	**9/26/2019 8:51:00 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: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	4.8
Sample 1	3.8

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

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 9/24/19 Page: 1 of: 2

Laboratory Project No (internal): 1909411

Special Remarks:

Project Name: Bethel Junction

Project No: 1246.02.030.03.0004

Client: PES Environmental, Inc.

Address: 1215 4th Ave Suite 1350

City, State, Zip: Seattle, WA, 98161

Telephone: (206) 529-3480

Fax: (206) 529-3985

Collected by: C. DeBoer

Location: Port Orchard, WA

Report To (PM): Matt Dahl

PM Email: mdahl@pesenv.com

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	SB-27-0.5	9/24/19	1030	S	X													
2	SB-27-3		1045		X													
3	SB-27-6		1055		X													
4	SB-28-0.5		1450		X													
5	SB-28-3		1510		X													
6	SB-28-6		1540		X													
7	SB-29-0.5		1610		X													
8	SB-29-3		1620		X													
9	SB-29-6		1630		X													
10	SB-30-0.5		1710		X													

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	9/26/19 0730	x [signature]	9/26/ 0451
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☐ Standard
- ☒ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 9/24/19 Page: 2 of: 2

Laboratory Project No (internal): 1909411

Project Name: Bethel Junction

Special Remarks:

Project No: 1246.030.03.004

Client: PES Environmental, Inc.

Collected by: C. DeBoer

Address: 1295 4th Ave Suite 1350

Location: Port Orchard, WA

City, State, Zip: Seattle, WA 98161

Report To (PM): Matt Dahl

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Telephone: (206) 529-3980

PM Email: mdahl@pesenv.com

Fax: (206) 529-3985

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	SB-30-3	9/24/19	1720	S	X													
2	SB-30-6		1730	S	X													
3	SB-27-W		1131	GW	X													
4	SB-29-W		1700	GW	X													
5	SB-31-0.5	9/25/19	0745	S	X													
6	SB-31-3		0750		X													
7	SB-31-6		0800		X													
8	SB-32-0.5		0830		X													
9	SB-32-3		0845		X													
10	SB-32-6		0900		X													

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- ☐ Standard
- ☒ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	9/26/19 0730	x [signature]	9/26/19 0851
Relinquished	Date/Time	Received	Date/Time
x		x	

MEMORANDUM

TO: Project File **DATE:** October 3, 2019

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Bethel Junction, Port Orchard WA

PROJECT #: 1246.030.03.006

TASK: EIM Data Validation Level EPA2A – Soil and Groundwater Samples September 2019

LAB: Fremont Analytical Work Order 1909411

Eighteen (18) soil samples and two (2) grab groundwater samples were collected September 24 and 25, 2019 as part of confirmation sampling at the Bethel Junction in Port Orchard, Washington. 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 8260D. The results were reported in Fremont Lab Package 1909411.

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, 2017).

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 4.8 degrees Centigrade (°C). Samples in the cooler were recorded at a temperature of 3.8°C within the recommended preservation temperature of less than 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 8260D (VOCs):
All samples were analyzed for VOCs within the EPA recommended holding time of 14 days for soils and 14 days for waters (preserved) 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 continuing calibration criteria did not meet acceptance criteria for the following:

- Analytical Batch 25977 (groundwater): CCV criteria are not met for one compound (dichlorodifluoromethane (CFC-12)) and Fremont qualified associated results (Q). **Associated groundwater sample results for this compound are estimated (J/UJ) because CCV acceptance criteria are not met.**

Method Blank Results

USEPA Method 8260D (VOCs):
Laboratory method blanks were included with the analytical batch per method requirement. The target analytes were not detected in the method blanks for soil or water at or above the reporting limits (RLs). No qualifications of the data were made due to the results of the method blank analyses.

Trip Blank Results

USEPA Method 8260D (VOCs):
A trip blank was not collected.

Field, Rinsate, or Equipment Blank Results

USEPA Method 8260D (VOCs):
Field, rinsate, or equipment blanks were not collected.

Field Duplicate Analyses

USEPA Method 8260D (VOCs):
Field duplicate samples were not collected. Refer to the laboratory duplicate result for precision data.

Laboratory Duplicate Analyses

USEPA Method 8260D (VOCs):
Laboratory duplicate analyses was performed on client soil sample SB-27-0.5 and non-client

water sample within the analytical batch. The primary/duplicate RPDs were within the laboratory control limit of 30%. Duplicate data are acceptable.

Surrogate Recoveries

USEPA Method 8260D (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 the analyses.

Matrix Spike/ Matrix Spike Duplicates

USEPA Method 8260D (VOCs):
Matrix spike and matrix spike duplicate (MS/MSD) analysis was performed on a client soil sample within the analytical batch. In cases where no matrix spike analyses are performed refer to laboratory duplicate and laboratory control sample results. The MS/MSD percent recoveries (%Rs) and RPDs for all target analytes are within the laboratory control criteria with the following exception:

- Analytical Batch 25958: MS/MSD analyses were performed on soil sample SB-27-3. MS/MSD % recoveries for bromomethane are above laboratory control limit criteria. No action was taken since this compound is not detected in the associated sample.

Laboratory Control Samples

USEPA Method 8260D (VOCs):
Laboratory control sample/laboratory control sample duplicates (LCS/LCSD) were analyzed by USEPA Method 8260D. In some cases, only an LCS was analyzed. For precision data refer to laboratory duplicate results. The LCS or LCS/LCSD %R's and RPDs for the target compounds are within the laboratory control criteria for waters with the following exceptions:

- Analytical Batch 25958: Soil LCS % recovery for bromomethane is above laboratory control limit criteria. No action was taken since this compound is not detected in the associated samples.

- Analytical Batch 25977: Water LCS/LCSD % recoveries for 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, and 1,2,3-trichlorobenzene are above laboratory control limit criteria. LCSD % recovery for naphthalene is above laboratory control limit criteria. No action was taken since these compounds are not detected in the associated groundwater samples.

- Analytical Batch 25977: Water LCS/LCSD RPD for chloromethane is above criteria. No action is taken since both LCS/LCSD chloromethane recoveries are within laboratory criteria but are recovered wide.

Quantitation Limits

Results of all analyses were reported based on standard laboratory RLs. The reported RLs 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 RLs. 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.

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 11:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-013
Matrix: Groundwater
Client Sample ID: SB-27-W

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	1.00	Q	µg/L	1	9/30/2019 5:54:38 PM
Chloromethane	ND		2.00		µg/L	1	9/30/2019 5:54:38 PM
Vinyl chloride	ND		0.200		µg/L	1	9/30/2019 5:54:38 PM
Bromomethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Chloroethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Methylene chloride	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
cis-1,2-Dichloroethene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Chloroform	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Carbon tetrachloride	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Benzene	2.79		1.00		µg/L	1	9/30/2019 5:54:38 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromodichloromethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Dibromomethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Toluene	15.7		1.00		µg/L	1	9/30/2019 5:54:38 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Tetrachloroethene (PCE)	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Dibromochloromethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	9/30/2019 5:54:38 PM
Chlorobenzene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Ethylbenzene	1.35		1.00		µg/L	1	9/30/2019 5:54:38 PM
m,p-Xylene	4.85		1.00		µg/L	1	9/30/2019 5:54:38 PM
o-Xylene	1.82		1.00		µg/L	1	9/30/2019 5:54:38 PM
Styrene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Isopropylbenzene	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromoform	ND		2.00		µg/L	1	9/30/2019 5:54:38 PM
1,1,2,2-Tetrachloroethane	ND		1.00		µg/L	1	9/30/2019 5:54:38 PM

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 11:30:00 AM
Project: Bethel Junction
Lab ID: 1909411-013
Matrix: Groundwater
Client Sample ID: **SB-27-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Bromobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
2-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
4-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
tert-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	9/30/2019 5:54:38 PM
sec-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
n-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	9/30/2019 5:54:38 PM
Naphthalene	ND	1.00		µg/L	1	9/30/2019 5:54:38 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	9/30/2019 5:54:38 PM
Surr: Dibromofluoromethane	87.7	45.4 - 152		%Rec	1	9/30/2019 5:54:38 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	9/30/2019 5:54:38 PM
Surr: 1-Bromo-4-fluorobenzene	98.4	64.2 - 128		%Rec	1	9/30/2019 5:54:38 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

JC 10/3/19

Client: PES Environmental, Inc.
Collection Date: 9/24/2019 5:00:00 PM
Project: Bethel Junction
Lab ID: 1909411-014
Matrix: Groundwater
Client Sample ID: SB-29-W

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	1.00	Q	µg/L	1	9/30/2019 6:26:36 PM
Chloromethane	ND		2.00		µg/L	1	9/30/2019 6:26:36 PM
Vinyl chloride	ND		0.200		µg/L	1	9/30/2019 6:26:36 PM
Bromomethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Chloroethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Methylene chloride	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
cis-1,2-Dichloroethene	7.66		1.00		µg/L	1	9/30/2019 6:26:36 PM
Chloroform	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Carbon tetrachloride	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Benzene	1.54		1.00		µg/L	1	9/30/2019 6:26:36 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromodichloromethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Dibromomethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Toluene	7.66		1.00		µg/L	1	9/30/2019 6:26:36 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Tetrachloroethene (PCE)	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Dibromochloromethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	9/30/2019 6:26:36 PM
Chlorobenzene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Ethylbenzene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
m,p-Xylene	2.25		1.00		µg/L	1	9/30/2019 6:26:36 PM
o-Xylene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Styrene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Isopropylbenzene	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromoform	ND		2.00		µg/L	1	9/30/2019 6:26:36 PM
1,1,2,2-Tetrachloroethane	ND		1.00		µg/L	1	9/30/2019 6:26:36 PM

Client: PES Environmental, Inc. **Collection Date:** 9/24/2019 5:00:00 PM
Project: Bethel Junction
Lab ID: 1909411-014 **Matrix:** Groundwater
Client Sample ID: **SB-29-W**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25977 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Bromobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
2-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
4-Chlorotoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
tert-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	9/30/2019 6:26:36 PM
sec-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
n-Butylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	9/30/2019 6:26:36 PM
Naphthalene	ND	1.00		µg/L	1	9/30/2019 6:26:36 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	9/30/2019 6:26:36 PM
Surr: Dibromofluoromethane	90.7	45.4 - 152		%Rec	1	9/30/2019 6:26:36 PM
Surr: Toluene-d8	104	40.1 - 139		%Rec	1	9/30/2019 6:26:36 PM
Surr: 1-Bromo-4-fluorobenzene	97.7	64.2 - 128		%Rec	1	9/30/2019 6:26:36 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

JC 10/3/19

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
Work Order Number: 2008119

August 17, 2020

Attention Brian O'Neal:

Fremont Analytical, Inc. received 7 sample(s) on 8/8/2020 for the analyses presented in the following report.

Mercury by EPA Method 7471
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020B
Volatile Organic Compounds by EPA Method 8260D

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,

Brianna Barnes
Project Manager

Date: *08/17/2020*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 2008119

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2008119-001	SB-33-0.5	08/07/2020 2:30 PM	08/08/2020 1:20 PM
2008119-002	SB-34-0.5	08/07/2020 2:40 PM	08/08/2020 1:20 PM
2008119-003	SB-35-3	08/07/2020 2:55 PM	08/08/2020 1:20 PM
2008119-004	SB-33-3	08/07/2020 3:00 PM	08/08/2020 1:20 PM
2008119-005	SB-33-6	08/07/2020 3:05 PM	08/08/2020 1:20 PM
2008119-006	W-DRUM-080720	08/07/2020 4:00 PM	08/08/2020 1:20 PM
2008119-007	TRIP BLANK	08/05/2020 5:28 PM	08/08/2020 1:20 PM

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

Original

Case Narrative

WO#: **2008119**
Date: **8/17/2020**

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
DUP - Sample Duplicate
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
REP - Sample Replicate
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:30:00 PM
Project: Bethel Junction
Lab ID: 2008119-001
Matrix: Soil
Client Sample ID: SB-33-0.5

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Chloromethane	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Vinyl chloride	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Bromomethane	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Trichlorofluoromethane (CFC-11)	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Chloroethane	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1-Dichloroethene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Methyl tert-butyl ether (MTBE)	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Chloroform	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1,1-Trichloroethane (TCA)	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Carbon tetrachloride	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2-Dichloroethane (EDC)	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Benzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Bromodichloromethane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Dibromomethane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Toluene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
trans-1,3-Dichloropropylene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1,2-Trichloroethane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,3-Dichloropropane	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Tetrachloroethene (PCE)	0.153	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Dibromochloromethane	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2-Dibromoethane (EDB)	ND	0.00559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Chlorobenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1,1,2-Tetrachloroethane	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Ethylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
m,p-Xylene	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
o-Xylene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Styrene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Isopropylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Bromoform	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 2:30:00 PM
Project: Bethel Junction
Lab ID: 2008119-001 **Matrix:** Soil
Client Sample ID: SB-33-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Bromobenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,3,5-Trimethylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
2-Chlorotoluene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
4-Chlorotoluene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
tert-Butylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2,3-Trichloropropane	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2,4-Trichlorobenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
sec-Butylbenzene	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
4-Isopropyltoluene	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
n-Butylbenzene	ND	0.0279		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2-Dibromo-3-chloropropane	ND	0.559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Hexachloro-1,3-butadiene	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Naphthalene	ND	0.0559		mg/Kg-dry	1	8/11/2020 1:50:53 PM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	8/11/2020 1:50:53 PM
Surr: Dibromofluoromethane	94.6	83.3 - 111		%Rec	1	8/11/2020 1:50:53 PM
Surr: Toluene-d8	95.7	87.9 - 111		%Rec	1	8/11/2020 1:50:53 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	85.1 - 111		%Rec	1	8/11/2020 1:50:53 PM
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	9.18	0.500		wt%	1	8/11/2020 9:35:15 AM

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:40:00 PM
Project: Bethel Junction
Lab ID: 2008119-002
Matrix: Soil
Client Sample ID: SB-34-0.5

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Chloromethane	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Vinyl chloride	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Bromomethane	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Trichlorofluoromethane (CFC-11)	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Chloroethane	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Methylene chloride	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
trans-1,2-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1-Dichloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
cis-1,2-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Chloroform	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1,1-Trichloroethane (TCA)	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1-Dichloropropene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Carbon tetrachloride	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2-Dichloroethane (EDC)	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Benzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Trichloroethene (TCE)	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2-Dichloropropane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Bromodichloromethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Dibromomethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
cis-1,3-Dichloropropene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Toluene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
trans-1,3-Dichloropropylene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1,2-Trichloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,3-Dichloropropane	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Tetrachloroethene (PCE)	0.0954	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Dibromochloromethane	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2-Dibromoethane (EDB)	ND	0.00545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Chlorobenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1,1,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Ethylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
m,p-Xylene	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
o-Xylene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Styrene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Isopropylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Bromoform	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,1,2,2-Tetrachloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 2:40:00 PM
Project: Bethel Junction
Lab ID: 2008119-002 **Matrix:** Soil
Client Sample ID: SB-34-0.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Bromobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,3,5-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
2-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
4-Chlorotoluene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
tert-Butylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2,3-Trichloropropane	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2,4-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
sec-Butylbenzene	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
4-Isopropyltoluene	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,3-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,4-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
n-Butylbenzene	ND	0.0272		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2-Dibromo-3-chloropropane	ND	0.545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2,4-Trimethylbenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Hexachloro-1,3-butadiene	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Naphthalene	ND	0.0545		mg/Kg-dry	1	8/11/2020 2:51:10 PM
1,2,3-Trichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 2:51:10 PM
Surr: Dibromofluoromethane	92.9	83.3 - 111		%Rec	1	8/11/2020 2:51:10 PM
Surr: Toluene-d8	96.1	87.9 - 111		%Rec	1	8/11/2020 2:51:10 PM
Surr: 1-Bromo-4-fluorobenzene	101	85.1 - 111		%Rec	1	8/11/2020 2:51:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	9.21	0.500		wt%	1	8/11/2020 9:35:15 AM

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:55:00 PM
Project: Bethel Junction
Lab ID: 2008119-003
Matrix: Soil
Client Sample ID: SB-35-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloromethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Vinyl chloride	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromomethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Trichlorofluoromethane (CFC-11)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloroethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Methylene chloride	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
trans-1,2-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Methyl tert-butyl ether (MTBE)	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
cis-1,2-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloroform	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,1-Trichloroethane (TCA)	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloropropene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Carbon tetrachloride	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichloroethane (EDC)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Benzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Trichloroethene (TCE)	0.0598	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichloropropane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromodichloromethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Dibromomethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
cis-1,3-Dichloropropene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Toluene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
trans-1,3-Dichloropropylene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,2-Trichloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3-Dichloropropane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Tetrachloroethene (PCE)	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Dibromochloromethane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dibromoethane (EDB)	ND	0.00522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chlorobenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,1,2-Tetrachloroethane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Ethylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
m,p-Xylene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
o-Xylene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Styrene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Isopropylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromoform	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,2,2-Tetrachloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:55:00 PM
Project: Bethel Junction
Lab ID: 2008119-003
Matrix: Soil
Client Sample ID: SB-35-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3,5-Trimethylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
2-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
4-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
tert-Butylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,3-Trichloropropane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,4-Trichlorobenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
sec-Butylbenzene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
4-Isopropyltoluene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,4-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
n-Butylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dibromo-3-chloropropane	ND	0.522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,4-Trimethylbenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Hexachloro-1,3-butadiene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Naphthalene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,3-Trichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Surr: Dibromofluoromethane	94.7	83.3 - 111		%Rec	1	8/11/2020 3:21:17 PM
Surr: Toluene-d8	95.1	87.9 - 111		%Rec	1	8/11/2020 3:21:17 PM
Surr: 1-Bromo-4-fluorobenzene	101	85.1 - 111		%Rec	1	8/11/2020 3:21:17 PM
Mercury by EPA Method 7471				Batch ID: 29354		Analyst: TN
Mercury	ND	0.275		mg/Kg-dry	1	8/14/2020 1:22:42 PM
Total Metals by EPA Method 6020B				Batch ID: 29315		Analyst: WC
Arsenic	2.64	0.205		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Barium	58.9	0.411		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Cadmium	ND	0.164		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Chromium	29.7	0.0822	B	mg/Kg-dry	1	8/12/2020 4:49:34 PM
Lead	3.35	0.822	D	mg/Kg-dry	5	8/13/2020 2:09:51 PM
Selenium	0.684	0.411		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Silver	0.107	0.0822		mg/Kg-dry	1	8/12/2020 4:49:34 PM

NOTES:
B - Detection in sample is 10x greater than detection in Method Blank. No further action required.

Analytical Report

Work Order: **2008119**
Date Reported: **8/17/2020**

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:55:00 PM
Project: Bethel Junction
Lab ID: 2008119-003
Matrix: Soil
Client Sample ID: SB-35-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	9.17	0.500		wt%	1	8/11/2020 9:35:15 AM

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 3:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-004
Matrix: Soil
Client Sample ID: SB-33-3

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Chloromethane	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Vinyl chloride	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Bromomethane	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Trichlorofluoromethane (CFC-11)	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Chloroethane	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1-Dichloroethene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Methylene chloride	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
trans-1,2-Dichloroethene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1-Dichloroethane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
cis-1,2-Dichloroethene	0.0239	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Chloroform	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1,1-Trichloroethane (TCA)	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1-Dichloropropene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Carbon tetrachloride	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2-Dichloroethane (EDC)	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Benzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Trichloroethene (TCE)	0.0518	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2-Dichloropropane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Bromodichloromethane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Dibromomethane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
cis-1,3-Dichloropropene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Toluene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
trans-1,3-Dichloropropylene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1,2-Trichloroethane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,3-Dichloropropane	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Tetrachloroethene (PCE)	0.0367	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Dibromochloromethane	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2-Dibromoethane (EDB)	ND	0.00505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Chlorobenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1,1,2-Tetrachloroethane	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Ethylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
m,p-Xylene	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
o-Xylene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Styrene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Isopropylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Bromoform	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,1,2,2-Tetrachloroethane	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 3:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-004 **Matrix:** Soil
Client Sample ID: SB-33-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Bromobenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,3,5-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
2-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
4-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
tert-Butylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2,3-Trichloropropane	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2,4-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
sec-Butylbenzene	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
4-Isopropyltoluene	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,3-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,4-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
n-Butylbenzene	ND	0.0253		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2-Dibromo-3-chloropropane	ND	0.505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2,4-Trimethylbenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Hexachloro-1,3-butadiene	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Naphthalene	ND	0.0505		mg/Kg-dry	1	8/11/2020 3:51:27 PM
1,2,3-Trichlorobenzene	ND	0.0202		mg/Kg-dry	1	8/11/2020 3:51:27 PM
Surr: Dibromofluoromethane	93.2	83.3 - 111		%Rec	1	8/11/2020 3:51:27 PM
Surr: Toluene-d8	95.2	87.9 - 111		%Rec	1	8/11/2020 3:51:27 PM
Surr: 1-Bromo-4-fluorobenzene	103	85.1 - 111		%Rec	1	8/11/2020 3:51:27 PM
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	10.2	0.500		wt%	1	8/11/2020 9:35:15 AM

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 3:05:00 PM
Project: Bethel Junction
Lab ID: 2008119-005
Matrix: Soil
Client Sample ID: SB-33-6

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Chloromethane	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Vinyl chloride	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Bromomethane	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Trichlorofluoromethane (CFC-11)	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Chloroethane	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Methylene chloride	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
trans-1,2-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1-Dichloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
cis-1,2-Dichloroethene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Chloroform	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1,1-Trichloroethane (TCA)	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1-Dichloropropene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Carbon tetrachloride	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2-Dichloroethane (EDC)	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Benzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Trichloroethene (TCE)	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2-Dichloropropane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Bromodichloromethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Dibromomethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
cis-1,3-Dichloropropene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Toluene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
trans-1,3-Dichloropropylene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1,2-Trichloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,3-Dichloropropane	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Tetrachloroethene (PCE)	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Dibromochloromethane	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2-Dibromoethane (EDB)	ND	0.00546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Chlorobenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1,1,2-Tetrachloroethane	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Ethylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
m,p-Xylene	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
o-Xylene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Styrene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Isopropylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Bromoform	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,1,2,2-Tetrachloroethane	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 3:05:00 PM
Project: Bethel Junction
Lab ID: 2008119-005 **Matrix:** Soil
Client Sample ID: SB-33-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Bromobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,3,5-Trimethylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
2-Chlorotoluene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
4-Chlorotoluene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
tert-Butylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2,3-Trichloropropane	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2,4-Trichlorobenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
sec-Butylbenzene	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
4-Isopropyltoluene	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,3-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,4-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
n-Butylbenzene	ND	0.0273		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2-Dichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2-Dibromo-3-chloropropane	ND	0.546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2,4-Trimethylbenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Hexachloro-1,3-butadiene	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Naphthalene	ND	0.0546		mg/Kg-dry	1	8/11/2020 4:21:34 PM
1,2,3-Trichlorobenzene	ND	0.0218		mg/Kg-dry	1	8/11/2020 4:21:34 PM
Surr: Dibromofluoromethane	91.2	83.3 - 111		%Rec	1	8/11/2020 4:21:34 PM
Surr: Toluene-d8	94.4	87.9 - 111		%Rec	1	8/11/2020 4:21:34 PM
Surr: 1-Bromo-4-fluorobenzene	100	85.1 - 111		%Rec	1	8/11/2020 4:21:34 PM
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	11.2	0.500		wt%	1	8/11/2020 9:35:15 AM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 4:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-006 **Matrix:** Water
Client Sample ID: W-DRUM-080720

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29319 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloromethane	ND	20.0	DQ	µg/L	10	8/12/2020 3:20:52 PM
Vinyl chloride	ND	2.00	D	µg/L	10	8/12/2020 3:20:52 PM
Bromomethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Trichlorofluoromethane (CFC-11)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloroethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloroethene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Methylene chloride	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
trans-1,2-Dichloroethene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Methyl tert-butyl ether (MTBE)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloroethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
cis-1,2-Dichloroethene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloroform	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,1-Trichloroethane (TCA)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloropropene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Carbon tetrachloride	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichloroethane (EDC)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Benzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Trichloroethene (TCE)	ND	5.00	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichloropropane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromodichloromethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Dibromomethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
cis-1,3-Dichloropropene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Toluene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
trans-1,3-Dichloropropylene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,2-Trichloroethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3-Dichloropropane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Tetrachloroethene (PCE)	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Dibromochloromethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dibromoethane (EDB)	ND	2.50	D	µg/L	10	8/12/2020 3:20:52 PM
Chlorobenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,1,2-Tetrachloroethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Ethylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
m,p-Xylene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
o-Xylene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Styrene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Isopropylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromoform	ND	20.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,2,2-Tetrachloroethane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 4:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-006 **Matrix:** Water
Client Sample ID: W-DRUM-080720

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29319 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromobenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3,5-Trimethylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
2-Chlorotoluene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
4-Chlorotoluene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
tert-Butylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,3-Trichloropropane	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,4-Trichlorobenzene	ND	20.0	D	µg/L	10	8/12/2020 3:20:52 PM
sec-Butylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
4-Isopropyltoluene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3-Dichlorobenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,4-Dichlorobenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
n-Butylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichlorobenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dibromo-3-chloropropane	ND	10.0	DQ	µg/L	10	8/12/2020 3:20:52 PM
1,2,4-Trimethylbenzene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Hexachloro-1,3-butadiene	ND	40.0	D	µg/L	10	8/12/2020 3:20:52 PM
Naphthalene	ND	10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,3-Trichlorobenzene	ND	40.0	D	µg/L	10	8/12/2020 3:20:52 PM
Surr: Dibromofluoromethane	90.3	83.7 - 117	D	%Rec	10	8/12/2020 3:20:52 PM
Surr: Toluene-d8	97.3	87.6 - 113	D	%Rec	10	8/12/2020 3:20:52 PM
Surr: 1-Bromo-4-fluorobenzene	99.3	81.2 - 113	D	%Rec	10	8/12/2020 3:20:52 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Client: PES Environmental, Inc.
Collection Date: 8/5/2020 5:28:00 PM
Project: Bethel Junction
Lab ID: 2008119-007
Matrix: Soil
Client Sample ID: TRIP BLANK

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Chloromethane	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
Vinyl chloride	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Bromomethane	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
Trichlorofluoromethane (CFC-11)	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Chloroethane	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,1-Dichloroethene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Methylene chloride	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,1-Dichloroethane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Chloroform	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,1,1-Trichloroethane (TCA)	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,1-Dichloropropene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Carbon tetrachloride	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,2-Dichloroethane (EDC)	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Benzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Trichloroethene (TCE)	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,2-Dichloropropane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Bromodichloromethane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Dibromomethane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Toluene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
trans-1,3-Dichloropropylene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,1,2-Trichloroethane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,3-Dichloropropane	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Tetrachloroethene (PCE)	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Dibromochloromethane	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg	1	8/11/2020 11:49:25 AM
Chlorobenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,1,1,2-Tetrachloroethane	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Ethylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
m,p-Xylene	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
o-Xylene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Styrene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Isopropylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Bromoform	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM

Client: PES Environmental, Inc. **Collection Date:** 8/5/2020 5:28:00 PM
Project: Bethel Junction
Lab ID: 2008119-007 **Matrix:** Soil
Client Sample ID: TRIP BLANK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
Bromobenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,3,5-Trimethylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
2-Chlorotoluene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
4-Chlorotoluene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
tert-Butylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,2,3-Trichloropropane	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,2,4-Trichlorobenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
sec-Butylbenzene	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
4-Isopropyltoluene	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
n-Butylbenzene	ND	0.0250		mg/Kg	1	8/11/2020 11:49:25 AM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
1,2-Dibromo-3-chloropropane	ND	0.500		mg/Kg	1	8/11/2020 11:49:25 AM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Hexachloro-1,3-butadiene	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
Naphthalene	ND	0.0500		mg/Kg	1	8/11/2020 11:49:25 AM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg	1	8/11/2020 11:49:25 AM
Surr: Dibromofluoromethane	93.3	83.3 - 111		%Rec	1	8/11/2020 11:49:25 AM
Surr: Toluene-d8	96.8	87.9 - 111		%Rec	1	8/11/2020 11:49:25 AM
Surr: 1-Bromo-4-fluorobenzene	101	85.1 - 111		%Rec	1	8/11/2020 11:49:25 AM

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **MB-29315**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/11/2020**	RunNo: **61154**
Client ID: **MBLKS**	Batch ID: **29315**		Analysis Date: **8/12/2020**	SeqNo: **1226288**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.197									
Barium	ND	0.394									
Cadmium	ND	0.157									
Chromium	0.0913	0.0787									
Lead	ND	0.157									
Selenium	ND	0.394									
Silver	ND	0.0787									

Sample ID: **LCS-29315**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **8/11/2020**	RunNo: **61154**
Client ID: **LCSS**	Batch ID: **29315**		Analysis Date: **8/12/2020**	SeqNo: **1226289**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	40.5	0.194	38.76	0	104	80	120				
Barium	42.4	0.388	38.76	0	109	80	120				
Cadmium	2.02	0.155	1.938	0	104	80	120				
Chromium	40.5	0.0775	38.76	0	104	80	120				B
Lead	21.0	0.155	19.38	0	109	80	120				
Selenium	3.80	0.388	3.876	0	98.1	80	120				
Silver	2.19	0.0775	1.938	0	113	80	120				

Sample ID: **2008119-003AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **8/11/2020**	RunNo: **61154**
Client ID: **SB-35-3**	Batch ID: **29315**		Analysis Date: **8/12/2020**	SeqNo: **1226292**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	45.6	0.202	40.48	2.636	106	75	125				
Barium	104	0.405	40.48	58.88	110	75	125				
Cadmium	2.35	0.162	2.024	0.06450	113	75	125				
Chromium	75.4	0.0810	40.48	29.68	113	75	125				B
Lead	21.0	0.162	20.24	2.914	89.2	75	125				I

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Total Metals by EPA Method 6020B

Sample ID: **2008119-003AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61154**
Client ID: **SB-35-3** Batch ID: **29315** Analysis Date: **8/12/2020** SeqNo: **1226292**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	4.85	0.405	4.048	0.6835	103	75	125				
Silver	2.19	0.0810	2.024	0.1069	103	75	125				

NOTES:
I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

Sample ID: **2008119-003AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61154**
Client ID: **SB-35-3** Batch ID: **29315** Analysis Date: **8/12/2020** SeqNo: **1226293**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	45.3	0.204	40.78	2.636	105	75	125	45.59	0.738	20	
Barium	107	0.408	40.78	58.88	118	75	125	103.6	3.24	20	
Cadmium	2.29	0.163	2.039	0.06450	109	75	125	2.351	2.59	20	
Chromium	77.2	0.0816	40.78	29.68	117	75	125	75.37	2.46	20	B
Lead	20.5	0.163	20.39	2.914	86.1	75	125	20.96	2.33	20	
Selenium	4.84	0.408	4.078	0.6835	102	75	125	4.849	0.233	20	
Silver	2.13	0.0816	2.039	0.1069	99.0	75	125	2.191	3.02	20	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Mercury by EPA Method 7471

Sample ID: **MB-29354**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/14/2020**			RunNo: **61187**		
Client ID: **MBLKS**	Batch ID: **29354**					Analysis Date: **8/14/2020**			SeqNo: **1227068**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.240									

Sample ID: **LCS-29354**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/14/2020**			RunNo: **61187**		
Client ID: **LCSS**	Batch ID: **29354**					Analysis Date: **8/14/2020**			SeqNo: **1227069**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.513	0.250	0.5000	0	103	80	120				

Sample ID: **2008119-003ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **8/14/2020**			RunNo: **61187**		
Client ID: **SB-35-3**	Batch ID: **29354**					Analysis Date: **8/14/2020**			SeqNo: **1227071**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.260						0		20	

Sample ID: **2008119-003AMS**	SampType: **MS**			Units: **mg/Kg-dry**		Prep Date: **8/14/2020**			RunNo: **61187**		
Client ID: **SB-35-3**	Batch ID: **29354**					Analysis Date: **8/14/2020**			SeqNo: **1227072**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.526	0.255	0.5097	0.03061	97.2	70	130				

Sample ID: **2008119-003AMSD**	SampType: **MSD**			Units: **mg/Kg-dry**		Prep Date: **8/14/2020**			RunNo: **61187**		
Client ID: **SB-35-3**	Batch ID: **29354**					Analysis Date: **8/14/2020**			SeqNo: **1227073**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.521	0.246	0.4915	0.03061	99.8	70	130	0.5260	0.960	20	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29304** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **LCSS** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227056**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.26	0.0200	1.000	0	126	13.4	185				
Chloromethane	0.975	0.0500	1.000	0	97.5	38.5	158				
Vinyl chloride	0.943	0.0250	1.000	0	94.3	53.6	138				
Bromomethane	1.05	0.0500	1.000	0	105	56.6	151				
Trichlorofluoromethane (CFC-11)	0.951	0.0200	1.000	0	95.1	64.2	137				
Chloroethane	0.956	0.0500	1.000	0	95.6	54.1	134				
1,1-Dichloroethene	0.865	0.0200	1.000	0	86.5	66	133				
Methylene chloride	0.859	0.0200	1.000	0	85.9	74.3	117				
trans-1,2-Dichloroethene	0.928	0.0200	1.000	0	92.8	79.6	115				
Methyl tert-butyl ether (MTBE)	0.881	0.0500	1.000	0	88.1	73.1	119				
1,1-Dichloroethane	0.888	0.0200	1.000	0	88.8	75.8	117				
cis-1,2-Dichloroethene	0.913	0.0200	1.000	0	91.3	77.8	115				
Chloroform	0.920	0.0200	1.000	0	92.0	78.2	115				
1,1,1-Trichloroethane (TCA)	1.04	0.0250	1.000	0	104	76	121				
1,1-Dichloropropene	1.00	0.0200	1.000	0	100	77.2	120				
Carbon tetrachloride	1.07	0.0500	1.000	0	107	74	122				
1,2-Dichloroethane (EDC)	0.935	0.0200	1.000	0	93.5	74.7	115				
Benzene	0.952	0.0200	1.000	0	95.2	80.5	114				
Trichloroethene (TCE)	0.986	0.0200	1.000	0	98.6	79.6	118				
1,2-Dichloropropane	0.932	0.0200	1.000	0	93.2	78.2	115				
Bromodichloromethane	0.963	0.0200	1.000	0	96.3	76.6	116				
Dibromomethane	0.881	0.0200	1.000	0	88.1	77.9	115				
cis-1,3-Dichloropropene	0.950	0.0200	1.000	0	95.0	74.6	119				
Toluene	0.942	0.0200	1.000	0	94.2	79.6	116				
trans-1,3-Dichloropropylene	0.919	0.0200	1.000	0	91.9	70.6	124				
1,1,2-Trichloroethane	0.876	0.0200	1.000	0	87.6	75.6	116				
1,3-Dichloropropane	0.882	0.0250	1.000	0	88.2	75.3	116				
Tetrachloroethene (PCE)	0.992	0.0250	1.000	0	99.2	78.8	119				
Dibromochloromethane	0.923	0.0250	1.000	0	92.3	72.5	123				
1,2-Dibromoethane (EDB)	0.863	0.00500	1.000	0	86.3	75	116				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29304** SampType: **LCS** Units: **mg/Kg** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **LCSS** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227056**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.992	0.0250	1.000	0	99.2	83.4	113				
1,1,1,2-Tetrachloroethane	1.02	0.0250	1.000	0	102	80.8	117				
Ethylbenzene	1.02	0.0250	1.000	0	102	81.6	116				
m,p-Xylene	2.05	0.0500	2.000	0	103	80.9	117				
o-Xylene	1.02	0.0250	1.000	0	102	80.8	114				
Styrene	1.00	0.0250	1.000	0	100	80.4	114				
Isopropylbenzene	1.06	0.0250	1.000	0	106	79.3	118				
Bromoform	0.946	0.0500	1.000	0	94.6	71	129				
1,1,2,2-Tetrachloroethane	0.771	0.0200	1.000	0	77.1	71.3	119				
n-Propylbenzene	1.03	0.0250	1.000	0	103	80.4	120				
Bromobenzene	1.02	0.0200	1.000	0	102	78.6	115				
1,3,5-Trimethylbenzene	1.06	0.0250	1.000	0	106	80	116				
2-Chlorotoluene	1.03	0.0250	1.000	0	103	78.6	116				
4-Chlorotoluene	1.03	0.0250	1.000	0	103	78.8	117				
tert-Butylbenzene	1.07	0.0250	1.000	0	107	77.8	118				
1,2,3-Trichloropropane	0.842	0.0250	1.000	0	84.2	67.5	129				
1,2,4-Trichlorobenzene	0.920	0.0250	1.000	0	92.0	79.6	124				
sec-Butylbenzene	1.05	0.0500	1.000	0	105	78.6	119				
4-Isopropyltoluene	1.07	0.0500	1.000	0	107	78	119				
1,3-Dichlorobenzene	1.02	0.0200	1.000	0	102	87.1	117				
1,4-Dichlorobenzene	0.994	0.0200	1.000	0	99.4	87.6	115				
n-Butylbenzene	1.01	0.0250	1.000	0	101	81.9	122				
1,2-Dichlorobenzene	0.969	0.0200	1.000	0	96.9	87.9	115				
1,2-Dibromo-3-chloropropane	0.820	0.500	1.000	0	82.0	65.6	132				
1,2,4-Trimethylbenzene	1.06	0.0200	1.000	0	106	79.3	117				
Hexachloro-1,3-butadiene	1.10	0.0500	1.000	0	110	75	130				
Naphthalene	0.822	0.0500	1.000	0	82.2	71.7	132				
1,2,3-Trichlorobenzene	0.829	0.0200	1.000	0	82.9	74.3	128				
Surr: Dibromofluoromethane	1.22		1.250		97.3	83.3	111				
Surr: Toluene-d8	1.18		1.250		94.7	87.9	111				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29304**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **8/11/2020**		RunNo: **61186**	
Client ID: **LCSS**	Batch ID: **29304**					Analysis Date: **8/11/2020**		SeqNo: **1227056**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		101	85.1	111				

Sample ID: **MB-29304**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **8/11/2020**		RunNo: **61186**	
Client ID: **MBLKS**	Batch ID: **29304**					Analysis Date: **8/11/2020**		SeqNo: **1227057**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
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									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0500									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-29304**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **8/11/2020**	RunNo: **61186**
Client ID: **MBLKS**	Batch ID: **29304**		Analysis Date: **8/11/2020**	SeqNo: **1227057**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-29304** SampType: **MBLK** Units: **mg/Kg** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **MBLKS** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227057**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.15		1.250		92.0	83.3	111				
Surr: Toluene-d8	1.18		1.250		94.6	87.9	111				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.250		101	85.1	111				

Sample ID: **2008119-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-33-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227046**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0224						0		30	
Chloromethane	ND	0.0559						0		30	
Vinyl chloride	ND	0.0279						0		30	
Bromomethane	ND	0.0559						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0224						0		30	
Chloroethane	ND	0.0559						0		30	
1,1-Dichloroethene	ND	0.0224						0		30	
Methylene chloride	ND	0.0224						0		30	
trans-1,2-Dichloroethene	ND	0.0224						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0559						0		30	
1,1-Dichloroethane	ND	0.0224						0		30	
cis-1,2-Dichloroethene	ND	0.0224						0		30	
Chloroform	ND	0.0224						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0279						0		30	
1,1-Dichloropropene	ND	0.0224						0		30	
Carbon tetrachloride	ND	0.0559						0		30	
1,2-Dichloroethane (EDC)	ND	0.0224						0		30	
Benzene	ND	0.0224						0		30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-33-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227046**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0224						0		30	
1,2-Dichloropropane	ND	0.0224						0		30	
Bromodichloromethane	ND	0.0224						0		30	
Dibromomethane	ND	0.0224						0		30	
cis-1,3-Dichloropropene	ND	0.0224						0		30	
Toluene	ND	0.0224						0		30	
trans-1,3-Dichloropropylene	ND	0.0224						0		30	
1,1,2-Trichloroethane	ND	0.0224						0		30	
1,3-Dichloropropane	ND	0.0279						0		30	
Tetrachloroethene (PCE)	0.127	0.0279						0.1534	19.2	30	
Dibromochloromethane	ND	0.0279						0		30	
1,2-Dibromoethane (EDB)	ND	0.00559						0		30	
Chlorobenzene	ND	0.0279						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0279						0		30	
Ethylbenzene	ND	0.0279						0		30	
m,p-Xylene	ND	0.0559						0		30	
o-Xylene	ND	0.0279						0		30	
Styrene	ND	0.0279						0		30	
Isopropylbenzene	ND	0.0279						0		30	
Bromoform	ND	0.0559						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0224						0		30	
n-Propylbenzene	ND	0.0279						0		30	
Bromobenzene	ND	0.0224						0		30	
1,3,5-Trimethylbenzene	ND	0.0279						0		30	
2-Chlorotoluene	ND	0.0279						0		30	
4-Chlorotoluene	ND	0.0279						0		30	
tert-Butylbenzene	ND	0.0279						0		30	
1,2,3-Trichloropropane	ND	0.0279						0		30	
1,2,4-Trichlorobenzene	ND	0.0279						0		30	
sec-Butylbenzene	ND	0.0559						0		30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-33-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227046**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	0.0559						0		30	
1,3-Dichlorobenzene	ND	0.0224						0		30	
1,4-Dichlorobenzene	ND	0.0224						0		30	
n-Butylbenzene	ND	0.0279						0		30	
1,2-Dichlorobenzene	ND	0.0224						0		30	
1,2-Dibromo-3-chloropropane	ND	0.559						0		30	
1,2,4-Trimethylbenzene	ND	0.0224						0		30	
Hexachloro-1,3-butadiene	ND	0.0559						0		30	
Naphthalene	ND	0.0559						0		30	
1,2,3-Trichlorobenzene	ND	0.0224						0		30	
Surr: Dibromofluoromethane	1.32		1.397		94.5	83.3	111		0		
Surr: Toluene-d8	1.33		1.397		95.1	87.9	111		0		
Surr: 1-Bromo-4-fluorobenzene	1.39		1.397		99.2	85.1	111		0		

Sample ID: **2008119-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227048**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.02	0.0218	1.090	0	94.1	5.73	173				
Chloromethane	0.825	0.0545	1.090	0	75.7	41.3	150				
Vinyl chloride	0.915	0.0272	1.090	0	83.9	49.5	138				
Bromomethane	1.09	0.0545	1.090	0	100	48.5	158				
Trichlorofluoromethane (CFC-11)	1.06	0.0218	1.090	0	97.0	40.6	159				
Chloroethane	0.962	0.0545	1.090	0	88.3	30.4	166				
1,1-Dichloroethene	0.973	0.0218	1.090	0	89.3	55	138				
Methylene chloride	0.927	0.0218	1.090	0	85.1	70.3	123				
trans-1,2-Dichloroethene	1.04	0.0218	1.090	0	95.8	73.1	121				
Methyl tert-butyl ether (MTBE)	1.07	0.0545	1.090	0	97.9	69.6	122				
1,1-Dichloroethane	1.02	0.0218	1.090	0	93.8	70.8	122				
cis-1,2-Dichloroethene	1.07	0.0218	1.090	0	98.0	71.8	122				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227048**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	1.07	0.0218	1.090	0	98.4	72.9	122				
1,1,1-Trichloroethane (TCA)	1.16	0.0272	1.090	0	106	69.6	125				
1,1-Dichloropropene	1.12	0.0218	1.090	0	103	69.3	126				
Carbon tetrachloride	1.19	0.0545	1.090	0	110	65	127				
1,2-Dichloroethane (EDC)	1.09	0.0218	1.090	0	100	70.1	121				
Benzene	1.08	0.0218	1.090	0	99.1	76.7	119				
Trichloroethene (TCE)	1.12	0.0218	1.090	0	103	70.1	129				
1,2-Dichloropropane	1.02	0.0218	1.090	0	93.9	74.6	120				
Bromodichloromethane	1.07	0.0218	1.090	0	98.2	70.9	122				
Dibromomethane	1.04	0.0218	1.090	0	95.3	75.6	120				
cis-1,3-Dichloropropene	1.02	0.0218	1.090	0	93.8	68.3	120				
Toluene	1.09	0.0218	1.090	0	100	74.7	119				
trans-1,3-Dichloropropylene	1.06	0.0218	1.090	0	97.2	62.2	127				
1,1,2-Trichloroethane	1.03	0.0218	1.090	0	94.7	72.9	120				
1,3-Dichloropropane	1.04	0.0272	1.090	0	95.6	71.9	119				
Tetrachloroethene (PCE)	1.24	0.0272	1.090	0.09538	105	71.1	122				
Dibromochloromethane	1.08	0.0272	1.090	0	99.6	65.9	126				
1,2-Dibromoethane (EDB)	1.04	0.00545	1.090	0	95.2	72	119				
Chlorobenzene	1.10	0.0272	1.090	0	101	81.4	116				
1,1,1,2-Tetrachloroethane	1.15	0.0272	1.090	0	106	72.9	125				
Ethylbenzene	1.14	0.0272	1.090	0	104	77.1	120				
m,p-Xylene	2.27	0.0545	2.179	0	104	76.3	120				
o-Xylene	1.11	0.0272	1.090	0	102	76.6	119				
Styrene	1.11	0.0272	1.090	0	102	75.1	121				
Isopropylbenzene	1.16	0.0272	1.090	0	107	74.8	122				
Bromoform	1.12	0.0545	1.090	0	103	63.4	133				
1,1,2,2-Tetrachloroethane	0.963	0.0218	1.090	0	88.4	61	128				
n-Propylbenzene	1.16	0.0272	1.090	0	106	73	128				
Bromobenzene	1.13	0.0218	1.090	0	104	77	120				
1,3,5-Trimethylbenzene	1.19	0.0272	1.090	0	109	72.1	126				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-002BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227048**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	1.14	0.0272	1.090	0	105	71.4	126				
4-Chlorotoluene	1.15	0.0272	1.090	0	106	73.6	124				
tert-Butylbenzene	1.19	0.0272	1.090	0	109	70.7	126				
1,2,3-Trichloropropane	1.01	0.0272	1.090	0	92.6	65.7	132				
1,2,4-Trichlorobenzene	1.12	0.0272	1.090	0	102	70.5	130				
sec-Butylbenzene	1.17	0.0545	1.090	0	107	68.8	129				
4-Isopropyltoluene	1.17	0.0545	1.090	0	108	69.2	128				
1,3-Dichlorobenzene	1.13	0.0218	1.090	0	104	83.8	121				
1,4-Dichlorobenzene	1.12	0.0218	1.090	0	103	85.7	117				
n-Butylbenzene	1.12	0.0272	1.090	0	103	67.4	133				
1,2-Dichlorobenzene	1.11	0.0218	1.090	0	102	81.8	120				
1,2-Dibromo-3-chloropropane	1.07	0.545	1.090	0	98.6	56.9	139				
1,2,4-Trimethylbenzene	1.18	0.0218	1.090	0	109	70.9	127				
Hexachloro-1,3-butadiene	1.24	0.0545	1.090	0	114	61.1	140				
Naphthalene	1.07	0.0545	1.090	0	98.4	63.3	143				
1,2,3-Trichlorobenzene	1.12	0.0218	1.090	0	103	67.8	132				
Surr: Dibromofluoromethane	1.35		1.362		99.0	83.3	111				
Surr: Toluene-d8	1.32		1.362		96.6	87.9	111				
Surr: 1-Bromo-4-fluorobenzene	1.42		1.362		104	85.1	111				

Sample ID: **2008119-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227049**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.995	0.0218	1.090	0	91.3	5.73	173	1.025	2.96	30	
Chloromethane	0.788	0.0545	1.090	0	72.3	41.3	150	0.8248	4.54	30	
Vinyl chloride	0.885	0.0272	1.090	0	81.2	49.5	138	0.9146	3.29	30	
Bromomethane	0.997	0.0545	1.090	0	91.5	48.5	158	1.090	8.98	30	
Trichlorofluoromethane (CFC-11)	1.06	0.0218	1.090	0	97.2	40.6	159	1.057	0.289	30	
Chloroethane	0.942	0.0545	1.090	0	86.5	30.4	166	0.9619	2.08	30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227049**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.977	0.0218	1.090	0	89.6	55	138	0.9730	0.362	30	
Methylene chloride	0.909	0.0218	1.090	0	83.4	70.3	123	0.9274	2.05	30	
trans-1,2-Dichloroethene	1.03	0.0218	1.090	0	94.4	73.1	121	1.044	1.52	30	
Methyl tert-butyl ether (MTBE)	1.11	0.0545	1.090	0	102	69.6	122	1.067	3.76	30	
1,1-Dichloroethane	1.03	0.0218	1.090	0	94.6	70.8	122	1.022	0.852	30	
cis-1,2-Dichloroethene	1.05	0.0218	1.090	0	96.6	71.8	122	1.068	1.48	30	
Chloroform	1.05	0.0218	1.090	0	96.6	72.9	122	1.073	1.85	30	
1,1,1-Trichloroethane (TCA)	1.15	0.0272	1.090	0	106	69.6	125	1.160	0.569	30	
1,1-Dichloropropene	1.07	0.0218	1.090	0	97.8	69.3	126	1.124	5.29	30	
Carbon tetrachloride	1.17	0.0545	1.090	0	107	65	127	1.194	1.96	30	
1,2-Dichloroethane (EDC)	1.08	0.0218	1.090	0	99.4	70.1	121	1.092	0.870	30	
Benzene	1.05	0.0218	1.090	0	96.3	76.7	119	1.080	2.88	30	
Trichloroethene (TCE)	1.10	0.0218	1.090	0	101	70.1	129	1.119	1.93	30	
1,2-Dichloropropane	1.02	0.0218	1.090	0	93.5	74.6	120	1.023	0.399	30	
Bromodichloromethane	1.06	0.0218	1.090	0	97.7	70.9	122	1.070	0.471	30	
Dibromomethane	1.05	0.0218	1.090	0	95.9	75.6	120	1.038	0.725	30	
cis-1,3-Dichloropropene	1.01	0.0218	1.090	0	92.8	68.3	120	1.023	1.12	30	
Toluene	1.08	0.0218	1.090	0	98.8	74.7	119	1.090	1.25	30	
trans-1,3-Dichloropropylene	1.08	0.0218	1.090	0	99.2	62.2	127	1.059	1.99	30	
1,1,2-Trichloroethane	1.07	0.0218	1.090	0	97.7	72.9	120	1.032	3.17	30	
1,3-Dichloropropane	1.05	0.0272	1.090	0	96.3	71.9	119	1.041	0.790	30	
Tetrachloroethene (PCE)	1.23	0.0272	1.090	0.09538	104	71.1	122	1.245	1.29	30	
Dibromochloromethane	1.11	0.0272	1.090	0	102	65.9	126	1.085	2.21	30	
1,2-Dibromoethane (EDB)	1.09	0.00545	1.090	0	99.8	72	119	1.037	4.75	30	
Chlorobenzene	1.13	0.0272	1.090	0	104	81.4	116	1.101	2.39	30	
1,1,1,2-Tetrachloroethane	1.17	0.0272	1.090	0	108	72.9	125	1.152	1.74	30	
Ethylbenzene	1.15	0.0272	1.090	0	106	77.1	120	1.135	1.44	30	
m,p-Xylene	2.28	0.0545	2.179	0	105	76.3	120	2.274	0.277	30	
o-Xylene	1.12	0.0272	1.090	0	103	76.6	119	1.107	1.59	30	
Styrene	1.11	0.0272	1.090	0	102	75.1	121	1.108	0.111	30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008119-002BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **8/11/2020** RunNo: **61186**
Client ID: **SB-34-0.5** Batch ID: **29304** Analysis Date: **8/11/2020** SeqNo: **1227049**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	1.17	0.0272	1.090	0	108	74.8	122	1.164	0.779	30	
Bromoform	1.21	0.0545	1.090	0	111	63.4	133	1.122	7.22	30	
1,1,2,2-Tetrachloroethane	1.06	0.0218	1.090	0	97.3	61	128	0.9631	9.57	30	
n-Propylbenzene	1.16	0.0272	1.090	0	106	73	128	1.158	0.136	30	
Bromobenzene	1.17	0.0218	1.090	0	107	77	120	1.135	2.86	30	
1,3,5-Trimethylbenzene	1.20	0.0272	1.090	0	110	72.1	126	1.190	0.644	30	
2-Chlorotoluene	1.14	0.0272	1.090	0	105	71.4	126	1.143	0.105	30	
4-Chlorotoluene	1.15	0.0272	1.090	0	105	73.6	124	1.150	0.449	30	
tert-Butylbenzene	1.21	0.0272	1.090	0	111	70.7	126	1.188	1.64	30	
1,2,3-Trichloropropane	1.09	0.0272	1.090	0	99.9	65.7	132	1.009	7.58	30	
1,2,4-Trichlorobenzene	1.22	0.0272	1.090	0	112	70.5	130	1.116	9.31	30	
sec-Butylbenzene	1.17	0.0545	1.090	0	108	68.8	129	1.167	0.560	30	
4-Isopropyltoluene	1.19	0.0545	1.090	0	109	69.2	128	1.174	0.955	30	
1,3-Dichlorobenzene	1.15	0.0218	1.090	0	106	83.8	121	1.130	1.95	30	
1,4-Dichlorobenzene	1.15	0.0218	1.090	0	106	85.7	117	1.119	2.91	30	
n-Butylbenzene	1.14	0.0272	1.090	0	105	67.4	133	1.117	2.43	30	
1,2-Dichlorobenzene	1.16	0.0218	1.090	0	106	81.8	120	1.110	4.09	30	
1,2-Dibromo-3-chloropropane	1.21	0.545	1.090	0	111	56.9	139	1.075	11.7	30	
1,2,4-Trimethylbenzene	1.19	0.0218	1.090	0	109	70.9	127	1.184	0.151	30	
Hexachloro-1,3-butadiene	1.30	0.0545	1.090	0	120	61.1	140	1.242	4.76	30	
Naphthalene	1.24	0.0545	1.090	0	114	63.3	143	1.072	14.9	30	
1,2,3-Trichlorobenzene	1.26	0.0218	1.090	0	116	67.8	132	1.117	12.0	30	
Surr: Dibromofluoromethane	1.33		1.362		97.9	83.3	111		0		
Surr: Toluene-d8	1.29		1.362		95.0	87.9	111		0		
Surr: 1-Bromo-4-fluorobenzene	1.40		1.362		103	85.1	111		0		

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29319** SampType: **LCS** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **LCSW** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226370**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.3	1.00	20.00	0	86.5	17.1	189				
Chloromethane	15.5	2.00	20.00	0	77.3	15.4	168				
Vinyl chloride	19.1	0.200	20.00	0	95.6	67.4	127				
Bromomethane	24.8	1.00	20.00	0	124	57.7	134				
Trichlorofluoromethane (CFC-11)	20.4	1.00	20.00	0	102	76.5	123				
Chloroethane	18.4	1.00	20.00	0	92.2	56.4	139				
1,1-Dichloroethene	19.5	1.00	20.00	0	97.5	72.2	124				
Methylene chloride	19.4	1.00	20.00	0	96.9	80.1	112				
trans-1,2-Dichloroethene	19.4	1.00	20.00	0	96.9	81.6	113				
Methyl tert-butyl ether (MTBE)	17.2	1.00	20.00	0	86.2	73.9	118				
1,1-Dichloroethane	19.3	1.00	20.00	0	96.5	78.2	113				
cis-1,2-Dichloroethene	19.2	1.00	20.00	0	96.0	82.8	111				
Chloroform	19.3	1.00	20.00	0	96.7	81.7	112				
1,1,1-Trichloroethane (TCA)	19.5	1.00	20.00	0	97.6	80.9	115				
1,1-Dichloropropene	19.3	1.00	20.00	0	96.3	80.8	114				
Carbon tetrachloride	19.3	1.00	20.00	0	96.5	80	119				
1,2-Dichloroethane (EDC)	18.7	1.00	20.00	0	93.5	78.6	114				
Benzene	19.0	1.00	20.00	0	95.1	81.2	113				
Trichloroethene (TCE)	19.3	0.500	20.00	0	96.4	81.6	114				
1,2-Dichloropropane	19.0	1.00	20.00	0	94.8	78.1	114				
Bromodichloromethane	19.0	1.00	20.00	0	95.2	81.4	113				
Dibromomethane	18.5	1.00	20.00	0	92.5	81.6	112				
cis-1,3-Dichloropropene	19.1	1.00	20.00	0	95.5	80.9	115				
Toluene	19.5	1.00	20.00	0	97.3	82.7	114				
trans-1,3-Dichloropropylene	18.5	1.00	20.00	0	92.7	80.6	117				
1,1,2-Trichloroethane	18.8	1.00	20.00	0	94.0	79.3	116				
1,3-Dichloropropane	18.4	1.00	20.00	0	92.2	78	116				
Tetrachloroethene (PCE)	19.5	1.00	20.00	0	97.5	83.2	117				
Dibromochloromethane	18.4	1.00	20.00	0	92.1	78.9	119				
1,2-Dibromoethane (EDB)	18.4	0.250	20.00	0	91.9	80.3	115				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29319** SampType: **LCS** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **LCSW** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226370**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.6	1.00	20.00	0	97.8	82.4	113				
1,1,1,2-Tetrachloroethane	19.4	1.00	20.00	0	96.9	79.3	117				
Ethylbenzene	19.6	1.00	20.00	0	98.1	81.7	115				
m,p-Xylene	39.4	1.00	40.00	0	98.6	82.1	115				
o-Xylene	19.6	1.00	20.00	0	97.9	82	115				
Styrene	19.6	1.00	20.00	0	97.9	81.6	114				
Isopropylbenzene	20.0	1.00	20.00	0	100	81.9	116				
Bromoform	19.2	2.00	20.00	0	95.9	72.9	125				
1,1,2,2-Tetrachloroethane	19.7	1.00	20.00	0	98.5	64.7	127				
n-Propylbenzene	21.0	1.00	20.00	0	105	81.2	117				
Bromobenzene	21.4	1.00	20.00	0	107	80.7	116				
1,3,5-Trimethylbenzene	21.1	1.00	20.00	0	106	80.9	117				
2-Chlorotoluene	21.5	1.00	20.00	0	107	78.2	120				
4-Chlorotoluene	20.8	1.00	20.00	0	104	81.4	116				
tert-Butylbenzene	21.0	1.00	20.00	0	105	80.5	118				
1,2,3-Trichloropropane	19.2	1.00	20.00	0	95.8	69.7	121				
1,2,4-Trichlorobenzene	18.3	2.00	20.00	0	91.3	78.6	125				
sec-Butylbenzene	21.2	1.00	20.00	0	106	80.1	120				
4-Isopropyltoluene	21.5	1.00	20.00	0	107	79.1	120				
1,3-Dichlorobenzene	19.6	1.00	20.00	0	98.0	86.4	115				
1,4-Dichlorobenzene	20.1	1.00	20.00	0	100	85.6	115				
n-Butylbenzene	22.0	1.00	20.00	0	110	81	121				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	85.2	115				
1,2-Dibromo-3-chloropropane	17.5	1.00	20.00	0	87.6	62.3	132				
1,2,4-Trimethylbenzene	21.6	1.00	20.00	0	108	80.3	119				
Hexachloro-1,3-butadiene	18.2	4.00	20.00	0	90.9	80.4	125				
Naphthalene	18.1	1.00	20.00	0	90.7	72.8	134				
1,2,3-Trichlorobenzene	18.4	4.00	20.00	0	91.8	76.1	127				
Surr: Dibromofluoromethane	24.7		25.00		98.8	83.7	117				
Surr: Toluene-d8	25.0		25.00		99.9	87.6	113				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-29319**	SampType: **LCS**			Units: **µg/L**		Prep Date: **8/12/2020**		RunNo: **61155**		
Client ID: **LCSW**	Batch ID: **29319**					Analysis Date: **8/12/2020**		SeqNo: **1226370**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	26.4		25.00		105	94	110				

Sample ID: **MB-29319**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **8/12/2020**		RunNo: **61155**		
Client ID: **MBLKW**	Batch ID: **29319**					Analysis Date: **8/12/2020**		SeqNo: **1226371**		
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	2.00									Q
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									
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	0.0747									MDL
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	0.0912									MDL

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-29319** SampType: **MBLK** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **MBLKW** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226371**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	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	0.250									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	0.0868									MDL
m,p-Xylene	ND	0.173									MDL
o-Xylene	ND	0.0688									MDL
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
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									Q

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-29319** SampType: **MBLK** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **MBLKW** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226371**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.5		25.00		98.1	83.7	117				
Surr: Toluene-d8	24.5		25.00		98.1	87.6	113				
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.7	81.2	113				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
MDL - Analyte reported to Method Detection Limit (MDL)

Sample ID: **2008120-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226356**

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	2.00						0		30	Q
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	
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: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008120-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226356**

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-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008120-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226356**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.3		25.00		101	83.7	117		0		
Surr: Toluene-d8	24.6		25.00		98.2	87.6	113		0		
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.5	81.2	113		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **2008106-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226352**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.8	1.00	20.00	0	89.0	5.43	176				
Chloromethane	14.9	2.00	20.00	0	74.6	16.9	195				
Vinyl chloride	21.0	0.200	20.00	0	105	56.5	140				
Bromomethane	25.5	1.00	20.00	0	128	46.6	148				
Trichlorofluoromethane (CFC-11)	21.2	1.00	20.00	0	106	70.8	131				
Chloroethane	18.7	1.00	20.00	0	93.6	62.5	133				
1,1-Dichloroethene	20.6	1.00	20.00	0	103	73.1	133				
Methylene chloride	19.6	1.00	20.00	0	97.8	66.1	128				
trans-1,2-Dichloroethene	20.4	1.00	20.00	0	102	73.6	132				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008106-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226352**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17.1	1.00	20.00	0	85.4	60.1	134				
1,1-Dichloroethane	21.5	1.00	20.00	1.829	98.4	67.5	136				
cis-1,2-Dichloroethene	19.9	1.00	20.00	0	99.4	73.1	130				
Chloroform	19.6	1.00	20.00	0	97.9	72.7	131				
1,1,1-Trichloroethane (TCA)	20.0	1.00	20.00	0	100	70.8	138				
1,1-Dichloropropene	20.0	1.00	20.00	0	100	74.4	135				
Carbon tetrachloride	20.2	1.00	20.00	0	101	74.8	134				
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0.7248	90.2	68.2	132				
Benzene	19.6	1.00	20.00	0	97.9	74.4	131				
Trichloroethene (TCE)	19.4	0.500	20.00	0	97.0	75.1	128				
1,2-Dichloropropane	19.0	1.00	20.00	0	94.8	72.1	131				
Bromodichloromethane	18.8	1.00	20.00	0	93.8	74.5	129				
Dibromomethane	18.2	1.00	20.00	0	90.9	70.3	128				
cis-1,3-Dichloropropene	18.5	1.00	20.00	0	92.7	66.8	127				
Toluene	19.6	1.00	20.00	0	98.0	71.3	132				
trans-1,3-Dichloropropylene	17.7	1.00	20.00	0	88.7	59.4	131				
1,1,2-Trichloroethane	17.7	1.00	20.00	0	88.5	68.7	132				
1,3-Dichloropropane	17.7	1.00	20.00	0	88.6	63.9	134				
Tetrachloroethene (PCE)	20.0	1.00	20.00	0	99.8	72.7	130				
Dibromochloromethane	17.6	1.00	20.00	0	88.0	67.8	130				
1,2-Dibromoethane (EDB)	17.4	0.250	20.00	0	87.0	63.7	132				
Chlorobenzene	20.3	1.00	20.00	0	102	73.8	125				
1,1,1,2-Tetrachloroethane	19.9	1.00	20.00	0	99.3	72.4	127				
Ethylbenzene	20.7	1.00	20.00	0	103	73	129				
m,p-Xylene	40.7	1.00	40.00	0	102	70.5	131				
o-Xylene	20.3	1.00	20.00	0	102	70.9	129				
Styrene	19.7	1.00	20.00	0	98.7	71.8	124				
Isopropylbenzene	20.8	1.00	20.00	0	104	68.4	137				
Bromoform	18.9	2.00	20.00	0	94.4	66.5	132				
1,1,2,2-Tetrachloroethane	19.6	1.00	20.00	0	98.2	61.3	146				

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008106-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226352**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	22.2	1.00	20.00	0	111	69.9	138				
Bromobenzene	21.7	1.00	20.00	0	108	68.6	132				
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	112	61.4	142				
2-Chlorotoluene	22.7	1.00	20.00	0	113	68.9	135				
4-Chlorotoluene	21.3	1.00	20.00	0	107	68.1	136				
tert-Butylbenzene	21.3	1.00	20.00	0	107	67.3	137				
1,2,3-Trichloropropane	18.4	1.00	20.00	0	92.0	55	143				
1,2,4-Trichlorobenzene	18.5	2.00	20.00	0	92.7	72.1	129				
sec-Butylbenzene	21.0	1.00	20.00	0	105	65.1	143				
4-Isopropyltoluene	21.4	1.00	20.00	0	107	62.2	142				
1,3-Dichlorobenzene	20.0	1.00	20.00	0	100	77.6	123				
1,4-Dichlorobenzene	20.5	1.00	20.00	0	102	76.6	122				
n-Butylbenzene	21.0	1.00	20.00	0	105	75.2	133				
1,2-Dichlorobenzene	20.6	1.00	20.00	0	103	77	123				
1,2-Dibromo-3-chloropropane	16.5	1.00	20.00	0	82.5	56.8	145				
1,2,4-Trimethylbenzene	25.4	1.00	20.00	0	127	64.6	137				
Hexachloro-1,3-butadiene	14.2	4.00	20.00	0	70.8	71.9	131				S
Naphthalene	18.2	1.00	20.00	0	90.8	64.1	144				
1,2,3-Trichlorobenzene	17.7	4.00	20.00	0	88.3	69	134				
Surr: Dibromofluoromethane	24.4		25.00		97.6	83.7	117				
Surr: Toluene-d8	24.0		25.00		96.2	87.6	113				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	81.2	113				

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID: **2008106-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.0	1.00	20.00	0	85.2	5.43	176	17.80	4.29	30	
Chloromethane	17.2	2.00	20.00	0	86.0	16.9	195	14.92	14.2	30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008106-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	20.6	0.200	20.00	0	103	56.5	140	20.97	1.96	30	
Bromomethane	23.5	1.00	20.00	0	118	46.6	148	25.51	8.11	30	
Trichlorofluoromethane (CFC-11)	21.3	1.00	20.00	0	106	70.8	131	21.18	0.385	30	
Chloroethane	18.7	1.00	20.00	0	93.7	62.5	133	18.72	0.114	30	
1,1-Dichloroethene	20.4	1.00	20.00	0	102	73.1	133	20.62	1.25	30	
Methylene chloride	19.5	1.00	20.00	0	97.6	66.1	128	19.56	0.214	30	
trans-1,2-Dichloroethene	20.4	1.00	20.00	0	102	73.6	132	20.38	0.0686	30	
Methyl tert-butyl ether (MTBE)	16.7	1.00	20.00	0	83.7	60.1	134	17.08	2.06	30	
1,1-Dichloroethane	21.5	1.00	20.00	1.829	98.3	67.5	136	21.50	0.0669	30	
cis-1,2-Dichloroethene	20.1	1.00	20.00	0	100	73.1	130	19.88	0.897	30	
Chloroform	19.8	1.00	20.00	0	98.8	72.7	131	19.58	0.946	30	
1,1,1-Trichloroethane (TCA)	20.7	1.00	20.00	0	103	70.8	138	20.02	3.27	30	
1,1-Dichloropropene	20.3	1.00	20.00	0	102	74.4	135	20.04	1.39	30	
Carbon tetrachloride	20.6	1.00	20.00	0	103	74.8	134	20.16	2.04	30	
1,2-Dichloroethane (EDC)	19.2	1.00	20.00	0.7248	92.2	68.2	132	18.77	2.04	30	
Benzene	19.8	1.00	20.00	0	99.1	74.4	131	19.57	1.22	30	
Trichloroethene (TCE)	19.8	0.500	20.00	0	98.8	75.1	128	19.41	1.79	30	
1,2-Dichloropropane	19.3	1.00	20.00	0	96.4	72.1	131	18.97	1.67	30	
Bromodichloromethane	19.3	1.00	20.00	0	96.3	74.5	129	18.76	2.61	30	
Dibromomethane	18.4	1.00	20.00	0	92.1	70.3	128	18.18	1.32	30	
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	95.0	66.8	127	18.54	2.42	30	
Toluene	20.3	1.00	20.00	0	102	71.3	132	19.60	3.67	30	
trans-1,3-Dichloropropylene	18.4	1.00	20.00	0	92.2	59.4	131	17.74	3.91	30	
1,1,2-Trichloroethane	18.1	1.00	20.00	0	90.6	68.7	132	17.71	2.33	30	
1,3-Dichloropropane	18.2	1.00	20.00	0	91.1	63.9	134	17.72	2.75	30	
Tetrachloroethene (PCE)	20.4	1.00	20.00	0	102	72.7	130	19.96	2.42	30	
Dibromochloromethane	18.4	1.00	20.00	0	92.0	67.8	130	17.60	4.48	30	
1,2-Dibromoethane (EDB)	18.0	0.250	20.00	0	90.1	63.7	132	17.40	3.57	30	
Chlorobenzene	20.5	1.00	20.00	0	102	73.8	125	20.33	0.731	30	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	100	72.4	127	19.85	1.07	30	

Work Order: 2008119
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2008106-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **8/12/2020** RunNo: **61155**
Client ID: **BATCH** Batch ID: **29319** Analysis Date: **8/12/2020** SeqNo: **1226353**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	20.7	1.00	20.00	0	104	73	129	20.66	0.200	30	
m,p-Xylene	41.0	1.00	40.00	0	102	70.5	131	40.72	0.676	30	
o-Xylene	20.5	1.00	20.00	0	103	70.9	129	20.31	1.09	30	
Styrene	19.8	1.00	20.00	0	98.8	71.8	124	19.74	0.145	30	
Isopropylbenzene	21.2	1.00	20.00	0	106	68.4	137	20.80	1.81	30	
Bromoform	18.9	2.00	20.00	0	94.4	66.5	132	18.89	0.0828	30	
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	61.3	146	19.64	2.61	30	
n-Propylbenzene	22.4	1.00	20.00	0	112	69.9	138	22.18	1.23	30	
Bromobenzene	22.0	1.00	20.00	0	110	68.6	132	21.68	1.52	30	
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	111	61.4	142	22.33	0.177	30	
2-Chlorotoluene	22.7	1.00	20.00	0	113	68.9	135	22.66	0.00781	30	
4-Chlorotoluene	21.9	1.00	20.00	0	109	68.1	136	21.34	2.40	30	
tert-Butylbenzene	22.3	1.00	20.00	0	111	67.3	137	21.35	4.24	30	
1,2,3-Trichloropropane	18.0	1.00	20.00	0	90.0	55	143	18.40	2.23	30	
1,2,4-Trichlorobenzene	20.3	2.00	20.00	0	102	72.1	129	18.53	9.14	30	
sec-Butylbenzene	22.2	1.00	20.00	0	111	65.1	143	21.03	5.62	30	
4-Isopropyltoluene	22.7	1.00	20.00	0	114	62.2	142	21.39	6.03	30	
1,3-Dichlorobenzene	20.5	1.00	20.00	0	102	77.6	123	20.03	2.27	30	
1,4-Dichlorobenzene	20.7	1.00	20.00	0	104	76.6	122	20.47	1.15	30	
n-Butylbenzene	22.5	1.00	20.00	0	112	75.2	133	20.96	7.04	30	
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	77	123	20.56	1.19	30	
1,2-Dibromo-3-chloropropane	16.6	1.00	20.00	0	83.2	56.8	145	16.50	0.862	30	
1,2,4-Trimethylbenzene	23.5	1.00	20.00	0	117	64.6	137	25.44	8.12	30	
Hexachloro-1,3-butadiene	16.5	4.00	20.00	0	82.4	71.9	131	14.16	15.2	30	
Naphthalene	19.9	1.00	20.00	0	99.3	64.1	144	18.16	8.93	30	
1,2,3-Trichlorobenzene	19.5	4.00	20.00	0	97.4	69	134	17.65	9.87	30	
Surr: Dibromofluoromethane	24.6		25.00		98.3	83.7	117		0		
Surr: Toluene-d8	24.6		25.00		98.5	87.6	113		0		
Surr: 1-Bromo-4-fluorobenzene	26.4		25.00		106	81.2	113		0		

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**2008119**
Logged by:	**Brianna Barnes**	Date Received:	**8/8/2020 1:20:00 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 Present	☐
6.	Was an attempt made to cool the samples?	Yes	☑	No ☐	NA	☐
7.	Were all items received at a temperature of >2°C to 6°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: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	3.8
Sample	4.1
Temp Blank	4.7

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

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 8/7/20 Page: 1 of: 1

Laboratory Project No (internal): 2008119

Special Remarks:

Project Name: Bethel Junction

Project No: 1246.030.03

Client: PES Environmental, Inc.

Address: 1215 4th Ave Suite 1350

Collected by: C. DeBoer

City, State, Zip: Seattle, WA 98161

Location: Port Orchard, WA

Telephone: (206) 529-3980

Report To (PM): Brian O'Neal

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax: (206) 529-3985

PM Email: boneal@pesenv.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)		HOLD	Comments
1	SB-33-0.5	8/7/20	1430	Soil															X	
2	SB-34-0.5		1440																X	
3	SB-35-3		1455																X	
4	SB-33-3		1500																X	
5	SB-33-6		1505																X	
6	W-DRUM-080720		1600																X	
7	TRIP BLANK	8/5/20	1728	—															X	
8																				
9																				
10																				

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x Chris DeBoer	8/8/20 0850	x [signature]	8/8/2020 1320
Relinquished	Date/Time	Received	Date/Time
x		x	

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 8/7/20 Page: 1 of: 1

Laboratory Project No (internal): 2008119

Project Name: Bethel Junction

Special Remarks:

Project No: 1240.030.03

Client: PES Environmental, Inc.

Collected by: C. DeBoer

Address: 1215 4th Ave Suite 1350

Location: Port Orchard, WA

City, State, Zip: Seattle, WA 98161

Report To (PM): Brian O'Neal

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Telephone: (206) 529-3980

PM Email: boneal@pesenv.com

Fax: (206) 529-3985

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) / Dissolved (D)	Anions (IC)***	EDB (8011)	RCRA 8 Metals	HOLD	Comments
1 SB-33-0.5	8/7/20	1430	Soil	X													X	ANALYZE AND 8/10/2020
2 SB-34-0.5		1440		X													X	
3 SB-35-3		1455		X												X	X	
4 SB-33-3		1500		X													X	
5 SB-33-6		1505		X													X	
6 W-DRUM-080720		1600	WS	X													X	Corrected — water sample
7 TRIP BLANK	8/5/20	1728	—	X													X	
8																		
9																		
10																		

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
Chris DeBoer	8/8/20 0850	Thomas	8/8/2020 1320
Relinquished	Date/Time	Received	Date/Time

Turn-around Time:
- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day ____ (specify)

Page 247 of 247

MEMORANDUM

TO: Project File **DATE:** October 13, 2020

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Gerrity Bethel Site - Data Validation

PROJECT #: 1246.030.04.003

TASK: EIM Data Validation Level EPA2A for August 2020 Sampling

LAB: Fremont Work Order: 2008119

Five soil samples and one drum water sample were collected as part of an ongoing sampling event at the Gerrity Bethel Site in Port Orchard, Washington. Samples were collected August 7, 2020. The samples were delivered to Fremont Analytical of Seattle, WA for laboratory analysis. Selected samples were analyzed for the following:

- Volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260D (GC/MS);
- Metal (arsenic, barium, cadmium, chromium, lead, selenium) by USEPA Method 6020B (ICP-MS);
- Mercury by USEPA Method 7471 (CVAA); and
- Percent Moisture by USEPA Method 8000D.

The quality assurance review on Fremont Work Order 2008119 are summarized below. The sampling event is ongoing and additional data validation reports are associated with this project.

DATA QUALIFICATIONS

Guidelines established by USEPA for a limited data validation review of analytical data along with Fremont Analytical (Fremont) control limit criteria 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 Superfund Organic Methods Data Review (USEPA, 2017) and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

All samples were collected and analyzed as requested with the following discussions:

- Sample SW-8-7 matrix type was corrected to water sample (WS) on the chain of custody by Pace. Metals (RCRA 8) analysis was requested on sample SB-35-3.

Sample Collection and Preservation

Samples were collected in laboratory-supplied sample containers preserved as appropriate for the individual analyses conducted. The samples were packed on ice in coolers and hand delivered by PES to the analytical laboratory. Cooler and samples were received at or below the EPA recommended preservation temperature of 6°C. No data were qualified based upon the sample collection and preservation information.

Holding Times

USEPA Method 8260D:
All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved soils and waters. All holding time criteria were met.

USEPA Methods 6020B and 7471:
All samples were analyzed within the USEPA recommended holding time for metals of 180 days for soils from the date of sample collection. The samples were analyzed within the USEPA recommended holding time for mercury of twenty-eight days for soils from the date of sample collection.

Moisture by USEPA Method 8000D:
Samples were analyzed within the USEPA recommended holding time of seven days for moisture content (%). 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 continuing calibration criteria did not meet acceptance criteria for the following:

- VOC CCV criteria are not met for several compounds and Fremont qualified associated results (Q). **Associated sample results for laboratory qualified (Q) compounds are considered estimated (J/UJ) because CCV acceptance criteria are not met.**

Method Blank Results

USEPA Methods 8260D:
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 reporting limits (RLs).

USEPA Methods 6020B and 7471:

Laboratory method blanks were included with the analytical batches per method requirement. The target analytes are not detected in the method blanks at or above the RL with the following exception:

- Chromium was detected at a low level in the method blank however no action is necessary since the chromium detection in the associated sample is greater than 10X the blank contamination.

Trip Blank Results

USEPA Method 8260D:
One trip blank was collected and analyzed. The target analytes are not detected in the trip blank at or above the RLs. No qualifications of the data are made due to the results of the trip blank analysis.

Field, Rinsate, or Equipment Blank Results

Field blank (field, rinsate, and equipment) quality control samples were not collected.

Field Duplicate Analyses

Field duplicates were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260D:
Laboratory duplicate samples were performed on client and on non-client samples associated with the analytical batches. The RPDs for VOCs are within the laboratory control limit of 30% RPD.

USEPA Methods 6020B and 7471:
Laboratory duplicate samples were performed on sample SB-35-3. The RPDs for metals are within the laboratory control limit of 30% RPD.

Total Solids by USEPA Method 8000D:
Laboratory duplicate sample analyses were not performed. No action was taken other than to note this.

Surrogate Recoveries

USEPA Methods 8260D:
The surrogate recovery results for the samples, laboratory duplicate samples, laboratory control samples, matrix spike samples, and blanks are within the laboratory surrogate control limits for all analyses.

Laboratory Control Samples

USEPA Method 8260D:
A laboratory control sample (LCS) was analyzed by USEPA Method 8260D method along with each analytical batch. The LCS %Rs for all target compounds (VOCs) are within the laboratory control criteria.

USEPA Methods 6020B and 7471:
An LCS was analyzed by the metal's methods along with each analytical batch. The LCS %Rs and for target compounds are within the laboratory control criteria.

Matrix Spike/Matrix Spike Duplicates

USEPA Methods 8260D:
Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on client sample SB-33-0.5 and on a non-client sample within the analytical batch. MS/MSD % Rs and RPDs are acceptable and within laboratory control limit criteria.

USEPA Methods 6020B and 7471:
MS/MSD analyses were performed on client sample SB-35-3. MS/MSD % Rs and RPDs are acceptable and within laboratory control limit criteria.

Other Quality Control Issues

No laboratory quality control issues were identified in the laboratory reports with the following discussion:

- Electronic data deliverables (EDDs) for these Work Orders were provided by the laboratory and data validator qualifiers were entered into the EDDs.

Compound Identification

No results are footnoted or qualified by the laboratory.

Quantitation Limits

The RLs used for this sample group are acceptable for the project. Selected targets (benzene, toluene, ethylbenzene, m,p-xylene, and o-xylene) are reported to the method detection limit (MDL). Several samples were diluted due to elevated concentrations of various target analytes. No action was taken other than to note this.

Sample SB-35-3 matrix spike sample internal standard for lead is outside of QC criteria. No action is taken since the internal standard recovery is acceptable for sample SB-35-3.

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, 2017); and
- USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2017).

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. All data, including qualified data, are judged to be acceptable for their intended use.

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:55:00 PM
Project: Bethel Junction
Lab ID: 2008119-003
Matrix: Soil
Client Sample ID: **SB-35-3**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29304 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloromethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Vinyl chloride	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromomethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Trichlorofluoromethane (CFC-11)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloroethane	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Methylene chloride	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
trans-1,2-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Methyl tert-butyl ether (MTBE)	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
cis-1,2-Dichloroethene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chloroform	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,1-Trichloroethane (TCA)	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1-Dichloropropene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Carbon tetrachloride	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichloroethane (EDC)	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Benzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Trichloroethene (TCE)	0.0598	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichloropropane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromodichloromethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Dibromomethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
cis-1,3-Dichloropropene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Toluene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
trans-1,3-Dichloropropylene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,2-Trichloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3-Dichloropropane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Tetrachloroethene (PCE)	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Dibromochloromethane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dibromoethane (EDB)	ND	0.00522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Chlorobenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,1,2-Tetrachloroethane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Ethylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
m,p-Xylene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
o-Xylene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Styrene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Isopropylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromoform	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,1,2,2-Tetrachloroethane	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM

Analytical Report

Work Order: **2008119**
Date Reported: **8/17/2020**

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 2:55:00 PM
Project: Bethel Junction
Lab ID: 2008119-003
Matrix: Soil
Client Sample ID: **SB-35-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 29304		Analyst: CR
n-Propylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Bromobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3,5-Trimethylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
2-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
4-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
tert-Butylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,3-Trichloropropane	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,4-Trichlorobenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
sec-Butylbenzene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
4-Isopropyltoluene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,3-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,4-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
n-Butylbenzene	ND	0.0261		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2-Dibromo-3-chloropropane	ND	0.522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,4-Trimethylbenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Hexachloro-1,3-butadiene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Naphthalene	ND	0.0522		mg/Kg-dry	1	8/11/2020 3:21:17 PM
1,2,3-Trichlorobenzene	ND	0.0209		mg/Kg-dry	1	8/11/2020 3:21:17 PM
Surr: Dibromofluoromethane	94.7	83.3 - 111		%Rec	1	8/11/2020 3:21:17 PM
Surr: Toluene-d8	95.1	87.9 - 111		%Rec	1	8/11/2020 3:21:17 PM
Surr: 1-Bromo-4-fluorobenzene	101	85.1 - 111		%Rec	1	8/11/2020 3:21:17 PM
Mercury by EPA Method 7471				Batch ID: 29354		Analyst: TN
Mercury	ND	0.275		mg/Kg-dry	1	8/14/2020 1:22:42 PM
Total Metals by EPA Method 6020B				Batch ID: 29315		Analyst: WC
Arsenic	2.64	0.205		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Barium	58.9	0.411		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Cadmium	ND	0.164		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Chromium	29.7	0.0822	~~B~~	mg/Kg-dry	1	8/12/2020 4:49:34 PM
Lead	3.35	0.822	D	mg/Kg-dry	5	8/13/2020 2:09:51 PM
Selenium	0.684	0.411		mg/Kg-dry	1	8/12/2020 4:49:34 PM
Silver	0.107	0.0822		mg/Kg-dry	1	8/12/2020 4:49:34 PM

NOTES:
B - Detection in sample is 10x greater than detection in Method Blank. No further action required.

Analytical Report

Work Order: **2008119**
Date Reported: **8/17/2020**

Client: PES Environmental, Inc.
Project: Bethel Junction
Lab ID: 2008119-003
Client Sample ID: **SB-35-3**

Collection Date: 8/7/2020 2:55:00 PM
Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R61093		Analyst: EH
Percent Moisture	9.17	0.500		wt%	1	8/11/2020 9:35:15 AM

JC 10/13/2020

Client: PES Environmental, Inc.
Collection Date: 8/7/2020 4:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-006
Matrix: Water
Client Sample ID: **W-DRUM-080720**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29319 Analyst: KT

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloromethane	ND	UJ	20.0	DQ	µg/L	10	8/12/2020 3:20:52 PM
Vinyl chloride	ND		2.00	D	µg/L	10	8/12/2020 3:20:52 PM
Bromomethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Trichlorofluoromethane (CFC-11)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloroethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloroethene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Methylene chloride	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
trans-1,2-Dichloroethene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Methyl tert-butyl ether (MTBE)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloroethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
cis-1,2-Dichloroethene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Chloroform	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,1-Trichloroethane (TCA)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1-Dichloropropene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Carbon tetrachloride	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichloroethane (EDC)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Benzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Trichloroethene (TCE)	ND		5.00	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichloropropane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromodichloromethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Dibromomethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
cis-1,3-Dichloropropene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Toluene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
trans-1,3-Dichloropropylene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,2-Trichloroethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3-Dichloropropane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Tetrachloroethene (PCE)	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Dibromochloromethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dibromoethane (EDB)	ND		2.50	D	µg/L	10	8/12/2020 3:20:52 PM
Chlorobenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,1,2-Tetrachloroethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Ethylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
m,p-Xylene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
o-Xylene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Styrene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Isopropylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromoform	ND		20.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,1,2,2-Tetrachloroethane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM

Client: PES Environmental, Inc. **Collection Date:** 8/7/2020 4:00:00 PM
Project: Bethel Junction
Lab ID: 2008119-006 **Matrix:** Water
Client Sample ID: W-DRUM-080720

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 29319 Analyst: KT

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
n-Propylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Bromobenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3,5-Trimethylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
2-Chlorotoluene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
4-Chlorotoluene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
tert-Butylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,3-Trichloropropane	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,4-Trichlorobenzene	ND		20.0	D	µg/L	10	8/12/2020 3:20:52 PM
sec-Butylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
4-Isopropyltoluene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,3-Dichlorobenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,4-Dichlorobenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
n-Butylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dichlorobenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2-Dibromo-3-chloropropane	ND	UJ	10.0	DQ	µg/L	10	8/12/2020 3:20:52 PM
1,2,4-Trimethylbenzene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
Hexachloro-1,3-butadiene	ND		40.0	D	µg/L	10	8/12/2020 3:20:52 PM
Naphthalene	ND		10.0	D	µg/L	10	8/12/2020 3:20:52 PM
1,2,3-Trichlorobenzene	ND		40.0	D	µg/L	10	8/12/2020 3:20:52 PM
Surr: Dibromofluoromethane	90.3		83.7 - 117	D	%Rec	10	8/12/2020 3:20:52 PM
Surr: Toluene-d8	97.3		87.6 - 113	D	%Rec	10	8/12/2020 3:20:52 PM
Surr: 1-Bromo-4-fluorobenzene	99.3		81.2 - 113	D	%Rec	10	8/12/2020 3:20:52 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

JC 10/13/2020

APPENDIX C

WASTE DISPOSAL

BRAVO environmental

WORK ORDER № 39755

Order Date: 8/19/15
Required Date: ↓
Work Date:

Ordered by: Wyser Const.
Company:
19015 109th Ave SE
Snohomish

Location:
Wyser Const. - Port Orchard
3377 Bethel Rd SE #103
Port Orchard

Phone: (425) 742-0898
Job: D030597
PO #: 31357

Site Phone: (206) 678-5122
Site Contact: Darren

Service Description
Pick up Vac Box and haul dirt ~~to~~ to wenatchee.

Notes:

Start Travel: 0715 am/pm **Start Job:** 0815 am/pm **Finish Job:** 0830 am/pm **Finish off-loading:** 1445 ~~1730~~ am/pm **Stop Travel:** 1930 am/pm

Disposal Site:		**Estimated Tons:**		**Receipt # for Disposal:**	737595
Decant Site:	WM	**Estimated Gallons:**		**Water District:**	
Truck:	Full (Empty)	**Laborer:**		**Estimated Gallons:**	
		Operator:	Reilly	**Truck Number:**	B-24

Rates, prevailing wage: ☐
Rates Non-prevailing wage: ☒
3 hour minimum, portal to portal

Signature: _____ **Signed by:** _____

Signature above acknowledges approval of all work completed as stated on this work order:

Payment Terms: Net 30, all overdue accounts will be charged 1.5% monthly

6437 South 144th Street • Tukwila, WA 98168 • phone: 425.424.9000 • fax: 425.424.9002 • toll free: 888.BRAVO44
www.BravoEnvironmental.com

WASTE MANAGEMENT

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 737595

Ph: (509) 884-2802

D030597

Customer Name WYSERCONSTRUCTION WYSER CONST
Ticket Date 08/19/2015
Payment Type Credit Account
Manual Ticket#
Route
Hauling Ticket#
Destination
PO# PES-15-1426

Carrier bravo env
Vehicle# 24
Container
Driver
Check#
Billing# 0508160
Grid

Volume

	Time	Scale	Operator	Inbound		
In	08/19/2015 13:45:10	Inbound	cmorris		Gross	62340 lb
Out	08/19/2015 14:42:36	Outbound	cmorris		Tare	47060 lb
					Net	15280 lb
					Tons	7.64

Comments

I acknowledge I have no hazardous materials.

	Product	LD%	Qty	UOM	Rate	Tax	Amount	Origin
1	Spwaste Solid Oth-Tons-S	100	7.64	Tons	25.88	7.12	$197.72	PIERCE
2	FEA FEE-VARIABLE FUEL EN	100	7.64	Tons	2.58		$19.71	PIERCE
3	CDHD FEE-Chelan Douglas	100	7.64	Tons	1.00		$7.64	PIERCE

Total Tax $7.12
Total Ticket $232.19

Driver's Signature

203WM

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

July 20, 2015

Gerrity Atlantic Retail Partners II, Inc.
Attention: Mr. John Waters
c/o Gerrity Group, LLC
977 Lomas Santa Fe Drive, Suite A
Solana Beach, CA 92075

Re: Contained-in Determination for Contaminated Soils from Suite #103, Bethel Junction Shopping Center Property, 3377 Bethel Road SE, Port Orchard, WA (Ecology Facility/Site ID: 28514228/VCP No. NW0568)

Reference: 1. Letter Report from Kelly L. Rankich, PE, PES Environmental, Inc. to B. Maeng, Department of Ecology, dated July 2, 2015; 2. Figure 2, Soil Boring Locations, PES Environmental, received July 14, 2015.

Dear Mr. Waters:

The Washington State Department of Ecology (Ecology) received a contained-in determination request from your environmental consultant, PES Environmental, for six cubic yards of F002 listed waste contaminated soils generated during trenching activities July 6 and 7, 2015, at the Bethel Junction Shopping Center property located at 3377 Bethel Road SE in Port Orchard, WA. Analytical data and the supplemental information were submitted to Ecology to determine if these soils contaminated with F002 listed dangerous waste constituents may be exempt from management as dangerous wastes per the "Contained-In Policy"[1].

This contained-in determination letter only applies to the six cubic yards of soil described above. Ecology understands that these contaminated soils do not designate under federal characteristics (WAC 173-303-090) or State-only criteria (WAC 173-303-100).

Based on the information received and reviewed, Ecology has determined that the six cubic yards of soils are contaminated with F002 listed dangerous waste constituents at concentrations that do not warrant management as dangerous wastes, and Ecology will not require disposal of these soils as listed dangerous wastes at a RCRA permitted dangerous waste treatment, storage and disposal (TSD) facility, provided that all of the following conditions are implemented. This contained-in determination applies only to

[1] Washington State Department of Ecology Contained-in Policy, dated February 19, 1993

the contaminated soils, and does not pertain to contaminated water or any mixture of contaminated soils and drilling fluids. See attached Figure 2.

You or your environmental consultant, PES shall:

- Ensure that **no standing water** is present **within the container(s)** holding the contaminated soils. All water must be removed to the maximum extent possible from each of the drums and managed as F002 dangerous wastes. The contaminated groundwater should be removed from the contaminated soils prior to shipment to the landfill. Contaminated water cannot be disposed of into a RCRA Subtitle D (or C) landfill directly;

- This Ecology approval letter does not pertain to any decontamination water or groundwater;

- Directly deliver the soils to a solid waste landfill permitted under WAC 173-351 in Washington State, such as Roosevelt Regional Landfill in Klickitat County or Greater Wenatchee Landfill in East Wenatchee, or a landfill permitted under RCRA Subtitle D outside the Washington State, such as Columbia Ridge Landfill in Arlington, OR. The containers can be sent to the rail loading area, but contaminated soils **shall not** be offloaded from containers to the ground (creating a contaminated soil/concrete pile) at the transfer facility.

- Do not consolidate these contaminated soils with other soils that do not pertain to this contained in determination;

- Dispose of the contaminated soils at a permitted solid waste landfill by **September 4, 2015**. This contained-in determination letter is no longer valid after **September 4, 2015,** and the contaminated soils must be managed as dangerous wastes after this date;

- Notify Ecology before disposal of the soil if the amount exceeds the approved amount in this letter. Ecology needs to make sure that the additional soil qualifies for this contained-in determination;

- These contaminated soils shall not be used as fill at the Site or any other Property.

- Take measures to prevent unauthorized contact with these soils at all times;

- Plastic line the containers or delivery trucks for direct delivery to the solid waste landfill;

- During transport, take adequate measures to prevent spills and dispersion due to wind erosion;

- Provide instructions to the landfill operator that these soils are not to be used for daily, intermediate, or final cover;

- Provide copies of all soil analytical data to the landfill operator, upon request; and

- Do not send these contaminated soils to any incinerator, thermal desorption unit or recycling facility unless that facility is a RCRA Subtitle C permitted dangerous waste TSD facility.

- Send copies of all signed solid waste landfill receipt records for these contaminated soils to Ecology, attention of Dean Yasuda, within 15 days of your receipt. Also indicate the total volume/weight of all contaminated soils disposed of under the Ecology approved contained-in determination, and indicate if this total amount is above, below or equal to the total amount approved by this Ecology letter. This is an important verification step for you and your environmental consultant to follow in order for this Ecology decision to be valid.

- This written decision for the contaminated soils does not apply to any other area or other media. Local agencies have the authority to impose additional requirements on this waste stream.

Ecology issued this determination based on the information provided and reviewed to date. This written decision only applies to the six cubic yards of soils generated during the trenching activities, and does not apply to any other area or other media. Any data used for this contained-in determination is intended for use in determining the proper disposal of the six cubic yards of soils according to the Washington State Dangerous Waste Regulations (Chapter 173-30 WAC) and Ecology Contained-in Policy.

This letter is not a No Further Action (NFA) letter and not written approval for any cleanup action plan you may have submitted. Instead, this letter only addresses the procedures for disposal of the contaminated soils according to the Washington State Dangerous Waste Regulations (Chapter 173-303 WAC). Regulatory decisions regarding the cleanup action, applicable soil and groundwater cleanup levels and any other cleanup issues must comply with the requirements under Ecology Model Toxics Control Act (Chapter 173-340 WAC).

If you fail to comply with the terms of this letter, Ecology may issue an administrative order and/or penalty as provided by the Revised Code of Washington, Sections 70.105.080 and/or .095 (Hazardous Waste Management Act).

If you have any questions concerning this letter, please feel free to contact me at (425) 649-7264 or by email at dyas461@ecy.wa.gov.

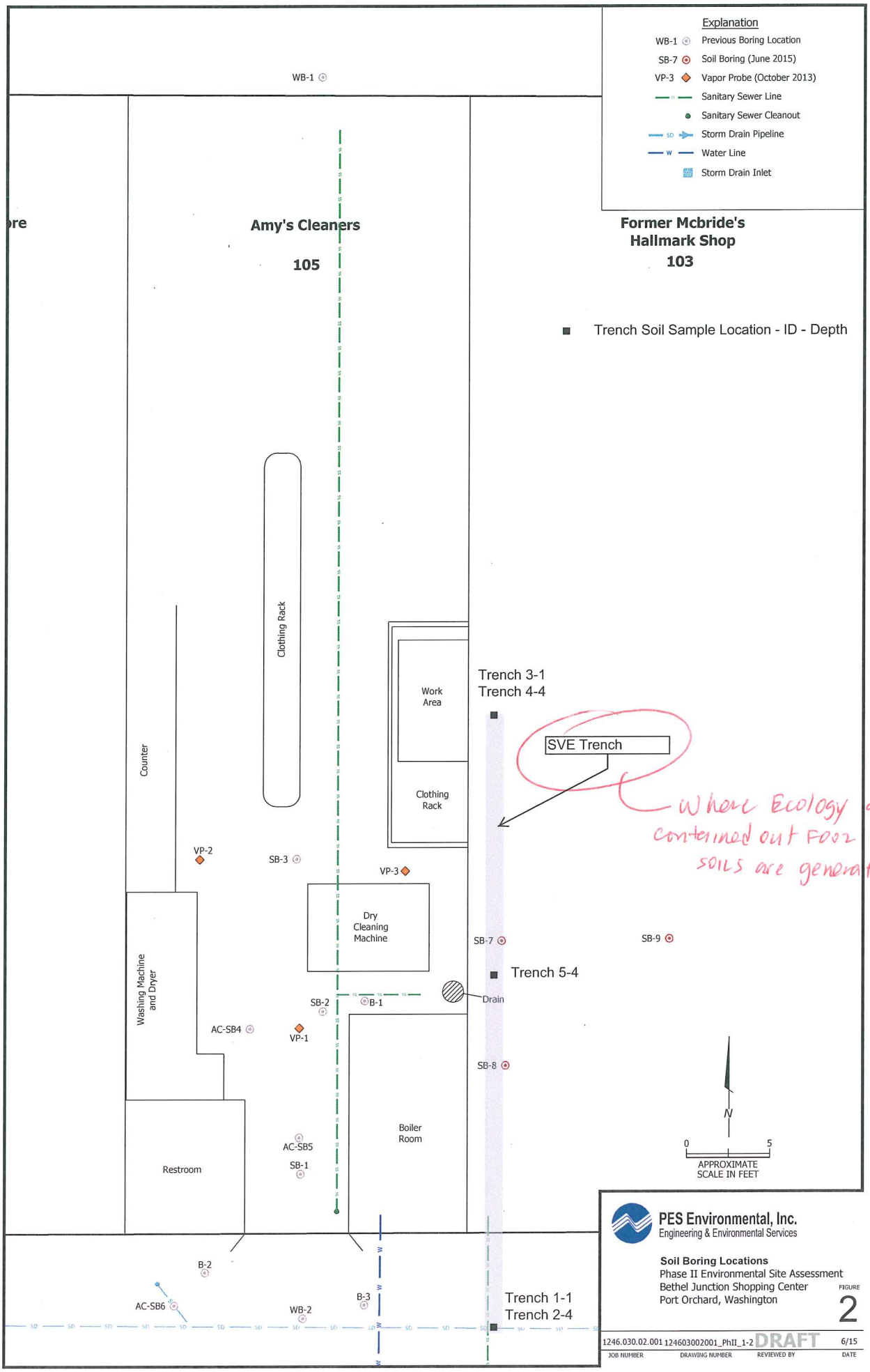
Sincerely,

Dean Yasuda

Dean Yasuda, P.E.
Hazardous Waste and Toxics Reduction Program

By certified mail: 9171 9690 0935 0088 4629 57

e-cc: Lisa Brown, Ecology-ERO
Greg Caron, Ecology-CRO
Byung Maeng, Ecology-NWRO
Chuck Hoffman, Ecology-SWRO
Mindy Collins, Ecology-BFO
Kelly Rankich, Project Engineer, PES Environmental, Inc., krankich@pesenv.com
DW File:



Where Ecology approved contained out Food listed DW soils are generated

DG

PES Environmental, Inc.
Engineering & Environmental Services

Soil Boring Locations
Phase II Environmental Site Assessment
Bethel Junction Shopping Center
Port Orchard, Washington

FIGURE 2

1246.030.02.001	124603002001_PhII_1-2	DRAFT	6/15
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

455122

CWMI

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
WAH000053236	1	(800)424-9300	016212089 JJK

GENERATOR

5. Generator's Name and Mailing Address
BETHEL GRF2 LLC
3377 BETHEL ROAD SE
PORT ORCHARD WA 98366
Generator's Phone: (206)529-3980

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: NRC
U.S. EPA ID Number: CAR000003114

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709
Facility's Phone: (541)454-2643
U.S. EPA ID Number: ORD089452353

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., III, (SLUDGE CONTAMINATED WITH PCE)	1	TT	2,100	G	F002
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. PROFILE OR329390: PCE-CONTAMINATED SLUDGE; ERG = 171
1948 G

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Amanda Payne on behalf of Gerrity | Signature | Month 8 | Day 2 | Year 17

INTL

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: DALE MUCK | Signature | Month 8 | Day 3 | Year 17

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H132			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Paula Hammack | Signature | Month 8 | Day 4 | Year 17

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

8/8

Chemical Waste Management
Of The Northwest

17629 Cedar Springs Lane
Arlington, Oregon 97812
541-454-2643
EPA I.D.# ORD089452353

LOAD NO. 455122 8.5

MANIFEST DOC. NO. 2009
PB

INBOUND
T/D: 13:09:01 2017-08-04
ID: 455122 TRK ID: 2058
43920 lb G

OUTBOUND
T/D: 15:06:48 2017-08-04
ID: 455122 TRK ID: 2058
43920 lb G
27360 lb PT
16560 lb N

NET 8.28 TONS

1948 G

GENERATOR _____

903-ARLINGTON OR

WASTE MANAGEMENT

Chemical Waste Management, Inc
Waste Analysis Report

Lab Sample ID: ARL-17-5379
Generator: BETHEL GRF2 LLC
Sampled Date: 8/4/2017
Profile: OR329390
Sampled By: BSHANNON
Load: 000455122
Receipt Type: RS
Line #: 01
Tracking / SU #:
Reviewer's Initials/Date: 8-4-17
Waste Name: STAB15-PCE-CONTAMINATED SLUDGE
Sample Source: TANKER

Analyte	Result	Qual	LOQ	Units	Date Analyzed	Analyst
FINGERPRINT						
Layer #	1			-	8/4/2017	SSMITH67
Layer Percentage	100			%	8/4/2017	SSMITH67
Physical State	Liquid			-	8/4/2017	SSMITH67
Color	BROWN			-	8/4/2017	SSMITH67
Turbidity	Opaque			-	8/4/2017	SSMITH67
Viscosity	Low Viscosity			-	8/4/2017	SSMITH67
Is liquid matrix readable by pH meter?	Yes			-	8/4/2017	SSMITH67
pH Meter	4.79			-	8/4/2017	SSMITH67
Water Mix Temp Change	0			°C	8/4/2017	SSMITH67
Water Mix Observations	NRTW		0.0000	-	8/4/2017	SSMITH67
Flammability Potential	Negative			-	8/4/2017	SSMITH67
Sulfide Screen	Negative			-	8/4/2017	SSMITH67
Prussian Blue CN Screen	Negative		0.0000	-	8/4/2017	SSMITH67
Spec Grav - lb/gallon	8.5			lbs/G	8/4/2017	SSMITH67

Unless otherwise noted, the testing data above was produced by the CWM of the Northwest laboratory in accord with the requirements of the Waste Analysis Plan and laboratory quality assurance program.

Sample Consistent with Profile: Yes

Final Disposal Process and Location Solidification and then Landfill by Procedure 4

Comments, if applicable: N/A

040-044-10
5524

OLYMPIC VIEW TRANSFER STATION
BILL OF LADING

KITSAP COUNTY PUBLIC WORKS
OLYMPIC VIEW TRANSFER STATION
360-337-5777

TICKET# 1221495
ACCT: 1361
BILL TO: WM OVTS
TRUCK: SHR 2

DATE: 10/12/18
TIME IN: 08:32 AM
TIME OUT: 09:28 AM
OPERATOR: DAH

GR: 53240 TR: 25180 NET: 28060
ADJUSTED NET LBS: 28
TONS: 26.62 TR: 12.59 NET: 14.0

NET WEIGHT 28060 @
RATE: /TN OR .0375/LB

CS2

TIP FEE:
SPEC FEE:
TAX FEE:
TOTAL FEE:
TENDERED:
CHANGE:

PAYMENT:

NOTE:

☒ CS-2 ☐ Pre-Pack

Generator Name & Address	Billing Name & Address
BETHEL GRF2, LLC 3377 BETHEL RD SE PORT ORCHARD WA 98366	IO ENVIRONMENTAL AND INFRASTRUCTURE, INC 14734 NE REDMOND WA 98052 VIA WM SALES
Contact: JOHN WATERS	***Contact:*** SCOT OVERDICK
Phone: (858)369-7004	***Phone:*** (425)497-9896
Alt: (EMAIL) jwaters@gerritygroup.com	***Alt:*** (EMAIL) scoto@iosdv.com

Acknowledgement of Loading

Ben HUBBARD — Name (Please Print)
SHEARER — Company
Signature
10/12/18 — Date

Deliver To	Disposal Facility
Olympic View Transfer Station 9300 SW Barney White Road Bremerton, WA 98312 (360) 674-2297, M-F 8:00am - 5:00 pm	Columbia Ridge Landfill & Recycling Center 18177 Cedar Springs Lane Arlington, OR 97812 (541) 454-2030

Transporter Name

Transporter Name: Ben HUBBARD
Truck #: S-2
Container#: WMXU-

Waste Profile Information

Waste Profile #: 127912OR
Waste Type: ☐ Asbestos ☐ Demo ☒ MSW
Other: CS2
Expiration Date: 07/27/2019

Weight

Gross: 53240 ***Tare:*** 25180 ***Net:*** 28060 ***Tons:*** 26.62

Signature

Ben HUBBARD
Drivers Name (Please Print)
Drivers Signature
10-12-18
Date

040-044-10
5524

OLYMPIC VIEW TRANSFER STATION
BILL OF LADING

☒ CS-2 ☐ Pre-Pack

Generator Name & Address	Billing Name & Address
BETHEL GRF2, LLC 3377 BETHEL RD SE PORT ORCHARD WA 98366	IO ENVIRONMENTAL AND INFRASTRUCTURE, INC 14734 NE REDMOND WA 98052 VIA WM SALES
Contact: JOHN WATERS ***Phone:*** (858)369-7004 ***Alt:*** (EMAIL) jwaters@gerritygroup.com	***Contact:*** SCOT OVERDICK ***Phone:*** (425)497-9896 ***Alt:*** (EMAIL) scoto@iosdv.com

KITSAP COUNTY PUBLIC WORKS
OLYMPIC VIEW TRANSFER STATION
360-337-5777

TICKET# 1221531
ACCT: 1361
BILL TO: WM OVTS
TRUCK: S-2

DATE: 10/12/18
TIME IN: 10:09 AM
TIME OUT: 10:17 AM
OPERATOR: DAH

GR: 48040 TR: 25140 NET: 22900
ADJUSTED NET LBS: 229
TONS: 24.02 TR: 12.57 NET: 11.45

NET WEIGHT 22900 @
RATE: /TN OR .0375/LB

Contaminated Soils

TIP FEE:
SPEC FEE:
TAX FEE:
TOTAL FEE:
TENDERED:
CHANGE:

PAYMENT:

NOTE:

Acknowledgement of Loading

Ben HUBBARD — Name (Please Print)
SHEARER — Company
Signature
10/12/18 — Date

Deliver To	Disposal Facility
Olympic View Transfer Station 9300 SW Barney White Road Bremerton, WA 98312 (360) 674-2297, M-F 8:00am - 5:00 pm	Columbia Ridge Landfill & Recycling Center 18177 Cedar Springs Lane Arlington, OR 97812 (541) 454-2030

Transporter Name

Transporter Name: Ben HUBBARD
Truck #: S-2
Container#: WMXU-

Waste Profile Information

Waste Profile #: 127912OR
Waste Type: ☐ Asbestos ☐ Demo ☒ MSW
Other: CS2
Expiration Date: 07/27/2019

Weight

Gross: 48040 ***Tare:*** 25140 ***Net:*** 22900 ***Tons:*** 24.02

Signature

Ben HUBBARD
Drivers Name (Please Print)
Drivers Signature
10-12-18
Date

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

PES Environmental, Inc.
Matt Dahl
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Work Order Number: 1806246

June 27, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 10 sample(s) on 6/20/2018 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

Date: *06/27/2018*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 1806246

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1806246-001	SB-27-2.5	06/20/2018 12:50 PM	06/20/2018 3:39 PM
1806246-002	SB-28-2	06/20/2018 12:40 PM	06/20/2018 3:39 PM
1806246-003	SB-29-3	06/20/2018 11:50 AM	06/20/2018 3:39 PM
1806246-004	SB-30-2	06/20/2018 11:40 AM	06/20/2018 3:39 PM
1806246-005	SB-31-2	06/20/2018 12:33 PM	06/20/2018 3:39 PM
1806246-006	SB-32-2	06/20/2018 11:20 AM	06/20/2018 3:39 PM
1806246-007	SB-33-4.5	06/20/2018 12:25 PM	06/20/2018 3:39 PM
1806246-008	SB-34-3	06/20/2018 12:10 PM	06/20/2018 3:39 PM
1806246-009	SB-35-2	06/20/2018 10:00 AM	06/20/2018 3:39 PM
1806246-010	Trip Blank	06/12/2018 1:47 PM	06/20/2018 3:39 PM

Case Narrative

WO#: **1806246**
Date: **6/27/2018**

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:** 6/20/2018 12:50:00 PM
Project: Bethel Junction
Lab ID: 1806246-001 **Matrix:** Soil
Client Sample ID: **SB-27-2.5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Chloromethane	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Vinyl chloride	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Bromomethane	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Trichlorofluoromethane (CFC-11)	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Chloroethane	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1-Dichloroethene	ND	0.0225	Q	mg/Kg-dry	1	6/26/2018 5:38:08 AM
Methylene chloride	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
trans-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Methyl tert-butyl ether (MTBE)	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1-Dichloroethane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
2,2-Dichloropropane	ND	0.112		mg/Kg-dry	1	6/26/2018 5:38:08 AM
cis-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Chloroform	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1,1-Trichloroethane (TCA)	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Carbon tetrachloride	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2-Dichloroethane (EDC)	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Benzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Trichloroethene (TCE)	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2-Dichloropropane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Bromodichloromethane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Dibromomethane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
cis-1,3-Dichloropropene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Toluene	0.205	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
trans-1,3-Dichloropropylene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1,2-Trichloroethane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,3-Dichloropropane	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Tetrachloroethene (PCE)	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Dibromochloromethane	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2-Dibromoethane (EDB)	ND	0.00562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Chlorobenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,1,1,2-Tetrachloroethane	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Ethylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
m,p-Xylene	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
o-Xylene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Styrene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Isopropylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Bromoform	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM

Analytical Report

Work Order: **1806246**
Date Reported: **6/27/2018**

Client: PES Environmental, Inc.
Collection Date: 6/20/2018 12:50:00 PM
Project: Bethel Junction
Lab ID: 1806246-001
Matrix: Soil
Client Sample ID: **SB-27-2.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 21063		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
n-Propylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Bromobenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,3,5-Trimethylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
2-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
4-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
tert-Butylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2,3-Trichloropropane	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2,4-Trichlorobenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
sec-Butylbenzene	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
4-Isopropyltoluene	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,3-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,4-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
n-Butylbenzene	ND	0.0281		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2-Dibromo-3-chloropropane	ND	0.562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2,4-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Hexachlorobutadiene	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Naphthalene	ND	0.0562		mg/Kg-dry	1	6/26/2018 5:38:08 AM
1,2,3-Trichlorobenzene	ND	0.0225		mg/Kg-dry	1	6/26/2018 5:38:08 AM
Surr: Dibromofluoromethane	97.0	56.5 - 129		%Rec	1	6/26/2018 5:38:08 AM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	6/26/2018 5:38:08 AM
Surr: 1-Bromo-4-fluorobenzene	97.0	43.2 - 143		%Rec	1	6/26/2018 5:38:08 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)				Batch ID: R44195		Analyst: NG
Percent Moisture	18.6	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:40:00 PM
Project: Bethel Junction
Lab ID: 1806246-002 **Matrix:** Soil
Client Sample ID: **SB-28-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Chloromethane	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Vinyl chloride	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Bromomethane	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Trichlorofluoromethane (CFC-11)	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Chloroethane	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1-Dichloroethene	ND	0.0189	Q	mg/Kg-dry	1	6/26/2018 6:09:05 AM
Methylene chloride	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
trans-1,2-Dichloroethene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Methyl tert-butyl ether (MTBE)	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1-Dichloroethane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
2,2-Dichloropropane	ND	0.0943		mg/Kg-dry	1	6/26/2018 6:09:05 AM
cis-1,2-Dichloroethene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Chloroform	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1,1-Trichloroethane (TCA)	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1-Dichloropropene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Carbon tetrachloride	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2-Dichloroethane (EDC)	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Benzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Trichloroethene (TCE)	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2-Dichloropropane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Bromodichloromethane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Dibromomethane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
cis-1,3-Dichloropropene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Toluene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
trans-1,3-Dichloropropylene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1,2-Trichloroethane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,3-Dichloropropane	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Tetrachloroethene (PCE)	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Dibromochloromethane	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2-Dibromoethane (EDB)	ND	0.00472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Chlorobenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,1,1,2-Tetrachloroethane	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Ethylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
m,p-Xylene	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
o-Xylene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Styrene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Isopropylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Bromoform	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM

Analytical Report

Work Order: **1806246**
Date Reported: **6/27/2018**

Client: PES Environmental, Inc.
Collection Date: 6/20/2018 12:40:00 PM
Project: Bethel Junction
Lab ID: 1806246-002
Matrix: Soil
Client Sample ID: **SB-28-2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 21063		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
n-Propylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Bromobenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,3,5-Trimethylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
2-Chlorotoluene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
4-Chlorotoluene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
tert-Butylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2,3-Trichloropropane	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2,4-Trichlorobenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
sec-Butylbenzene	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
4-Isopropyltoluene	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,3-Dichlorobenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,4-Dichlorobenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
n-Butylbenzene	ND	0.0236		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2-Dichlorobenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2-Dibromo-3-chloropropane	ND	0.472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2,4-Trimethylbenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Hexachlorobutadiene	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Naphthalene	ND	0.0472		mg/Kg-dry	1	6/26/2018 6:09:05 AM
1,2,3-Trichlorobenzene	ND	0.0189		mg/Kg-dry	1	6/26/2018 6:09:05 AM
Surr: Dibromofluoromethane	97.2	56.5 - 129		%Rec	1	6/26/2018 6:09:05 AM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	6/26/2018 6:09:05 AM
Surr: 1-Bromo-4-fluorobenzene	96.5	43.2 - 143		%Rec	1	6/26/2018 6:09:05 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)				Batch ID: R44195		Analyst: NG
Percent Moisture	11.8	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 11:50:00 AM
Project: Bethel Junction
Lab ID: 1806246-003 **Matrix:** Soil
Client Sample ID: **SB-29-3**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Chloromethane	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Vinyl chloride	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Bromomethane	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Chloroethane	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1-Dichloroethene	ND	0.0214	Q	mg/Kg-dry	1	6/25/2018 10:57:06 PM
Methylene chloride	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
trans-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1-Dichloroethane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
2,2-Dichloropropane	ND	0.107		mg/Kg-dry	1	6/25/2018 10:57:06 PM
cis-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Chloroform	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Carbon tetrachloride	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2-Dichloroethane (EDC)	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Benzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Trichloroethene (TCE)	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2-Dichloropropane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Bromodichloromethane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Dibromomethane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
cis-1,3-Dichloropropene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Toluene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
trans-1,3-Dichloropropylene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1,2-Trichloroethane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,3-Dichloropropane	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Tetrachloroethene (PCE)	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Dibromochloromethane	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2-Dibromoethane (EDB)	ND	0.00535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Chlorobenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,1,1,2-Tetrachloroethane	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Ethylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
m,p-Xylene	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
o-Xylene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Styrene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Isopropylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Bromoform	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM

Analytical Report

Work Order: **1806246**
Date Reported: **6/27/2018**

Client: PES Environmental, Inc.
Collection Date: 6/20/2018 11:50:00 AM
Project: Bethel Junction
Lab ID: 1806246-003
Matrix: Soil
Client Sample ID: **SB-29-3**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 21063		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
n-Propylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Bromobenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,3,5-Trimethylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
2-Chlorotoluene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
4-Chlorotoluene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
tert-Butylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2,3-Trichloropropane	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2,4-Trichlorobenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
sec-Butylbenzene	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
4-Isopropyltoluene	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,3-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,4-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
n-Butylbenzene	ND	0.0267		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2-Dibromo-3-chloropropane	ND	0.535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2,4-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Hexachlorobutadiene	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Naphthalene	ND	0.0535		mg/Kg-dry	1	6/25/2018 10:57:06 PM
1,2,3-Trichlorobenzene	ND	0.0214		mg/Kg-dry	1	6/25/2018 10:57:06 PM
Surr: Dibromofluoromethane	97.3	56.5 - 129		%Rec	1	6/25/2018 10:57:06 PM
Surr: Toluene-d8	98.3	64.5 - 151		%Rec	1	6/25/2018 10:57:06 PM
Surr: 1-Bromo-4-fluorobenzene	97.4	43.2 - 143		%Rec	1	6/25/2018 10:57:06 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)				Batch ID: R44195		Analyst: NG
Percent Moisture	16.7	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 11:40:00 AM
Project: Bethel Junction
Lab ID: 1806246-004 **Matrix:** Soil
Client Sample ID: **SB-30-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Chloromethane	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Vinyl chloride	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Bromomethane	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Chloroethane	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1-Dichloroethene	ND	0.0188	Q	mg/Kg-dry	1	6/25/2018 11:58:44 PM
Methylene chloride	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
trans-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1-Dichloroethane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
2,2-Dichloropropane	ND	0.0938		mg/Kg-dry	1	6/25/2018 11:58:44 PM
cis-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Chloroform	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1-Dichloropropene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Carbon tetrachloride	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2-Dichloroethane (EDC)	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Benzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Trichloroethene (TCE)	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2-Dichloropropane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Bromodichloromethane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Dibromomethane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
cis-1,3-Dichloropropene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Toluene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
trans-1,3-Dichloropropylene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1,2-Trichloroethane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,3-Dichloropropane	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Tetrachloroethene (PCE)	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Dibromochloromethane	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2-Dibromoethane (EDB)	ND	0.00469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Chlorobenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Ethylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
m,p-Xylene	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
o-Xylene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Styrene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Isopropylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Bromoform	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 11:40:00 AM
Project: Bethel Junction
Lab ID: 1806246-004 **Matrix:** Soil
Client Sample ID: **SB-30-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
n-Propylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Bromobenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,3,5-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
2-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
4-Chlorotoluene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
tert-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2,3-Trichloropropane	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2,4-Trichlorobenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
sec-Butylbenzene	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
4-Isopropyltoluene	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
n-Butylbenzene	ND	0.0234		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2-Dibromo-3-chloropropane	ND	0.469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Hexachlorobutadiene	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Naphthalene	ND	0.0469		mg/Kg-dry	1	6/25/2018 11:58:44 PM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/25/2018 11:58:44 PM
Surr: Dibromofluoromethane	96.7	56.5 - 129		%Rec	1	6/25/2018 11:58:44 PM
Surr: Toluene-d8	98.2	64.5 - 151		%Rec	1	6/25/2018 11:58:44 PM
Surr: 1-Bromo-4-fluorobenzene	97.9	43.2 - 143		%Rec	1	6/25/2018 11:58:44 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)

Batch ID: R44195 Analyst: NG

Percent Moisture	9.42	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:33:00 PM
Project: Bethel Junction
Lab ID: 1806246-005 **Matrix:** Soil
Client Sample ID: **SB-31-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Chloromethane	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Vinyl chloride	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Bromomethane	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Trichlorofluoromethane (CFC-11)	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Chloroethane	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1-Dichloroethene	ND	0.0190	Q	mg/Kg-dry	1	6/26/2018 12:29:37 AM
Methylene chloride	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
trans-1,2-Dichloroethene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Methyl tert-butyl ether (MTBE)	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1-Dichloroethane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
2,2-Dichloropropane	ND	0.0951		mg/Kg-dry	1	6/26/2018 12:29:37 AM
cis-1,2-Dichloroethene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Chloroform	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1,1-Trichloroethane (TCA)	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1-Dichloropropene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Carbon tetrachloride	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2-Dichloroethane (EDC)	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Benzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Trichloroethene (TCE)	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2-Dichloropropane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Bromodichloromethane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Dibromomethane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
cis-1,3-Dichloropropene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Toluene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
trans-1,3-Dichloropropylene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1,2-Trichloroethane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,3-Dichloropropane	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Tetrachloroethene (PCE)	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Dibromochloromethane	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2-Dibromoethane (EDB)	ND	0.00476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Chlorobenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,1,1,2-Tetrachloroethane	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Ethylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
m,p-Xylene	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
o-Xylene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Styrene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Isopropylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Bromoform	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:33:00 PM
Project: Bethel Junction
Lab ID: 1806246-005 **Matrix:** Soil
Client Sample ID: **SB-31-2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 21063		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
n-Propylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Bromobenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,3,5-Trimethylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
2-Chlorotoluene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
4-Chlorotoluene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
tert-Butylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2,3-Trichloropropane	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2,4-Trichlorobenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
sec-Butylbenzene	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
4-Isopropyltoluene	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,3-Dichlorobenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,4-Dichlorobenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
n-Butylbenzene	ND	0.0238		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2-Dichlorobenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2-Dibromo-3-chloropropane	ND	0.476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2,4-Trimethylbenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Hexachlorobutadiene	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Naphthalene	ND	0.0476		mg/Kg-dry	1	6/26/2018 12:29:37 AM
1,2,3-Trichlorobenzene	ND	0.0190		mg/Kg-dry	1	6/26/2018 12:29:37 AM
Surr: Dibromofluoromethane	96.2	56.5 - 129		%Rec	1	6/26/2018 12:29:37 AM
Surr: Toluene-d8	98.8	64.5 - 151		%Rec	1	6/26/2018 12:29:37 AM
Surr: 1-Bromo-4-fluorobenzene	95.2	43.2 - 143		%Rec	1	6/26/2018 12:29:37 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)				Batch ID: R44195		Analyst: NG
Percent Moisture	8.40	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc.
Collection Date: 6/20/2018 11:20:00 AM
Project: Bethel Junction
Lab ID: 1806246-006
Matrix: Soil
Client Sample ID: **SB-32-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Chloromethane	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Vinyl chloride	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Bromomethane	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Chloroethane	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1-Dichloroethene	ND	0.0188	Q	mg/Kg-dry	1	6/26/2018 6:39:56 AM
Methylene chloride	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
trans-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1-Dichloroethane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
2,2-Dichloropropane	ND	0.0941		mg/Kg-dry	1	6/26/2018 6:39:56 AM
cis-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Chloroform	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1-Dichloropropene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Carbon tetrachloride	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2-Dichloroethane (EDC)	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Benzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Trichloroethene (TCE)	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2-Dichloropropane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Bromodichloromethane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Dibromomethane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
cis-1,3-Dichloropropene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Toluene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
trans-1,3-Dichloropropylene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1,2-Trichloroethane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,3-Dichloropropane	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Tetrachloroethene (PCE)	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Dibromochloromethane	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2-Dibromoethane (EDB)	ND	0.00470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Chlorobenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Ethylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
m,p-Xylene	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
o-Xylene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Styrene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Isopropylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Bromoform	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 11:20:00 AM
Project: Bethel Junction
Lab ID: 1806246-006 **Matrix:** Soil
Client Sample ID: **SB-32-2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 21063		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
n-Propylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Bromobenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,3,5-Trimethylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
2-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
4-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
tert-Butylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2,3-Trichloropropane	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2,4-Trichlorobenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
sec-Butylbenzene	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
4-Isopropyltoluene	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
n-Butylbenzene	ND	0.0235		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2-Dibromo-3-chloropropane	ND	0.470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Hexachlorobutadiene	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Naphthalene	ND	0.0470		mg/Kg-dry	1	6/26/2018 6:39:56 AM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	6/26/2018 6:39:56 AM
Surr: Dibromofluoromethane	96.9	56.5 - 129		%Rec	1	6/26/2018 6:39:56 AM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	6/26/2018 6:39:56 AM
Surr: 1-Bromo-4-fluorobenzene	96.2	43.2 - 143		%Rec	1	6/26/2018 6:39:56 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)				Batch ID: R44195		Analyst: NG
Percent Moisture	11.7	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:25:00 PM
Project: Bethel Junction
Lab ID: 1806246-007 **Matrix:** Soil
Client Sample ID: **SB-33-4.5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Chloromethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Vinyl chloride	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Bromomethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Trichlorofluoromethane (CFC-11)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Chloroethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1-Dichloroethene	ND	0.0222	Q	mg/Kg-dry	1	6/26/2018 7:10:49 AM
Methylene chloride	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
trans-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Methyl tert-butyl ether (MTBE)	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1-Dichloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
2,2-Dichloropropane	ND	0.111		mg/Kg-dry	1	6/26/2018 7:10:49 AM
cis-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Chloroform	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1,1-Trichloroethane (TCA)	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Carbon tetrachloride	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2-Dichloroethane (EDC)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Benzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Trichloroethene (TCE)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2-Dichloropropane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Bromodichloromethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Dibromomethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
cis-1,3-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Toluene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
trans-1,3-Dichloropropylene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1,2-Trichloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,3-Dichloropropane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Tetrachloroethene (PCE)	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Dibromochloromethane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2-Dibromoethane (EDB)	ND	0.00554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Chlorobenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,1,1,2-Tetrachloroethane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Ethylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
m,p-Xylene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
o-Xylene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Styrene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Isopropylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Bromoform	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:25:00 PM
Project: Bethel Junction
Lab ID: 1806246-007 **Matrix:** Soil
Client Sample ID: **SB-33-4.5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
n-Propylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Bromobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,3,5-Trimethylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
2-Chlorotoluene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
4-Chlorotoluene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
tert-Butylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2,3-Trichloropropane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2,4-Trichlorobenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
sec-Butylbenzene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
4-Isopropyltoluene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,3-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,4-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
n-Butylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2-Dibromo-3-chloropropane	ND	0.554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2,4-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Hexachlorobutadiene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Naphthalene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:10:49 AM
1,2,3-Trichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:10:49 AM
Surr: Dibromofluoromethane	95.9	56.5 - 129		%Rec	1	6/26/2018 7:10:49 AM
Surr: Toluene-d8	97.6	64.5 - 151		%Rec	1	6/26/2018 7:10:49 AM
Surr: 1-Bromo-4-fluorobenzene	98.4	43.2 - 143		%Rec	1	6/26/2018 7:10:49 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)

Batch ID: R44195 Analyst: NG

Percent Moisture	6.06	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:10:00 PM
Project: Bethel Junction
Lab ID: 1806246-008 **Matrix:** Soil
Client Sample ID: **SB-34-3**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Chloromethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Vinyl chloride	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Bromomethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Trichlorofluoromethane (CFC-11)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Chloroethane	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1-Dichloroethene	ND	0.0222	Q	mg/Kg-dry	1	6/26/2018 7:41:35 AM
Methylene chloride	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
trans-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Methyl tert-butyl ether (MTBE)	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1-Dichloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
2,2-Dichloropropane	ND	0.111		mg/Kg-dry	1	6/26/2018 7:41:35 AM
cis-1,2-Dichloroethene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Chloroform	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1,1-Trichloroethane (TCA)	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Carbon tetrachloride	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2-Dichloroethane (EDC)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Benzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Trichloroethene (TCE)	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2-Dichloropropane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Bromodichloromethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Dibromomethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
cis-1,3-Dichloropropene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Toluene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
trans-1,3-Dichloropropylene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1,2-Trichloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,3-Dichloropropane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Tetrachloroethene (PCE)	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Dibromochloromethane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2-Dibromoethane (EDB)	ND	0.00554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Chlorobenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,1,1,2-Tetrachloroethane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Ethylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
m,p-Xylene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
o-Xylene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Styrene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Isopropylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Bromoform	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 12:10:00 PM
Project: Bethel Junction
Lab ID: 1806246-008 **Matrix:** Soil
Client Sample ID: **SB-34-3**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
n-Propylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Bromobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,3,5-Trimethylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
2-Chlorotoluene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
4-Chlorotoluene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
tert-Butylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2,3-Trichloropropane	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2,4-Trichlorobenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
sec-Butylbenzene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
4-Isopropyltoluene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,3-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,4-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
n-Butylbenzene	ND	0.0277		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2-Dichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2-Dibromo-3-chloropropane	ND	0.554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2,4-Trimethylbenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Hexachlorobutadiene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Naphthalene	ND	0.0554		mg/Kg-dry	1	6/26/2018 7:41:35 AM
1,2,3-Trichlorobenzene	ND	0.0222		mg/Kg-dry	1	6/26/2018 7:41:35 AM
Surr: Dibromofluoromethane	97.6	56.5 - 129		%Rec	1	6/26/2018 7:41:35 AM
Surr: Toluene-d8	98.2	64.5 - 151		%Rec	1	6/26/2018 7:41:35 AM
Surr: 1-Bromo-4-fluorobenzene	98.2	43.2 - 143		%Rec	1	6/26/2018 7:41:35 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)

Batch ID: R44195 Analyst: NG

Percent Moisture	12.5	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 10:00:00 AM
Project: Bethel Junction
Lab ID: 1806246-009 **Matrix:** Soil
Client Sample ID: **SB-35-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Chloromethane	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Vinyl chloride	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Bromomethane	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Trichlorofluoromethane (CFC-11)	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Chloroethane	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1-Dichloroethene	ND	0.0197	Q	mg/Kg-dry	1	6/26/2018 8:12:31 AM
Methylene chloride	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
trans-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Methyl tert-butyl ether (MTBE)	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1-Dichloroethane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
2,2-Dichloropropane	ND	0.0983		mg/Kg-dry	1	6/26/2018 8:12:31 AM
cis-1,2-Dichloroethene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Chloroform	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1,1-Trichloroethane (TCA)	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1-Dichloropropene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Carbon tetrachloride	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2-Dichloroethane (EDC)	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Benzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Trichloroethene (TCE)	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2-Dichloropropane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Bromodichloromethane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Dibromomethane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
cis-1,3-Dichloropropene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Toluene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
trans-1,3-Dichloropropylene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1,2-Trichloroethane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,3-Dichloropropane	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Tetrachloroethene (PCE)	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Dibromochloromethane	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2-Dibromoethane (EDB)	ND	0.00492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Chlorobenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,1,1,2-Tetrachloroethane	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Ethylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
m,p-Xylene	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
o-Xylene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Styrene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Isopropylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Bromoform	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM

Client: PES Environmental, Inc. **Collection Date:** 6/20/2018 10:00:00 AM
Project: Bethel Junction
Lab ID: 1806246-009 **Matrix:** Soil
Client Sample ID: **SB-35-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
n-Propylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Bromobenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,3,5-Trimethylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
2-Chlorotoluene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
4-Chlorotoluene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
tert-Butylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2,3-Trichloropropane	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2,4-Trichlorobenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
sec-Butylbenzene	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
4-Isopropyltoluene	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,3-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,4-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
n-Butylbenzene	ND	0.0246		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2-Dichlorobenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2-Dibromo-3-chloropropane	ND	0.492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2,4-Trimethylbenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Hexachlorobutadiene	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Naphthalene	ND	0.0492		mg/Kg-dry	1	6/26/2018 8:12:31 AM
1,2,3-Trichlorobenzene	ND	0.0197		mg/Kg-dry	1	6/26/2018 8:12:31 AM
Surr: Dibromofluoromethane	96.4	56.5 - 129		%Rec	1	6/26/2018 8:12:31 AM
Surr: Toluene-d8	97.1	64.5 - 151		%Rec	1	6/26/2018 8:12:31 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	43.2 - 143		%Rec	1	6/26/2018 8:12:31 AM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Sample Moisture (Percent Moisture)

Batch ID: R44195 Analyst: NG

Percent Moisture	10.2	0.500		wt%	1	6/21/2018 9:50:41 AM

Client: PES Environmental, Inc. **Collection Date:** 6/12/2018 1:47:00 PM
Project: Bethel Junction
Lab ID: 1806246-010 **Matrix:** Soil
Client Sample ID: **Trip Blank**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Chloromethane	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
Vinyl chloride	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Bromomethane	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Chloroethane	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
1,1-Dichloroethene	ND	0.0200	Q	mg/Kg	1	6/25/2018 7:20:44 PM
Methylene chloride	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
2,2-Dichloropropane	ND	0.100		mg/Kg	1	6/25/2018 7:20:44 PM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Chloroform	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Carbon tetrachloride	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,2-Dichloroethane (EDC)	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Benzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Trichloroethene (TCE)	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Bromodichloromethane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Dibromomethane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Toluene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
trans-1,3-Dichloropropylene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,1,2-Trichloroethane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,3-Dichloropropane	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Tetrachloroethene (PCE)	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Dibromochloromethane	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg	1	6/25/2018 7:20:44 PM
Chlorobenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Ethylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
m,p-Xylene	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
o-Xylene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Styrene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Isopropylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Bromoform	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM

Client: PES Environmental, Inc. **Collection Date:** 6/12/2018 1:47:00 PM
Project: Bethel Junction
Lab ID: 1806246-010 **Matrix:** Soil
Client Sample ID: **Trip Blank**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 21063 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
n-Propylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
Bromobenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,3,5-Trimethylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
2-Chlorotoluene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
4-Chlorotoluene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
tert-Butylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,2,3-Trichloropropane	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,2,4-Trichlorobenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
sec-Butylbenzene	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
4-Isopropyltoluene	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
n-Butylbenzene	ND	0.0250		mg/Kg	1	6/25/2018 7:20:44 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
1,2-Dibromo-3-chloropropane	ND	0.500		mg/Kg	1	6/25/2018 7:20:44 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Hexachlorobutadiene	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
Naphthalene	ND	0.0500		mg/Kg	1	6/25/2018 7:20:44 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg	1	6/25/2018 7:20:44 PM
Surr: Dibromofluoromethane	97.0	56.5 - 129		%Rec	1	6/25/2018 7:20:44 PM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	6/25/2018 7:20:44 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	43.2 - 143		%Rec	1	6/25/2018 7:20:44 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID	**1806246-003ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **6/21/2018**		RunNo: **44195**	
Client ID:	**SB-29-3**	Batch ID: **R44195**					Analysis Date: **6/21/2018**		SeqNo: **855155**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	16.6	0.500						16.69	0.501	20	

Sample ID	**1806247-045ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **6/21/2018**		RunNo: **44195**	
Client ID:	**BATCH**	Batch ID: **R44195**					Analysis Date: **6/21/2018**		SeqNo: **855179**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	6.39	0.500						6.858	6.99	20	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-21063** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **LCSS** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856872**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.44	0.0200	1.000	0	144	14.3	167				
Chloromethane	1.07	0.0500	1.000	0	107	32	156				
Vinyl chloride	1.09	0.0250	1.000	0	109	43.4	151				
Bromomethane	1.02	0.0500	1.000	0	102	35	155				
Trichlorofluoromethane (CFC-11)	1.26	0.0200	1.000	0	126	33.8	156				
Chloroethane	0.981	0.0500	1.000	0	98.1	33.1	147				
1,1-Dichloroethene	1.07	0.0200	1.000	0	107	39	144				
Methylene chloride	0.999	0.0200	1.000	0	99.9	46.3	140				
trans-1,2-Dichloroethene	1.02	0.0200	1.000	0	102	68	130				
Methyl tert-butyl ether (MTBE)	1.04	0.0500	1.000	0	104	44.1	152				
1,1-Dichloroethane	0.999	0.0200	1.000	0	99.9	61.9	137				
2,2-Dichloropropane	1.34	0.100	1.000	0	134	35.5	186				
cis-1,2-Dichloroethene	1.01	0.0200	1.000	0	101	71.3	135				
Chloroform	1.01	0.0200	1.000	0	101	69	145				
1,1,1-Trichloroethane (TCA)	1.04	0.0250	1.000	0	104	69	132				
1,1-Dichloropropene	1.06	0.0200	1.000	0	106	72.7	131				
Carbon tetrachloride	1.00	0.0250	1.000	0	100	63.4	137				
1,2-Dichloroethane (EDC)	0.997	0.0200	1.000	0	99.7	50.9	162				
Benzene	1.01	0.0200	1.000	0	101	64.3	133				
Trichloroethene (TCE)	0.996	0.0200	1.000	0	99.6	65.5	137				
1,2-Dichloropropane	0.992	0.0200	1.000	0	99.2	63.2	142				
Bromodichloromethane	1.04	0.0200	1.000	0	104	53.4	131				
Dibromomethane	0.986	0.0200	1.000	0	98.6	60.1	146				
cis-1,3-Dichloropropene	0.964	0.0200	1.000	0	96.4	59.1	143				
Toluene	1.00	0.0200	1.000	0	100	67.3	138				
trans-1,3-Dichloropropylene	1.10	0.0200	1.000	0	110	49.2	149				
1,1,2-Trichloroethane	0.985	0.0200	1.000	0	98.5	56.9	147				
1,3-Dichloropropane	0.974	0.0250	1.000	0	97.4	56.1	153				
Tetrachloroethene (PCE)	1.02	0.0250	1.000	0	102	52.7	150				
Dibromochloromethane	1.09	0.0250	1.000	0	109	70.6	144				
1,2-Dibromoethane (EDB)	0.984	0.00500	1.000	0	98.4	50.5	154				

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-21063** SampType: **LCS** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **LCSS** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856872**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.01	0.0250	1.000	0	101	84.9	125				
1,1,1,2-Tetrachloroethane	0.982	0.0250	1.000	0	98.2	65.9	141				
Ethylbenzene	1.03	0.0250	1.000	0	103	74	129				
m,p-Xylene	2.06	0.0500	2.000	0	103	70	124				
o-Xylene	1.00	0.0250	1.000	0	100	68.1	139				
Styrene	1.01	0.0250	1.000	0	101	73.3	146				
Isopropylbenzene	1.03	0.0250	1.000	0	103	70	130				
Bromoform	1.15	0.0500	1.000	0	115	44.3	130				
1,1,2,2-Tetrachloroethane	1.02	0.0200	1.000	0	102	44.8	165				
n-Propylbenzene	1.03	0.0250	1.000	0	103	75.8	139				
Bromobenzene	0.993	0.0200	1.000	0	99.3	49.2	144				
1,3,5-Trimethylbenzene	1.01	0.0250	1.000	0	101	76.5	135				
2-Chlorotoluene	0.996	0.0250	1.000	0	99.6	76.7	129				
4-Chlorotoluene	0.994	0.0250	1.000	0	99.4	77.5	125				
tert-Butylbenzene	1.03	0.0250	1.000	0	103	66.2	130				
1,2,3-Trichloropropane	1.03	0.0250	1.000	0	103	67.9	136				
1,2,4-Trichlorobenzene	1.09	0.0250	1.000	0	109	65.5	150				
sec-Butylbenzene	1.03	0.0500	1.000	0	103	75.6	133				
4-Isopropyltoluene	1.02	0.0500	1.000	0	102	76.8	131				
1,3-Dichlorobenzene	1.08	0.0200	1.000	0	108	72.8	128				
1,4-Dichlorobenzene	1.03	0.0200	1.000	0	103	72.6	126				
n-Butylbenzene	1.11	0.0250	1.000	0	111	78.4	140				
1,2-Dichlorobenzene	1.06	0.0200	1.000	0	106	72.8	126				
1,2-Dibromo-3-chloropropane	1.20	0.500	1.000	0	120	40.2	155				
1,2,4-Trimethylbenzene	1.02	0.0200	1.000	0	102	77.5	129				
Hexachlorobutadiene	1.14	0.0500	1.000	0	114	42	151				
Naphthalene	1.14	0.0500	1.000	0	114	46.5	167				
1,2,3-Trichlorobenzene	1.10	0.0200	1.000	0	110	64.5	149				
Surr: Dibromofluoromethane	1.35		1.250		108	56.5	129				
Surr: Toluene-d8	1.25		1.250		100	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	43.2	143				

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-21063**	SampType:	**LCS**		Units:	**mg/Kg**	Prep Date:	**6/25/2018**	RunNo:	**44271**	
Client ID:	**LCSS**	Batch ID:	**21063**				Analysis Date:	**6/25/2018**	SeqNo:	**856872**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-21063**	SampType:	**MBLK**		Units:	**mg/Kg**	Prep Date:	**6/25/2018**	RunNo:	**44271**	
Client ID:	**MBLKS**	Batch ID:	**21063**				Analysis Date:	**6/25/2018**	SeqNo:	**856873**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									Q
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	0.100									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.00699									MDL
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-21063** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **MBLKS** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856873**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-21063** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **MBLKS** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856873**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachlorobutadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	0.0220	0.0200									
Surr: Dibromofluoromethane	1.21		1.250		97.0	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.8	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.21		1.250		96.7	43.2	143				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)
MDL - Analyte reported to Method Detection Limit (MDL)

Sample ID **1806289-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **BATCH** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856868**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0194						0		30	
Chloromethane	ND	0.0486						0		30	
Vinyl chloride	ND	0.0243						0		30	
Bromomethane	ND	0.0486						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0194						0		30	
Chloroethane	ND	0.0486						0		30	
1,1-Dichloroethene	ND	0.0194						0		30	Q
Methylene chloride	ND	0.0194						0		30	
trans-1,2-Dichloroethene	ND	0.0194						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0486						0		30	
1,1-Dichloroethane	ND	0.0194						0		30	
2,2-Dichloropropane	ND	0.0972						0		30	
cis-1,2-Dichloroethene	ND	0.0194						0		30	
Chloroform	ND	0.0194						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0243						0		30	
1,1-Dichloropropene	ND	0.0194						0		30	
Carbon tetrachloride	ND	0.0243						0		30	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806289-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **BATCH** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856868**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	0.0194						0		30	
Benzene	0.0657	0.00679						0.06294	4.27	30	MDL
Trichloroethene (TCE)	ND	0.0194						0		30	
1,2-Dichloropropane	ND	0.0194						0		30	
Bromodichloromethane	ND	0.0194						0		30	
Dibromomethane	ND	0.0194						0		30	
cis-1,3-Dichloropropene	ND	0.0194						0		30	
Toluene	ND	0.0194						0		30	
trans-1,3-Dichloropropylene	ND	0.0194						0		30	
1,1,2-Trichloroethane	ND	0.0194						0		30	
1,3-Dichloropropane	ND	0.0243						0		30	
Tetrachloroethene (PCE)	ND	0.0243						0		30	
Dibromochloromethane	ND	0.0243						0		30	
1,2-Dibromoethane (EDB)	ND	0.00486						0		30	
Chlorobenzene	ND	0.0243						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0243						0		30	
Ethylbenzene	ND	0.0243						0		30	
m,p-Xylene	ND	0.0486						0		30	
o-Xylene	ND	0.0243						0		30	
Styrene	ND	0.0243						0		30	
Isopropylbenzene	ND	0.0243						0		30	
Bromoform	ND	0.0486						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0194						0		30	
n-Propylbenzene	ND	0.0243						0		30	
Bromobenzene	ND	0.0194						0		30	
1,3,5-Trimethylbenzene	ND	0.0243						0		30	
2-Chlorotoluene	ND	0.0243						0		30	
4-Chlorotoluene	ND	0.0243						0		30	
tert-Butylbenzene	ND	0.0243						0		30	
1,2,3-Trichloropropane	ND	0.0243						0		30	
1,2,4-Trichlorobenzene	ND	0.0243						0		30	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806289-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **BATCH** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856868**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	0.0486						0		30	
4-Isopropyltoluene	ND	0.0486						0		30	
1,3-Dichlorobenzene	ND	0.0194						0		30	
1,4-Dichlorobenzene	ND	0.0194						0		30	
n-Butylbenzene	ND	0.0243						0		30	
1,2-Dichlorobenzene	ND	0.0194						0		30	
1,2-Dibromo-3-chloropropane	ND	0.486						0		30	
1,2,4-Trimethylbenzene	ND	0.0194						0		30	
Hexachlorobutadiene	ND	0.0486						0		30	
Naphthalene	ND	0.0486						0		30	
1,2,3-Trichlorobenzene	ND	0.0194						0		30	
Surr: Dibromofluoromethane	1.17		1.215		96.6	56.5	129		0		
Surr: Toluene-d8	1.17		1.215		96.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.16		1.215		95.2	43.2	143		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)
MDL - Analyte reported to Method Detection Limit (MDL)

Sample ID **1806246-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-29-3** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856859**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0214						0		30	
Chloromethane	ND	0.0535						0		30	
Vinyl chloride	ND	0.0267						0		30	
Bromomethane	ND	0.0535						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0214						0		30	
Chloroethane	ND	0.0535						0		30	
1,1-Dichloroethene	ND	0.0214						0		30	Q
Methylene chloride	ND	0.0214						0		30	
trans-1,2-Dichloroethene	ND	0.0214						0		30	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-29-3** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856859**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.0535						0		30	
1,1-Dichloroethane	ND	0.0214						0		30	
2,2-Dichloropropane	ND	0.107						0		30	
cis-1,2-Dichloroethene	ND	0.0214						0		30	
Chloroform	ND	0.0214						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0267						0		30	
1,1-Dichloropropene	ND	0.0214						0		30	
Carbon tetrachloride	ND	0.0267						0		30	
1,2-Dichloroethane (EDC)	ND	0.0214						0		30	
Benzene	ND	0.00747						0		30	MDL
Trichloroethene (TCE)	ND	0.0214						0		30	
1,2-Dichloropropane	ND	0.0214						0		30	
Bromodichloromethane	ND	0.0214						0		30	
Dibromomethane	ND	0.0214						0		30	
cis-1,3-Dichloropropene	ND	0.0214						0		30	
Toluene	ND	0.0214						0		30	
trans-1,3-Dichloropropylene	ND	0.0214						0		30	
1,1,2-Trichloroethane	ND	0.0214						0		30	
1,3-Dichloropropane	ND	0.0267						0		30	
Tetrachloroethene (PCE)	ND	0.0267						0		30	
Dibromochloromethane	ND	0.0267						0		30	
1,2-Dibromoethane (EDB)	ND	0.00535						0		30	
Chlorobenzene	ND	0.0267						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0267						0		30	
Ethylbenzene	ND	0.0267						0		30	
m,p-Xylene	ND	0.0535						0		30	
o-Xylene	ND	0.0267						0		30	
Styrene	ND	0.0267						0		30	
Isopropylbenzene	ND	0.0267						0		30	
Bromoform	ND	0.0535						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0214						0		30	

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CLIENT: PES Environmental, Inc.
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Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-29-3** Batch ID: **21063** Analysis Date: **6/25/2018** SeqNo: **856859**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Propylbenzene	ND	0.0267						0		30	
Bromobenzene	ND	0.0214						0		30	
1,3,5-Trimethylbenzene	ND	0.0267						0		30	
2-Chlorotoluene	ND	0.0267						0		30	
4-Chlorotoluene	ND	0.0267						0		30	
tert-Butylbenzene	ND	0.0267						0		30	
1,2,3-Trichloropropane	ND	0.0267						0		30	
1,2,4-Trichlorobenzene	ND	0.0267						0		30	
sec-Butylbenzene	ND	0.0535						0		30	
4-Isopropyltoluene	ND	0.0535						0		30	
1,3-Dichlorobenzene	ND	0.0214						0		30	
1,4-Dichlorobenzene	ND	0.0214						0		30	
n-Butylbenzene	ND	0.0267						0		30	
1,2-Dichlorobenzene	ND	0.0214						0		30	
1,2-Dibromo-3-chloropropane	ND	0.535						0		30	
1,2,4-Trimethylbenzene	ND	0.0214						0		30	
Hexachlorobutadiene	ND	0.0535						0		30	
Naphthalene	ND	0.0535						0		30	
1,2,3-Trichlorobenzene	ND	0.0214						0		30	
Surr: Dibromofluoromethane	1.27		1.337		95.2	56.5	129		0		
Surr: Toluene-d8	1.32		1.337		98.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.28		1.337		95.4	43.2	143		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)
MDL - Analyte reported to Method Detection Limit (MDL)

Sample ID **1806246-004BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856861**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.14	0.0188	0.9380	0	122	43.5	121				S

Work Order: 1806246
CLIENT: PES Environmental, Inc.
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-004BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856861**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	0.900	0.0469	0.9380	0	95.9	45	130				
Vinyl chloride	0.947	0.0234	0.9380	0	101	43.6	150				
Bromomethane	0.973	0.0469	0.9380	0	104	21.3	120				
Trichlorofluoromethane (CFC-11)	1.06	0.0188	0.9380	0	113	35	131				
Chloroethane	1.05	0.0469	0.9380	0	112	31.9	123				
1,1-Dichloroethene	0.918	0.0188	0.9380	0	97.9	47.3	147				
Methylene chloride	0.931	0.0188	0.9380	0	99.3	54.7	142				
trans-1,2-Dichloroethene	0.923	0.0188	0.9380	0	98.4	52	136				
Methyl tert-butyl ether (MTBE)	0.961	0.0469	0.9380	0	102	58.5	167				
1,1-Dichloroethane	0.929	0.0188	0.9380	0	99.0	51.8	141				
2,2-Dichloropropane	1.07	0.0938	0.9380	0	114	36	123				
cis-1,2-Dichloroethene	0.927	0.0188	0.9380	0	98.9	58.6	136				
Chloroform	0.937	0.0188	0.9380	0	99.9	53.2	129				
1,1,1-Trichloroethane (TCA)	0.902	0.0234	0.9380	0	96.2	58.3	145				
1,1-Dichloropropene	0.915	0.0188	0.9380	0	97.6	55.1	138				
Carbon tetrachloride	0.852	0.0234	0.9380	0	90.9	53.3	144				
1,2-Dichloroethane (EDC)	0.934	0.0188	0.9380	0	99.5	51.3	139				
Benzene	0.931	0.0188	0.9380	0	99.3	63.5	133				
Trichloroethene (TCE)	0.893	0.0188	0.9380	0	95.2	61.6	147				
1,2-Dichloropropane	0.926	0.0188	0.9380	0	98.8	59	136				
Bromodichloromethane	0.946	0.0188	0.9380	0	101	50.7	141				
Dibromomethane	0.909	0.0188	0.9380	0	96.9	50.6	137				
cis-1,3-Dichloropropene	0.855	0.0188	0.9380	0	91.1	50.4	138				
Toluene	0.906	0.0188	0.9380	0	96.6	63.4	132				
trans-1,3-Dichloropropylene	0.987	0.0188	0.9380	0	105	44.1	147				
1,1,2-Trichloroethane	0.921	0.0188	0.9380	0	98.1	51.6	137				
1,3-Dichloropropane	0.924	0.0234	0.9380	0	98.5	53.1	134				
Tetrachloroethene (PCE)	0.903	0.0234	0.9380	0	96.2	35.6	158				
Dibromochloromethane	0.985	0.0234	0.9380	0	105	55.3	140				
1,2-Dibromoethane (EDB)	0.915	0.00469	0.9380	0	97.5	50.4	136				
Chlorobenzene	0.925	0.0234	0.9380	0	98.6	60	133				

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-004BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856861**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.882	0.0234	0.9380	0	94.1	53.1	142				
Ethylbenzene	0.924	0.0234	0.9380	0	98.5	54.5	134				
m,p-Xylene	1.84	0.0469	1.876	0	97.9	53.1	132				
o-Xylene	0.918	0.0234	0.9380	0	97.9	53.3	139				
Styrene	0.932	0.0234	0.9380	0	99.4	51.1	132				
Isopropylbenzene	0.922	0.0234	0.9380	0	98.3	58.9	138				
Bromoform	0.585	0.0469	0.9380	0	62.4	57.9	130				
1,1,2,2-Tetrachloroethane	0.909	0.0188	0.9380	0	96.9	51.9	131				
n-Propylbenzene	0.929	0.0234	0.9380	0	99.1	53.6	140				
Bromobenzene	0.914	0.0188	0.9380	0	97.5	54.2	140				
1,3,5-Trimethylbenzene	0.926	0.0234	0.9380	0	98.8	51.8	136				
2-Chlorotoluene	0.914	0.0234	0.9380	0	97.5	51.6	136				
4-Chlorotoluene	0.921	0.0234	0.9380	0	98.2	50.1	139				
tert-Butylbenzene	0.914	0.0234	0.9380	0	97.5	50.5	135				
1,2,3-Trichloropropane	0.910	0.0234	0.9380	0	97.1	50.5	131				
1,2,4-Trichlorobenzene	0.955	0.0234	0.9380	0	102	50.8	130				
sec-Butylbenzene	0.915	0.0469	0.9380	0	97.5	52.6	141				
4-Isopropyltoluene	0.912	0.0469	0.9380	0	97.2	52.9	134				
1,3-Dichlorobenzene	0.950	0.0188	0.9380	0	101	52.6	131				
1,4-Dichlorobenzene	0.948	0.0188	0.9380	0	101	52.9	129				
n-Butylbenzene	0.942	0.0234	0.9380	0	100	52.6	130				
1,2-Dichlorobenzene	0.954	0.0188	0.9380	0	102	55.8	129				
1,2-Dibromo-3-chloropropane	1.01	0.469	0.9380	0	108	40.5	131				
1,2,4-Trimethylbenzene	0.916	0.0188	0.9380	0	97.7	50.6	137				
Hexachlorobutadiene	0.930	0.0469	0.9380	0	99.2	40.6	158				
Naphthalene	0.995	0.0469	0.9380	0	106	52.3	124				
1,2,3-Trichlorobenzene	0.968	0.0188	0.9380	0	103	54.4	124				
Surr: Dibromofluoromethane	1.27		1.172		108	56.5	129				
Surr: Toluene-d8	1.19		1.172		102	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.172		104	43.2	143				

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

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Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-004BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856861**

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 and recovered within range.

Sample ID **1806246-004BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856862**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.13	0.0188	0.9380	0	121	43.5	121	1.145	1.25	30	
Chloromethane	0.936	0.0469	0.9380	0	99.7	45	130	0.9000	3.88	30	
Vinyl chloride	0.940	0.0234	0.9380	0	100	43.6	150	0.9468	0.686	30	
Bromomethane	1.04	0.0469	0.9380	0	111	21.3	120	0.9727	6.54	30	
Trichlorofluoromethane (CFC-11)	1.15	0.0188	0.9380	0	122	35	131	1.057	8.30	30	
Chloroethane	1.06	0.0469	0.9380	0	113	31.9	123	1.055	0.680	30	
1,1-Dichloroethene	0.907	0.0188	0.9380	0	96.7	47.3	147	0.9180	1.23	30	
Methylene chloride	0.909	0.0188	0.9380	0	97.0	54.7	142	0.9310	2.35	30	
trans-1,2-Dichloroethene	0.904	0.0188	0.9380	0	96.4	52	136	0.9228	2.05	30	
Methyl tert-butyl ether (MTBE)	0.939	0.0469	0.9380	0	100	58.5	167	0.9608	2.24	30	
1,1-Dichloroethane	0.906	0.0188	0.9380	0	96.6	51.8	141	0.9285	2.44	30	
2,2-Dichloropropane	1.08	0.0938	0.9380	0	115	36	123	1.068	0.952	30	
cis-1,2-Dichloroethene	0.908	0.0188	0.9380	0	96.8	58.6	136	0.9273	2.09	30	
Chloroform	0.922	0.0188	0.9380	0	98.3	53.2	129	0.9374	1.68	30	
1,1,1-Trichloroethane (TCA)	0.900	0.0234	0.9380	0	95.9	58.3	145	0.9022	0.251	30	
1,1-Dichloropropene	0.893	0.0188	0.9380	0	95.2	55.1	138	0.9154	2.49	30	
Carbon tetrachloride	0.858	0.0234	0.9380	0	91.5	53.3	144	0.8522	0.724	30	
1,2-Dichloroethane (EDC)	0.903	0.0188	0.9380	0	96.3	51.3	139	0.9335	3.34	30	
Benzene	0.901	0.0188	0.9380	0	96.1	63.5	133	0.9310	3.28	30	
Trichloroethene (TCE)	0.876	0.0188	0.9380	0	93.4	61.6	147	0.8927	1.92	30	
1,2-Dichloropropane	0.897	0.0188	0.9380	0	95.7	59	136	0.9263	3.16	30	
Bromodichloromethane	0.942	0.0188	0.9380	0	100	50.7	141	0.9457	0.433	30	
Dibromomethane	0.887	0.0188	0.9380	0	94.6	50.6	137	0.9093	2.44	30	
cis-1,3-Dichloropropene	0.833	0.0188	0.9380	0	88.8	50.4	138	0.8547	2.63	30	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-004BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856862**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	0.835	0.0188	0.9380	0	89.0	63.4	132	0.9065	8.18	30	
trans-1,3-Dichloropropylene	0.929	0.0188	0.9380	0	99.0	44.1	147	0.9865	6.06	30	
1,1,2-Trichloroethane	0.863	0.0188	0.9380	0	92.0	51.6	137	0.9205	6.47	30	
1,3-Dichloropropane	0.864	0.0234	0.9380	0	92.2	53.1	134	0.9237	6.63	30	
Tetrachloroethene (PCE)	0.847	0.0234	0.9380	0	90.3	35.6	158	0.9028	6.41	30	
Dibromochloromethane	0.922	0.0234	0.9380	0	98.3	55.3	140	0.9849	6.58	30	
1,2-Dibromoethane (EDB)	0.873	0.00469	0.9380	0	93.1	50.4	136	0.9148	4.64	30	
Chlorobenzene	0.912	0.0234	0.9380	0	97.3	60	133	0.9249	1.35	30	
1,1,1,2-Tetrachloroethane	0.875	0.0234	0.9380	0	93.3	53.1	142	0.8825	0.812	30	
Ethylbenzene	0.916	0.0234	0.9380	0	97.7	54.5	134	0.9242	0.862	30	
m,p-Xylene	1.82	0.0469	1.876	0	97.2	53.1	132	1.836	0.714	30	
o-Xylene	0.908	0.0234	0.9380	0	96.8	53.3	139	0.9183	1.11	30	
Styrene	0.922	0.0234	0.9380	0	98.3	51.1	132	0.9319	1.02	30	
Isopropylbenzene	0.903	0.0234	0.9380	0	96.3	58.9	138	0.9217	2.01	30	
Bromoform	0.991	0.0469	0.9380	0	106	57.9	130	0.5853	51.5	30	R
1,1,2,2-Tetrachloroethane	0.914	0.0188	0.9380	0	97.5	51.9	131	0.9087	0.583	30	
n-Propylbenzene	0.912	0.0234	0.9380	0	97.3	53.6	140	0.9292	1.84	30	
Bromobenzene	0.913	0.0188	0.9380	0	97.4	54.2	140	0.9143	0.106	30	
1,3,5-Trimethylbenzene	0.909	0.0234	0.9380	0	96.9	51.8	136	0.9264	1.92	30	
2-Chlorotoluene	0.912	0.0234	0.9380	0	97.2	51.6	136	0.9144	0.269	30	
4-Chlorotoluene	0.911	0.0234	0.9380	0	97.1	50.1	139	0.9215	1.17	30	
tert-Butylbenzene	0.913	0.0234	0.9380	0	97.4	50.5	135	0.9145	0.117	30	
1,2,3-Trichloropropane	0.923	0.0234	0.9380	0	98.4	50.5	131	0.9105	1.40	30	
1,2,4-Trichlorobenzene	0.982	0.0234	0.9380	0	105	50.8	130	0.9550	2.77	30	
sec-Butylbenzene	0.913	0.0469	0.9380	0	97.3	52.6	141	0.9150	0.208	30	
4-Isopropyltoluene	0.930	0.0469	0.9380	0	99.1	52.9	134	0.9118	1.92	30	
1,3-Dichlorobenzene	0.969	0.0188	0.9380	0	103	52.6	131	0.9496	2.05	30	
1,4-Dichlorobenzene	0.929	0.0188	0.9380	0	99.1	52.9	129	0.9479	1.98	30	
n-Butylbenzene	0.968	0.0234	0.9380	0	103	52.6	130	0.9422	2.65	30	
1,2-Dichlorobenzene	0.945	0.0188	0.9380	0	101	55.8	129	0.9536	0.943	30	
1,2-Dibromo-3-chloropropane	1.04	0.469	0.9380	0	111	40.5	131	1.013	2.87	30	

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1806246-004BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **SB-30-2** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **856862**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	0.929	0.0188	0.9380	0	99.0	50.6	137	0.9162	1.36	30	
Hexachlorobutadiene	1.00	0.0469	0.9380	0	107	40.6	158	0.9303	7.50	30	
Naphthalene	1.04	0.0469	0.9380	0	111	52.3	124	0.9954	4.67	30	
1,2,3-Trichlorobenzene	0.995	0.0188	0.9380	0	106	54.4	124	0.9676	2.75	30	
Surr: Dibromofluoromethane	1.28		1.172		109	56.5	129		0		
Surr: Toluene-d8	1.13		1.172		96.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.24		1.172		106	43.2	143		0		

NOTES:
R - High RPD observed, spike recoveries are within range.

Sample ID **MB-21063** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **MBLKS** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **857199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									Q
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	0.100									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-21063**	SampType:	**MBLK**	Units:	**mg/Kg**	Prep Date:	**6/25/2018**	RunNo:	**44271**
Client ID:	**MBLKS**	Batch ID:	**21063**			Analysis Date:	**6/26/2018**	SeqNo:	**857199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									

Work Order: 1806246
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-21063** SampType: **MBLK** Units: **mg/Kg** Prep Date: **6/25/2018** RunNo: **44271**
Client ID: **MBLKS** Batch ID: **21063** Analysis Date: **6/26/2018** SeqNo: **857199**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.13		1.250		90.5	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.4	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.19		1.250		95.3	43.2	143				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1806246**
Logged by:	**Brianna Barnes**	Date Received:	**6/20/2018 3:39:00 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 ☐
		Please refer to Item Information		
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: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	20.1
Sample	13.9

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

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 6/20/18 Page: of:

Laboratory Project No (internal): 1906246

Project Name: Bethel Junction

Special Remarks:

Project No: 1246.030.04.002

Client: PES Environmental Inc

Collected by: Rachel McLaughlin

Address: 1215 4th Ave STE 1350

Location: Port Orchard, WA

City, State, Zip: Seattle WA 98161

Report To (PM): Matt Dahl

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Telephone: 206 529 3980

PM Email: mdahl@pesenv.com

Fax: 202 529 3985

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Moisture content	Comments
1	SB-27-2.5	6/20/18	1250	Soil	X											X		
2	SB-28-2		1240															
3	SB-29-3		1150															
4	SB-30-2		1140															
5	SB-31-2		1233															
6	SB-32-2		1120															
7	SB-33-4.5		1225															
8	SB-34-3		~~1219~~ 1175	RM														
9	SB-35-2	X	1000	X	X											X		
10	TRIP BLANK	6/12/18	1347		X													

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- [X] Standard
- [ ] 3 Day
- [ ] 2 Day
- [ ] Next Day
- Same Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	6/20/18 1539	x [signature]	6/20/18 1539
Relinquished	Date/Time	Received	Date/Time
x		x	

This Shipping Order

must be legibly filled in, in Ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 19775

Carrier No. 3125'

Page 1 of 1

MARINE VACUUM SERVICE INC.

(Name of carrier) (SCAC)

Date 03.22.2019

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC.
Street 1516 SOUTH GRAHAM STREET
City SEATTLE State WA Zip Code 98108

FROM: Shipper Pes Environmental
Street 3355 Bethel rd SE
City Port Orchard State WA Zip Code
24 hr. Emergency Contact Tel. No. CHEMTEL 1-800-255-3924 CONTRACT MIS3627926

Route

Vehicle Number 025

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TT	X	(DOT SPEC TANK REQUIRED) UN1863 FUEL, AVIATION, TURBIN ENGINE, CLASS 3, PG I				
1 TT	X	(DOT SPEC TANK REQUIRED) UN1203 GASOLINE, MIXTURE CLASS 3, PG II				
1 TT	X	(DOT SPEC TANK REQUIRED) UN1203 GASOLINE, CLASS 3, PG II				
1 TT	X	NA1993 DIESEL MIXTURE, CLASS 3, PG III				
1 TT	X	NA1993 DIESEL, CLASS 3, PG III				
1 TT	X	NA1270 PETROLEUM OIL, CLASS 3, PG I				
1 TT	X	NA1270 PETROLEUM OIL, MIXTURE, CLASS 3, PG I				
1 TT		OILY WASTE WATER NON REG BY DOT				
1 TT		WASTE WATER NON REG BY DOT	4 000	gallon		
1 TT		MARINE VESSEL SEWAGE NON REG BY DOT				
1 TT		STREET WASTE STORM PIPE CLEANING NON REG BY DOT				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Pes Environmental
PER [signature] ON BEHALF OF GERRITY GREZ LLC

CARRIER Mar Vac
PER [signature]
DATE 03.22.2019

2

Permanent post-office address of shipper.

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

PES Environmental, Inc.
Matt Dahl
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Work Order Number: 1901229

January 22, 2019

Attention Matt Dahl:

Fremont Analytical, Inc. received 1 sample(s) on 1/16/2019 for the analyses presented in the following report.

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

Date: *01/22/2019*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 1901229

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1901229-001	W-DRUM-011619	01/16/2019 12:00 PM	01/16/2019 3:25 PM

Case Narrative

WO#: **1901229**
Date: **1/22/2019**

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:
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").

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.

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:** 1/16/2019 12:00:00 PM
Project: Bethel Junction
Lab ID: 1901229-001 **Matrix:** Water
Client Sample ID: **W-DRUM-011619**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23282 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Chloromethane	ND	2.00		µg/L	1	1/17/2019 3:16:51 PM
Vinyl chloride	ND	0.200		µg/L	1	1/17/2019 3:16:51 PM
Bromomethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Chloroethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Methylene chloride	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	1/17/2019 3:16:51 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Chloroform	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Benzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/17/2019 3:16:51 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Dibromomethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Toluene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/17/2019 3:16:51 PM
Chlorobenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Ethylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
m,p-Xylene	1.73	1.00		µg/L	1	1/17/2019 3:16:51 PM
o-Xylene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Styrene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Bromoform	ND	2.00		µg/L	1	1/17/2019 3:16:51 PM

Analytical Report

Work Order: **1901229**
Date Reported: **1/22/2019**

Client: PES Environmental, Inc.
Collection Date: 1/16/2019 12:00:00 PM
Project: Bethel Junction
Lab ID: 1901229-001
Matrix: Water
Client Sample ID: **W-DRUM-011619**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 23282 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
n-Propylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Bromobenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/17/2019 3:16:51 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2-Dibromo-3-chloropropane	ND	1.00	Q	µg/L	1	1/17/2019 3:16:51 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/17/2019 3:16:51 PM
Naphthalene	ND	1.00		µg/L	1	1/17/2019 3:16:51 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/17/2019 3:16:51 PM
Surr: Dibromofluoromethane	95.4	45.4 - 152		%Rec	1	1/17/2019 3:16:51 PM
Surr: Toluene-d8	94.4	40.1 - 139		%Rec	1	1/17/2019 3:16:51 PM
Surr: 1-Bromo-4-fluorobenzene	94.4	64.2 - 128		%Rec	1	1/17/2019 3:16:51 PM

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-23282** SampType: **LCS** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **LCSW** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961286**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.2	1.00	20.00	0	95.9	18.7	171				
Chloromethane	18.0	2.00	20.00	0	89.9	38.5	171				
Vinyl chloride	17.8	0.200	20.00	0	89.0	48	145				
Bromomethane	23.5	1.00	20.00	0	118	32.5	184				
Trichlorofluoromethane (CFC-11)	18.7	1.00	20.00	0	93.7	43.5	149				
Chloroethane	20.5	1.00	20.00	0	103	43.8	168				
1,1-Dichloroethene	20.8	1.00	20.00	0	104	57.5	150				
Methylene chloride	19.7	1.00	20.00	0	98.6	67.1	131				
trans-1,2-Dichloroethene	20.1	1.00	20.00	0	100	71.7	129				
Methyl tert-butyl ether (MTBE)	17.8	1.00	20.00	0	89.1	58	138				
1,1-Dichloroethane	19.3	1.00	20.00	0	96.6	67.9	134				
2,2-Dichloropropane	19.0	2.00	20.00	0	95.0	26.5	185				
cis-1,2-Dichloroethene	20.6	1.00	20.00	0	103	70.2	139				
Chloroform	19.3	1.00	20.00	0	96.6	66.3	131				
1,1,1-Trichloroethane (TCA)	18.9	1.00	20.00	0	94.3	63	140				
1,1-Dichloropropene	19.2	1.00	20.00	0	95.9	69.9	124				
Carbon tetrachloride	18.5	1.00	20.00	0	92.5	66.2	134				
1,2-Dichloroethane (EDC)	18.7	1.00	20.00	0	93.4	67	126				
Benzene	20.1	1.00	20.00	0	100	69.3	132				
Trichloroethene (TCE)	20.0	0.500	20.00	0	99.9	65.2	136				
1,2-Dichloropropane	19.2	1.00	20.00	0	96.1	70.5	130				
Bromodichloromethane	18.1	1.00	20.00	0	90.3	67.2	137				
Dibromomethane	20.0	1.00	20.00	0	100	69.3	143				
cis-1,3-Dichloropropene	18.3	1.00	20.00	0	91.6	62.6	137				
Toluene	20.3	1.00	20.00	0	101	61.3	145				
trans-1,3-Dichloropropylene	18.2	1.00	20.00	0	91.1	56.5	163				
1,1,2-Trichloroethane	20.9	1.00	20.00	0	105	71.7	131				
1,3-Dichloropropane	20.4	1.00	20.00	0	102	73.5	127				
Tetrachloroethene (PCE)	21.1	1.00	20.00	0	105	47.5	147				
Dibromochloromethane	19.0	1.00	20.00	0	95.1	67.2	134				
1,2-Dibromoethane (EDB)	20.8	0.250	20.00	0	104	73.6	125				

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-23282** SampType: **LCS** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **LCSW** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961286**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	21.0	1.00	20.00	0	105	73.9	126				
1,1,1,2-Tetrachloroethane	19.9	1.00	20.00	0	99.4	76.8	124				
Ethylbenzene	20.4	1.00	20.00	0	102	72	130				
m,p-Xylene	41.4	1.00	40.00	0	104	70.3	134				
o-Xylene	20.8	1.00	20.00	0	104	72.1	131				
Styrene	20.6	1.00	20.00	0	103	64.3	140				
Isopropylbenzene	20.5	1.00	20.00	0	102	73.9	128				
Bromoform	19.3	2.00	20.00	0	96.5	55.3	141				
1,1,2,2-Tetrachloroethane	21.4	1.00	20.00	0	107	62.9	132				
n-Propylbenzene	20.6	1.00	20.00	0	103	74.5	127				
Bromobenzene	21.5	1.00	20.00	0	107	71	131				
1,3,5-Trimethylbenzene	20.3	1.00	20.00	0	102	73.1	128				
2-Chlorotoluene	20.5	1.00	20.00	0	102	70.8	130				
4-Chlorotoluene	20.6	1.00	20.00	0	103	70.1	131				
tert-Butylbenzene	20.3	1.00	20.00	0	102	68.2	131				
1,2,3-Trichloropropane	18.9	1.00	20.00	0	94.6	67.7	131				
1,2,4-Trichlorobenzene	20.8	2.00	20.00	0	104	41	139				
sec-Butylbenzene	20.2	1.00	20.00	0	101	72	129				
4-Isopropyltoluene	20.0	1.00	20.00	0	99.9	69.2	130				
1,3-Dichlorobenzene	20.9	1.00	20.00	0	104	69.5	128				
1,4-Dichlorobenzene	21.3	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	20.0	1.00	20.00	0	100	73.8	127				
1,2-Dichlorobenzene	21.4	1.00	20.00	0	107	69.7	119				
1,2-Dibromo-3-chloropropane	16.5	1.00	20.00	0	82.6	63.1	136				
1,2,4-Trimethylbenzene	20.3	1.00	20.00	0	102	73.4	127				
Hexachloro-1,3-butadiene	20.9	4.00	20.00	0	104	58.6	138				
Naphthalene	20.8	1.00	20.00	0	104	41.8	165				
1,2,3-Trichlorobenzene	21.0	4.00	20.00	0	105	35.8	155				
Surr: Dibromofluoromethane	23.3		25.00		93.2	45.4	152				
Surr: Toluene-d8	24.1		25.00		96.4	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.3		25.00		97.1	64.2	128				

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-23282**	SampType: **LCS**			Units: **µg/L**		Prep Date: **1/16/2019**		RunNo: **49027**	
Client ID: **LCSW**	Batch ID: **23282**					Analysis Date: **1/17/2019**		SeqNo: **961286**	

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **LCSD-23282**	SampType: **LCSD**			Units: **µg/L**		Prep Date: **1/16/2019**		RunNo: **49027**	
Client ID: **LCSW02**	Batch ID: **23282**					Analysis Date: **1/17/2019**		SeqNo: **961287**	

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.2	1.00	20.00	0	96.1	18.7	171	19.18	0.240	20	
Chloromethane	18.9	2.00	20.00	0	94.6	38.5	171	17.99	5.08	20	
Vinyl chloride	18.2	0.200	20.00	0	91.0	48	145	17.80	2.27	20	
Bromomethane	23.3	1.00	20.00	0	116	32.5	184	23.53	1.11	20	
Trichlorofluoromethane (CFC-11)	19.1	1.00	20.00	0	95.7	43.5	149	18.74	2.04	20	
Chloroethane	20.8	1.00	20.00	0	104	43.8	168	20.51	1.23	20	
1,1-Dichloroethene	21.2	1.00	20.00	0	106	57.5	150	20.84	1.84	20	
Methylene chloride	20.0	1.00	20.00	0	99.8	67.1	131	19.72	1.18	20	
trans-1,2-Dichloroethene	20.5	1.00	20.00	0	102	71.7	129	20.05	2.05	20	
Methyl tert-butyl ether (MTBE)	18.1	1.00	20.00	0	90.4	58	138	17.82	1.43	20	
1,1-Dichloroethane	19.5	1.00	20.00	0	97.6	67.9	134	19.32	1.09	20	
2,2-Dichloropropane	18.8	2.00	20.00	0	94.0	26.5	185	19.00	1.08	20	
cis-1,2-Dichloroethene	21.2	1.00	20.00	0	106	70.2	139	20.61	2.98	20	
Chloroform	20.0	1.00	20.00	0	99.8	66.3	131	19.32	3.25	20	
1,1,1-Trichloroethane (TCA)	19.2	1.00	20.00	0	95.9	63	140	18.85	1.74	20	
1,1-Dichloropropene	19.6	1.00	20.00	0	98.2	69.9	124	19.18	2.33	20	
Carbon tetrachloride	18.8	1.00	20.00	0	94.1	66.2	134	18.50	1.68	20	
1,2-Dichloroethane (EDC)	18.9	1.00	20.00	0	94.4	68.8	123	18.67	1.07	20	
Benzene	20.3	1.00	20.00	0	102	69.3	132	20.05	1.23	20	
Trichloroethene (TCE)	20.2	0.500	20.00	0	101	65.2	136	19.97	1.16	20	
1,2-Dichloropropane	19.3	1.00	20.00	0	96.6	70.5	130	19.21	0.499	20	
Bromodichloromethane	18.5	1.00	20.00	0	92.5	74.6	127	18.06	2.44	20	
Dibromomethane	19.9	1.00	20.00	0	99.7	69.3	143	20.03	0.428	20	
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	91.2	62.6	137	18.33	0.468	20	
Toluene	20.3	1.00	20.00	0	102	61.3	145	20.27	0.337	20	

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-23282** SampType: **LCSD** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **LCSW02** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961287**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	18.2	1.00	20.00	0	91.2	56.5	163	18.21	0.205	20	
1,1,2-Trichloroethane	21.3	1.00	20.00	0	106	71.7	131	20.91	1.81	20	
1,3-Dichloropropane	20.6	1.00	20.00	0	103	73.5	127	20.38	0.939	20	
Tetrachloroethene (PCE)	21.3	1.00	20.00	0	106	47.5	147	21.09	0.847	20	
Dibromochloromethane	19.5	1.00	20.00	0	97.4	67.2	134	19.02	2.37	20	
1,2-Dibromoethane (EDB)	21.0	0.250	20.00	0	105	73.6	125	20.83	0.603	20	
Chlorobenzene	21.1	1.00	20.00	0	106	73.9	126	20.96	0.806	20	
1,1,1,2-Tetrachloroethane	20.3	1.00	20.00	0	102	76.8	124	19.88	2.26	20	
Ethylbenzene	20.6	1.00	20.00	0	103	72	130	20.44	0.766	20	
m,p-Xylene	41.5	1.00	40.00	0	104	70.3	134	41.45	0.0393	20	
o-Xylene	20.8	1.00	20.00	0	104	72.1	131	20.80	0.0219	20	
Styrene	20.7	1.00	20.00	0	104	64.3	140	20.60	0.505	20	
Isopropylbenzene	20.5	1.00	20.00	0	103	73.9	128	20.48	0.256	20	
Bromoform	20.1	2.00	20.00	0	100	55.3	141	19.29	4.00	20	
1,1,2,2-Tetrachloroethane	22.0	1.00	20.00	0	110	62.9	132	21.42	2.53	20	
n-Propylbenzene	20.7	1.00	20.00	0	103	74.5	127	20.64	0.0620	20	
Bromobenzene	21.6	1.00	20.00	0	108	71	131	21.46	0.604	20	
1,3,5-Trimethylbenzene	20.5	1.00	20.00	0	102	73.1	128	20.32	0.809	20	
2-Chlorotoluene	20.5	1.00	20.00	0	103	70.8	130	20.45	0.372	20	
4-Chlorotoluene	20.7	1.00	20.00	0	104	70.1	131	20.60	0.666	20	
tert-Butylbenzene	20.6	1.00	20.00	0	103	68.2	131	20.34	1.22	20	
1,2,3-Trichloropropane	20.1	1.00	20.00	0	100	67.7	131	18.92	6.02	20	
1,2,4-Trichlorobenzene	20.9	2.00	20.00	0	104	41	139	20.77	0.454	20	
sec-Butylbenzene	20.3	1.00	20.00	0	102	72	129	20.23	0.414	20	
4-Isopropyltoluene	20.1	1.00	20.00	0	100	69.2	130	19.98	0.373	20	
1,3-Dichlorobenzene	21.9	1.00	20.00	0	110	69.5	128	20.88	4.80	20	
1,4-Dichlorobenzene	21.6	1.00	20.00	0	108	66.8	119	21.29	1.44	20	
n-Butylbenzene	20.1	1.00	20.00	0	101	73.8	127	20.03	0.493	20	
1,2-Dichlorobenzene	21.6	1.00	20.00	0	108	69.7	119	21.39	0.947	20	
1,2-Dibromo-3-chloropropane	17.4	1.00	20.00	0	87.2	63.1	136	16.51	5.44	20	
1,2,4-Trimethylbenzene	20.3	1.00	20.00	0	102	73.4	127	20.32	0.0552	20	

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-23282** SampType: **LCSD** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **LCSW02** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961287**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	21.2	4.00	20.00	0	106	58.6	138	20.87	1.68	20	
Naphthalene	21.1	1.00	20.00	0	105	41.8	165	20.75	1.52	20	
1,2,3-Trichlorobenzene	21.1	4.00	20.00	0	105	35.8	155	20.98	0.445	20	
Surr: Dibromofluoromethane	23.2		25.00		93.0	45.4	152		0		
Surr: Toluene-d8	24.0		25.00		95.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.3	64.2	128		0		

Sample ID **MB-23282** SampType: **MBLK** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **MBLKW** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961288**

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	2.00									
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									

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-23282**	SampType:	**MBLK**	Units:	**µg/L**	Prep Date:	**1/16/2019**	RunNo:	**49027**
Client ID:	**MBLKW**	Batch ID:	**23282**			Analysis Date:	**1/17/2019**	SeqNo:	**961288**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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-Dichloropropylene	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	0.250									
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	2.00									
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									

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-23282** SampType: **MBLK** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **MBLKW** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961288**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									Q
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.1		25.00		96.6	45.4	152				
Surr: Toluene-d8	24.0		25.00		96.0	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.8	64.2	128				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID **1901223-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **BATCH** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961280**

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	2.00						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	

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1901223-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **BATCH** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
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-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 1901229
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1901223-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/16/2019** RunNo: **49027**
Client ID: **BATCH** Batch ID: **23282** Analysis Date: **1/17/2019** SeqNo: **961280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.9		25.00		99.6	45.4	152		0		
Surr: Toluene-d8	24.1		25.00		96.3	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.4	64.2	128		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1901229**
Logged by:	**Brianna Barnes**	Date Received:	**1/16/2019 3:25:00 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	☐
		Received straight from field.				
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:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample	5.8

* 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

Chain of Custody Record & Laboratory Services Agreement

Date: 1/16/19 Page: 1 of: 1

Laboratory Project No (internal): 190129

Project Name: BETHEL JUNCTION

Special Remarks: BOTTLES NOT PRESERVED

Client: PES ENVIRONMENTAL

Project No: 1246.030.04.003

Address: 1215 4th Ave Ste 1350

Collected by: R. McLaughlin

City, State, Zip: Seattle WA 98161

Location: PORT ORCHARD WA

Telephone: 206 529 3980

Report To (PM): M. Dahl

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax: 206 529 3985

PM Email: MDAHL@PESENV.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	W-DRUM-011619	1/16/19	1200	W	X													
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

R McLaughlin 1/16/19

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x R McLaughlin	1/16/19 1522	x	1/16/19 1525
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☑ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

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

PES Environmental, Inc.
Matt Dahl
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Work Order Number: 1904271

April 23, 2019

Attention Matt Dahl:

Fremont Analytical, Inc. received 1 sample(s) on 4/16/2019 for the analyses presented in the following report.

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

Date: *04/23/2019*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 1904271

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1904271-001	CONDENSATE_041619	04/16/2019 12:15 PM	04/16/2019 3:52 PM

Case Narrative

WO#: **1904271**
Date: **4/23/2019**

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:
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").

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.

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

Analytical Report

Work Order: **1904271**
Date Reported: **4/23/2019**

Client: PES Environmental, Inc.
Collection Date: 4/16/2019 12:15:00 PM
Project: Bethel Junction
Lab ID: 1904271-001
Matrix: Water
Client Sample ID: **CONDENSATE_041619**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 24213 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	4/18/2019 4:22:15 PM
Chloromethane	ND	2.00	Q	µg/L	1	4/18/2019 4:22:15 PM
Vinyl chloride	ND	0.200		µg/L	1	4/18/2019 4:22:15 PM
Bromomethane	ND	1.00	Q	µg/L	1	4/18/2019 4:22:15 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Chloroethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Methylene chloride	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.00	Q	µg/L	1	4/18/2019 4:22:15 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
2,2-Dichloropropane	ND	2.00	Q	µg/L	1	4/18/2019 4:22:15 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Chloroform	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Carbon tetrachloride	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Benzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/18/2019 4:22:15 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Bromodichloromethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Dibromomethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Toluene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/18/2019 4:22:15 PM
Chlorobenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Ethylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
m,p-Xylene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
o-Xylene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Styrene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Bromoform	ND	2.00		µg/L	1	4/18/2019 4:22:15 PM

Analytical Report

Work Order: **1904271**
Date Reported: **4/23/2019**

Client: PES Environmental, Inc.
Collection Date: 4/16/2019 12:15:00 PM
Project: Bethel Junction
Lab ID: 1904271-001
Matrix: Water
Client Sample ID: **CONDENSATE_041619**

Volatile Organic Compounds by EPA Method 8260C Batch ID: 24213 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Bromobenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/18/2019 4:22:15 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/18/2019 4:22:15 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/18/2019 4:22:15 PM
Naphthalene	ND	1.00	Q	µg/L	1	4/18/2019 4:22:15 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/18/2019 4:22:15 PM
Surr: Dibromofluoromethane	100	45.4 - 152		%Rec	1	4/18/2019 4:22:15 PM
Surr: Toluene-d8	99.3	40.1 - 139		%Rec	1	4/18/2019 4:22:15 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	64.2 - 128		%Rec	1	4/18/2019 4:22:15 PM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria (Dichlorodifluoromethane, Chloromethane)

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-24213** SampType: **LCS** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999451**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.5	1.00	20.00	0	77.3	18.7	171				
Chloromethane	18.2	2.00	20.00	0	91.2	38.5	171				
Vinyl chloride	17.6	0.200	20.00	0	88.2	48	145				
Bromomethane	17.5	1.00	20.00	0	87.6	32.5	184				
Trichlorofluoromethane (CFC-11)	19.0	1.00	20.00	0	94.9	43.5	149				
Chloroethane	17.9	1.00	20.00	0	89.5	43.8	168				
1,1-Dichloroethene	19.4	1.00	20.00	0	97.2	57.5	150				
Methylene chloride	18.5	1.00	20.00	0	92.3	67.1	131				
trans-1,2-Dichloroethene	19.3	1.00	20.00	0	96.6	71.7	129				
Methyl tert-butyl ether (MTBE)	13.8	1.00	20.00	0	68.9	58	138				
1,1-Dichloroethane	19.1	1.00	20.00	0	95.3	67.9	134				
2,2-Dichloropropane	16.5	2.00	20.00	0	82.4	26.5	185				
cis-1,2-Dichloroethene	19.5	1.00	20.00	0	97.6	70.2	139				
Chloroform	19.7	1.00	20.00	0	98.4	66.3	131				
1,1,1-Trichloroethane (TCA)	20.0	1.00	20.00	0	99.9	63	140				
1,1-Dichloropropene	20.1	1.00	20.00	0	100	69.9	124				
Carbon tetrachloride	20.3	1.00	20.00	0	101	66.2	134				
1,2-Dichloroethane (EDC)	19.7	1.00	20.00	0	98.6	67	126				
Benzene	20.1	1.00	20.00	0	100	69.3	132				
Trichloroethene (TCE)	19.9	0.500	20.00	0	99.3	65.2	136				
1,2-Dichloropropane	19.5	1.00	20.00	0	97.5	70.5	130				
Bromodichloromethane	19.8	1.00	20.00	0	98.9	67.2	137				
Dibromomethane	19.4	1.00	20.00	0	97.0	69.3	143				
cis-1,3-Dichloropropene	19.5	1.00	20.00	0	97.4	62.6	137				
Toluene	19.6	1.00	20.00	0	98.0	61.3	145				
trans-1,3-Dichloropropylene	18.6	1.00	20.00	0	93.0	56.5	163				
1,1,2-Trichloroethane	19.9	1.00	20.00	0	99.5	71.7	131				
1,3-Dichloropropane	19.9	1.00	20.00	0	99.5	73.5	127				
Tetrachloroethene (PCE)	20.3	1.00	20.00	0	102	47.5	147				
Dibromochloromethane	19.5	1.00	20.00	0	97.6	67.2	134				
1,2-Dibromoethane (EDB)	19.3	0.250	20.00	0	96.6	73.6	125				

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-24213** SampType: **LCS** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999451**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.9	1.00	20.00	0	104	73.9	126				
1,1,1,2-Tetrachloroethane	20.4	1.00	20.00	0	102	76.8	124				
Ethylbenzene	22.0	1.00	20.00	0	110	72	130				
m,p-Xylene	42.2	1.00	40.00	0	105	70.3	134				
o-Xylene	21.7	1.00	20.00	0	109	72.1	131				
Styrene	21.1	1.00	20.00	0	106	64.3	140				
Isopropylbenzene	22.7	1.00	20.00	0	114	73.9	128				
Bromoform	20.2	2.00	20.00	0	101	55.3	141				
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	62.9	132				
n-Propylbenzene	23.6	1.00	20.00	0	118	74.5	127				
Bromobenzene	20.4	1.00	20.00	0	102	71	131				
1,3,5-Trimethylbenzene	22.3	1.00	20.00	0	111	73.1	128				
2-Chlorotoluene	20.9	1.00	20.00	0	105	70.8	130				
4-Chlorotoluene	21.1	1.00	20.00	0	106	70.1	131				
tert-Butylbenzene	21.2	1.00	20.00	0	106	68.2	131				
1,2,3-Trichloropropane	18.4	1.00	20.00	0	92.0	67.7	131				
1,2,4-Trichlorobenzene	19.4	2.00	20.00	0	97.1	41	139				
sec-Butylbenzene	23.3	1.00	20.00	0	117	72	129				
4-Isopropyltoluene	22.6	1.00	20.00	0	113	69.2	130				
1,3-Dichlorobenzene	20.9	1.00	20.00	0	105	69.5	128				
1,4-Dichlorobenzene	20.4	1.00	20.00	0	102	66.8	119				
n-Butylbenzene	21.4	1.00	20.00	0	107	73.8	127				
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	69.7	119				
1,2-Dibromo-3-chloropropane	18.8	1.00	20.00	0	94.0	63.1	136				
1,2,4-Trimethylbenzene	21.9	1.00	20.00	0	109	73.4	127				
Hexachloro-1,3-butadiene	21.2	4.00	20.00	0	106	58.6	138				
Naphthalene	15.5	1.00	20.00	0	77.6	41.8	165				B
1,2,3-Trichlorobenzene	18.4	4.00	20.00	0	91.8	35.8	155				
Surr: Dibromofluoromethane	24.6		25.00		98.4	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.5	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.8		25.00		107	64.2	128				

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-24213** SampType: **LCS** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999451**

Sample ID **LCSD-24213** SampType: **LCSD** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW02** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999452**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.2	1.00	20.00	0	81.0	18.7	171	15.46	4.69	20	
Chloromethane	19.1	2.00	20.00	0	95.3	38.5	171	18.25	4.32	20	
Vinyl chloride	18.6	0.200	20.00	0	93.0	48	145	17.65	5.26	20	
Bromomethane	18.7	1.00	20.00	0	93.5	32.5	184	17.52	6.51	20	
Trichlorofluoromethane (CFC-11)	19.8	1.00	20.00	0	99.1	43.5	149	18.98	4.35	20	
Chloroethane	18.8	1.00	20.00	0	93.9	43.8	168	17.89	4.80	20	
1,1-Dichloroethene	20.2	1.00	20.00	0	101	57.5	150	19.45	3.96	20	
Methylene chloride	19.8	1.00	20.00	0	98.8	67.1	131	18.47	6.81	20	
trans-1,2-Dichloroethene	20.6	1.00	20.00	0	103	71.7	129	19.32	6.39	20	
Methyl tert-butyl ether (MTBE)	15.4	1.00	20.00	0	77.1	58	138	13.77	11.2	20	
1,1-Dichloroethane	20.1	1.00	20.00	0	101	67.9	134	19.05	5.39	20	
2,2-Dichloropropane	17.4	2.00	20.00	0	86.8	26.5	185	16.48	5.25	20	
cis-1,2-Dichloroethene	20.4	1.00	20.00	0	102	70.2	139	19.52	4.59	20	
Chloroform	21.0	1.00	20.00	0	105	66.3	131	19.69	6.31	20	
1,1,1-Trichloroethane (TCA)	21.0	1.00	20.00	0	105	63	140	19.99	5.02	20	
1,1-Dichloropropene	20.8	1.00	20.00	0	104	69.9	124	20.06	3.62	20	
Carbon tetrachloride	21.1	1.00	20.00	0	106	66.2	134	20.30	4.11	20	
1,2-Dichloroethane (EDC)	21.3	1.00	20.00	0	106	68.8	123	19.71	7.62	20	
Benzene	21.3	1.00	20.00	0	107	69.3	132	20.07	5.99	20	
Trichloroethene (TCE)	21.0	0.500	20.00	0	105	65.2	136	19.86	5.50	20	
1,2-Dichloropropane	20.5	1.00	20.00	0	103	70.5	130	19.49	5.17	20	
Bromodichloromethane	21.2	1.00	20.00	0	106	74.6	127	19.78	7.01	20	
Dibromomethane	21.2	1.00	20.00	0	106	69.3	143	19.41	8.92	20	
cis-1,3-Dichloropropene	20.9	1.00	20.00	0	105	62.6	137	19.49	7.03	20	
Toluene	20.9	1.00	20.00	0	105	61.3	145	19.60	6.42	20	

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-24213** SampType: **LCSD** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW02** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999452**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	20.3	1.00	20.00	0	101	56.5	163	18.59	8.67	20	
1,1,2-Trichloroethane	22.2	1.00	20.00	0	111	71.7	131	19.90	10.9	20	
1,3-Dichloropropane	21.8	1.00	20.00	0	109	73.5	127	19.91	9.05	20	
Tetrachloroethene (PCE)	21.5	1.00	20.00	0	108	47.5	147	20.32	5.76	20	
Dibromochloromethane	22.0	1.00	20.00	0	110	67.2	134	19.51	12.1	20	
1,2-Dibromoethane (EDB)	21.6	0.250	20.00	0	108	73.6	125	19.31	11.3	20	
Chlorobenzene	22.0	1.00	20.00	0	110	73.9	126	20.86	5.30	20	
1,1,1,2-Tetrachloroethane	22.1	1.00	20.00	0	111	76.8	124	20.44	8.01	20	
Ethylbenzene	23.3	1.00	20.00	0	116	72	130	22.04	5.46	20	
m,p-Xylene	44.3	1.00	40.00	0	111	70.3	134	42.17	4.89	20	
o-Xylene	22.1	1.00	20.00	0	111	72.1	131	21.74	1.66	20	
Styrene	22.0	1.00	20.00	0	110	64.3	140	21.11	4.07	20	
Isopropylbenzene	23.7	1.00	20.00	0	118	73.9	128	22.74	3.94	20	
Bromoform	21.9	2.00	20.00	0	109	55.3	141	20.24	7.78	20	
1,1,2,2-Tetrachloroethane	21.9	1.00	20.00	0	110	62.9	132	20.25	7.85	20	
n-Propylbenzene	24.2	1.00	20.00	0	121	74.5	127	23.60	2.73	20	
Bromobenzene	21.5	1.00	20.00	0	107	71	131	20.44	4.85	20	
1,3,5-Trimethylbenzene	23.0	1.00	20.00	0	115	73.1	128	22.28	3.29	20	
2-Chlorotoluene	21.9	1.00	20.00	0	109	70.8	130	20.94	4.49	20	
4-Chlorotoluene	21.8	1.00	20.00	0	109	70.1	131	21.11	3.43	20	
tert-Butylbenzene	22.2	1.00	20.00	0	111	68.2	131	21.24	4.43	20	
1,2,3-Trichloropropane	20.0	1.00	20.00	0	99.8	67.7	131	18.39	8.17	20	
1,2,4-Trichlorobenzene	21.2	2.00	20.00	0	106	41	139	19.42	8.64	20	
sec-Butylbenzene	24.2	1.00	20.00	0	121	72	129	23.32	3.61	20	
4-Isopropyltoluene	23.6	1.00	20.00	0	118	69.2	130	22.62	4.08	20	
1,3-Dichlorobenzene	22.1	1.00	20.00	0	111	69.5	128	20.93	5.60	20	
1,4-Dichlorobenzene	21.6	1.00	20.00	0	108	66.8	119	20.43	5.53	20	
n-Butylbenzene	22.4	1.00	20.00	0	112	73.8	127	21.44	4.27	20	
1,2-Dichlorobenzene	22.2	1.00	20.00	0	111	69.7	119	20.76	6.55	20	
1,2-Dibromo-3-chloropropane	21.0	1.00	20.00	0	105	63.1	136	18.80	11.3	20	
1,2,4-Trimethylbenzene	22.7	1.00	20.00	0	114	73.4	127	21.87	3.86	20	

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-24213** SampType: **LCSD** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **LCSW02** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999452**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	23.0	4.00	20.00	0	115	58.6	138	21.23	8.09	20	
Naphthalene	18.9	1.00	20.00	0	94.5	41.8	165	15.53	19.6	20	B
1,2,3-Trichlorobenzene	21.9	4.00	20.00	0	110	35.8	155	18.36	17.7	20	
Surr: Dibromofluoromethane	24.7		25.00		98.7	45.4	152		0		
Surr: Toluene-d8	25.0		25.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.5		25.00		106	64.2	128		0		

Sample ID **MB-24213** SampType: **MBLK** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **MBLKW** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999453**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									Q
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									Q
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									

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-24213**	SampType:	**MBLK**	Units:	**µg/L**	Prep Date:	**4/18/2019**	RunNo:	**50852**
Client ID:	**MBLKW**	Batch ID:	**24213**			Analysis Date:	**4/18/2019**	SeqNo:	**999453**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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-Dichloropropylene	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	0.250									
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	2.00									
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									

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-24213**	SampType: **MBLK**		Units: **µg/L**		Prep Date: **4/18/2019**		RunNo: **50852**		
Client ID:	**MBLKW**	Batch ID: **24213**				Analysis Date: **4/18/2019**		SeqNo: **999453**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	1.68	1.00									Q
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.1		25.00		100	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.5	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.3		25.00		93.3	64.2	128				

NOTES:
Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria (Dichlorodifluoromethane, Chloromethane)
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID	**1904248-002ADUP**	SampType: **DUP**		Units: **µg/L**		Prep Date: **4/18/2019**		RunNo: **50852**		
Client ID:	**BATCH**	Batch ID: **24213**				Analysis Date: **4/18/2019**		SeqNo: **999440**		
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	2.00						0		30	Q
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	Q
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	Q
1,1-Dichloroethane	ND	1.00						0		30	

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1904248-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **BATCH** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
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-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 1904271
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1904248-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/18/2019** RunNo: **50852**
Client ID: **BATCH** Batch ID: **24213** Analysis Date: **4/18/2019** SeqNo: **999440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	Q
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.0		25.00		99.9	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.1	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.7	64.2	128		0		

NOTES:
Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria (Dichlorodifluoromethane, Chloromethane)
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1904271**
Logged by:	**Brianna Barnes**	Date Received:	**4/16/2019 3:52:00 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: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	2.6
Sample	4.3
Temp Blank	2.0

* 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

Chain of Custody Record & Laboratory Services Agreement

Date: 4/16/19 Page: 1 of: 1

Laboratory Project No (internal): 1904271

Project Name: BETHEL JUNCTION

Special Remarks:

Project No: 1246.030.04

Collected by: S. MCKERNAN

Client: PES ENVIRONMENTAL

Address: 1215 4TH AVE #1350

City, State, Zip: SEATTLE, WA 98161

Location: BETHEL, WA

Telephone: 206 529 3980

Report To (PM): M. DAHL

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax: 206 529 3985

PM Email: MDAHL@PESENV.COM

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	CONDENSATE-041619	4/16/19	1215	W	X													
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	4/16/19 1555	x [signature]	4/16/19 1552
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

This Shipping Order must be legibly filled in, in Ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 18782

Carrier No. 024

Page 1 of 4

MARINE VACUUM SERVICE INC.

(Name of carrier) (SCAC)

Date 2-10-20

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC.
Street 1516 SOUTH GRAHAM STREET
City SEATTLE State WA Zip Code 98108

FROM:
Shipper Pes Environmental
Street 3377 Bethel Road
City Port Orchard State WA Zip Code
24 hr. Emergency Contact Tel. No. CHEMTEL 1-800-255-3924 CONTRACT MIS3627926

Route

Vehicle Number 024

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TT	X	(DOT SPEC TANK REQUIRED) UN1863 FUEL, AVIATION, TURBIN ENGINE, CLASS 3, PG I				
1 TT	X	(DOT SPEC TANK REQUIRED) UN1203 GASOLINE, MIXTURE CLASS 3, PG II				
1 TT	X	(DOT SPEC TANK REQUIRED) UN1203 GASOLINE, CLASS 3, PG II				
1 TT	X	NA1993 DIESEL MIXTURE, CLASS 3, PG III				
1 TT	X	NA1993 DIESEL, CLASS 3, PG III				
1 TT	X	NA1270 PETROLEUM OIL, CLASS 3, PG I				
1 TT	X	NA1270 PETROLEUM OIL, MIXTURE, CLASS 3, PG I				
1 TT		OILY WASTE WATER NON REG BY DOT				
1 TT		WASTE WATER NON REG BY DOT	450	gallon		
1 TT		MARINE VESSEL SEWAGE NON REG BY DOT				
1 TT		STREET WASTE STORM PIPE CLEANING NON REG BY DOT				

PLACARDS TENDERED: YES ☐ NO ☑

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER
PER [signature]
2-10-20

CARRIER Mar Vac
PER [signature]
DATE 2-10-20

2

Permanent post-office address of shipper.

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

PES Environmental, Inc.
Matt Dahl
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: Bethel Junction
Work Order Number: 2001166

January 15, 2020

Attention Matt Dahl:

Fremont Analytical, Inc. received 1 sample(s) on 1/9/2020 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260D

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,

Brianna Barnes
Project Manager

Date: *01/15/2020*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 2001166

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2001166-001	WaterComp - 010920	01/09/2020 2:00 PM	01/09/2020 4:00 PM

Case Narrative

WO#: **2001166**
Date: **1/15/2020**

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: 1/9/2020 2:00:00 PM
Project: Bethel Junction
Lab ID: 2001166-001
Matrix: Water
Client Sample ID: **WaterComp - 010920**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 27113 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Chloromethane	ND	2.00		µg/L	1	1/14/2020 6:20:07 PM
Vinyl chloride	ND	0.200		µg/L	1	1/14/2020 6:20:07 PM
Bromomethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Chloroethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Methylene chloride	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Chloroform	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Carbon tetrachloride	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Benzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	1/14/2020 6:20:07 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Bromodichloromethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Dibromomethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Toluene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Dibromochloromethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	1/14/2020 6:20:07 PM
Chlorobenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Ethylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
m,p-Xylene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
o-Xylene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Styrene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Isopropylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Bromoform	ND	2.00		µg/L	1	1/14/2020 6:20:07 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM

Client: PES Environmental, Inc.
Collection Date: 1/9/2020 2:00:00 PM
Project: Bethel Junction
Lab ID: 2001166-001
Matrix: Water
Client Sample ID: **WaterComp - 010920**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 27113		Analyst: CR
n-Propylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Bromobenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
2-Chlorotoluene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
4-Chlorotoluene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
tert-Butylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	1/14/2020 6:20:07 PM
sec-Butylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
n-Butylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	1/14/2020 6:20:07 PM
Naphthalene	ND	1.00		µg/L	1	1/14/2020 6:20:07 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	1/14/2020 6:20:07 PM
Surr: Dibromofluoromethane	103	81.1 - 118		%Rec	1	1/14/2020 6:20:07 PM
Surr: Toluene-d8	106	85.7 - 113		%Rec	1	1/14/2020 6:20:07 PM
Surr: 1-Bromo-4-fluorobenzene	94.2	84.2 - 111		%Rec	1	1/14/2020 6:20:07 PM

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-27113** SampType: **LCS** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **LCSW** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128528**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.0	1.00	20.00	0	115	11	201				
Chloromethane	42.1	2.00	20.00	0	211	41.2	162				S
Vinyl chloride	23.2	0.200	20.00	0	116	55.5	149				
Bromomethane	21.4	1.00	20.00	0	107	33.2	190				
Trichlorofluoromethane (CFC-11)	21.9	1.00	20.00	0	109	68.9	135				
Chloroethane	22.1	1.00	20.00	0	111	52.6	155				
1,1-Dichloroethene	21.4	1.00	20.00	0	107	73.3	131				
Methylene chloride	21.5	1.00	20.00	0	107	74.7	123				
trans-1,2-Dichloroethene	21.0	1.00	20.00	0	105	74	124				
Methyl tert-butyl ether (MTBE)	22.4	1.00	20.00	0	112	55.2	139				
1,1-Dichloroethane	21.9	1.00	20.00	0	110	74.7	124				
cis-1,2-Dichloroethene	20.8	1.00	20.00	0	104	78.6	123				
Chloroform	21.1	1.00	20.00	0	105	77.6	121				
1,1,1-Trichloroethane (TCA)	21.0	1.00	20.00	0	105	75.8	123				
1,1-Dichloropropene	21.5	1.00	20.00	0	108	77.1	124				
Carbon tetrachloride	20.6	1.00	20.00	0	103	74.5	124				
1,2-Dichloroethane (EDC)	22.3	1.00	20.00	0	112	71	126				
Benzene	21.4	1.00	20.00	0	107	76.2	124				
Trichloroethene (TCE)	21.1	0.500	20.00	0	105	77.2	124				
1,2-Dichloropropane	21.8	1.00	20.00	0	109	74.6	124				
Bromodichloromethane	20.9	1.00	20.00	0	105	73.2	124				
Dibromomethane	21.5	1.00	20.00	0	108	76.1	124				
cis-1,3-Dichloropropene	21.4	1.00	20.00	0	107	73.6	123				
Toluene	21.3	1.00	20.00	0	107	77.4	124				
trans-1,3-Dichloropropylene	21.6	1.00	20.00	0	108	70.1	123				
1,1,2-Trichloroethane	21.7	1.00	20.00	0	109	75.3	124				
1,3-Dichloropropane	22.0	1.00	20.00	0	110	74.5	124				
Tetrachloroethene (PCE)	20.5	1.00	20.00	0	103	79	124				
Dibromochloromethane	20.5	1.00	20.00	0	102	71.5	124				
1,2-Dibromoethane (EDB)	21.5	0.250	20.00	0	108	73.1	124				
Chlorobenzene	20.3	1.00	20.00	0	102	80.3	119				

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-27113** SampType: **LCS** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **LCSW** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128528**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	20.2	1.00	20.00	0	101	79.2	120				
Ethylbenzene	21.3	1.00	20.00	0	106	79.3	124				
m,p-Xylene	44.0	1.00	40.00	0	110	80	121				
o-Xylene	21.5	1.00	20.00	0	107	80	121				
Styrene	21.7	1.00	20.00	0	109	80.1	120				
Isopropylbenzene	21.7	1.00	20.00	0	108	79.8	124				
Bromoform	19.9	2.00	20.00	0	99.7	68.4	125				
1,1,2,2-Tetrachloroethane	22.1	1.00	20.00	0	110	73.7	125				
n-Propylbenzene	22.2	1.00	20.00	0	111	78.2	128				
Bromobenzene	20.6	1.00	20.00	0	103	77.9	122				
1,3,5-Trimethylbenzene	21.4	1.00	20.00	0	107	77.1	125				
2-Chlorotoluene	21.6	1.00	20.00	0	108	76.3	126				
4-Chlorotoluene	21.4	1.00	20.00	0	107	76.7	124				
tert-Butylbenzene	21.4	1.00	20.00	0	107	76.3	126				
1,2,3-Trichloropropane	22.2	1.00	20.00	0	111	71.1	126				
1,2,4-Trichlorobenzene	21.5	2.00	20.00	0	107	77.7	129				
sec-Butylbenzene	21.7	1.00	20.00	0	108	77.4	129				
4-Isopropyltoluene	21.4	1.00	20.00	0	107	76.1	127				
1,3-Dichlorobenzene	20.4	1.00	20.00	0	102	86.4	121				
1,4-Dichlorobenzene	20.3	1.00	20.00	0	102	86.8	119				
n-Butylbenzene	22.9	1.00	20.00	0	114	84.9	126				
1,2-Dichlorobenzene	20.7	1.00	20.00	0	103	86	120				
1,2-Dibromo-3-chloropropane	22.3	1.00	20.00	0	111	67.8	131				
1,2,4-Trimethylbenzene	21.5	1.00	20.00	0	108	76.6	126				
Hexachloro-1,3-butadiene	21.1	4.00	20.00	0	105	84.6	127				
Naphthalene	22.6	1.00	20.00	0	113	66.9	138				
1,2,3-Trichlorobenzene	21.7	4.00	20.00	0	108	70.6	137				
Surr: Dibromofluoromethane	26.1		25.00		105	81.1	118				
Surr: Toluene-d8	26.5		25.00		106	85.7	113				
Surr: 1-Bromo-4-fluorobenzene	27.9		25.00		112	84.2	111				S

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-27113**	SampType: **LCS**	Units: **µg/L**	Prep Date: **1/14/2020**	RunNo: **56644**
Client ID: **LCSW**	Batch ID: **27113**		Analysis Date: **1/14/2020**	SeqNo: **1128528**

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.
S - Outlying surrogate recovery(ies) observed.

Sample ID: **MB-27113**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **1/14/2020**	RunNo: **56644**
Client ID: **MBLKW**	Batch ID: **27113**		Analysis Date: **1/14/2020**	SeqNo: **1128529**

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	2.00									
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									
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: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-27113** SampType: **MBLK** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **MBLKW** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128529**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	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	0.250									
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	2.00									
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									

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-27113** SampType: **MBLK** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **MBLKW** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128529**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.8		25.00		103	81.1	118				
Surr: Toluene-d8	26.6		25.00		107	85.7	113				
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.6	84.2	111				

Sample ID: **2001208-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128524**

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	2.00						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	
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	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001208-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128524**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001208-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128524**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.4		25.00		106	81.1	118		0		
Surr: Toluene-d8	26.2		25.00		105	85.7	113		0		
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.2	84.2	111		0		

Sample ID: **2001117-029AMS** SampType: **MS** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128506**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.9	1.00	20.00	0	84.4	32.2	196				
Chloromethane	38.3	2.00	20.00	0	191	37.8	173				S
Vinyl chloride	21.5	0.200	20.00	0	107	67.7	154				
Bromomethane	19.4	1.00	20.00	0	96.8	21.9	223				
Trichlorofluoromethane (CFC-11)	21.0	1.00	20.00	0	105	80.7	139				
Chloroethane	21.1	1.00	20.00	0	105	72.5	149				
1,1-Dichloroethene	21.0	1.00	20.00	0	105	82.5	140				
Methylene chloride	20.9	1.00	20.00	0	104	77.9	131				
trans-1,2-Dichloroethene	20.7	1.00	20.00	0	104	80.5	133				
Methyl tert-butyl ether (MTBE)	21.4	1.00	20.00	0	107	65	138				
1,1-Dichloroethane	21.6	1.00	20.00	0	108	77.8	135				
cis-1,2-Dichloroethene	20.7	1.00	20.00	0	103	82.1	130				
Chloroform	21.4	1.00	20.00	0	107	78.6	133				

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001117-029AMS** SampType: **MS** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128506**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane (TCA)	21.0	1.00	20.00	0	105	79.9	135				
1,1-Dichloropropene	21.5	1.00	20.00	0	107	83	134				
Carbon tetrachloride	20.7	1.00	20.00	0	103	79.3	137				
1,2-Dichloroethane (EDC)	21.8	1.00	20.00	0	109	71.1	134				
Benzene	21.3	1.00	20.00	0	107	82.4	131				
Trichloroethene (TCE)	21.0	0.500	20.00	0	105	80.9	133				
1,2-Dichloropropane	21.9	1.00	20.00	0	110	78.5	131				
Bromodichloromethane	20.6	1.00	20.00	0	103	75.9	132				
Dibromomethane	21.2	1.00	20.00	0	106	77.6	130				
cis-1,3-Dichloropropene	20.4	1.00	20.00	0	102	71.6	127				
Toluene	21.1	1.00	20.00	0	106	75.9	137				
trans-1,3-Dichloropropylene	20.7	1.00	20.00	0	103	65.2	126				
1,1,2-Trichloroethane	21.6	1.00	20.00	0	108	71.7	136				
1,3-Dichloropropane	21.8	1.00	20.00	0	109	72.7	132				
Tetrachloroethene (PCE)	20.0	1.00	20.00	0	100	81.5	132				
Dibromochloromethane	20.2	1.00	20.00	0	101	70.8	131				
1,2-Dibromoethane (EDB)	21.0	0.250	20.00	0	105	70.1	133				
Chlorobenzene	20.2	1.00	20.00	0	101	84.5	124				
1,1,1,2-Tetrachloroethane	19.6	1.00	20.00	0	97.9	81.4	124				
Ethylbenzene	20.5	1.00	20.00	0	103	82.8	132				
m,p-Xylene	41.0	1.00	40.00	0	102	80.7	130				
o-Xylene	20.2	1.00	20.00	0	101	82	126				
Styrene	20.2	1.00	20.00	0	101	80.7	123				
Isopropylbenzene	20.5	1.00	20.00	0	103	85.1	129				
Bromoform	19.2	2.00	20.00	0	96.0	70.6	122				
1,1,2,2-Tetrachloroethane	20.8	1.00	20.00	0	104	78.7	124				
n-Propylbenzene	20.8	1.00	20.00	0	104	83.6	132				
Bromobenzene	19.2	1.00	20.00	0	96.0	80.3	124				
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	100	81.6	128				
2-Chlorotoluene	20.3	1.00	20.00	0	101	81.6	136				
4-Chlorotoluene	20.0	1.00	20.00	0	99.8	81.7	127				

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001117-029AMS** SampType: **MS** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128506**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
tert-Butylbenzene	20.1	1.00	20.00	0	100	79.9	133				
1,2,3-Trichloropropane	20.5	1.00	20.00	0	103	63.1	137				
1,2,4-Trichlorobenzene	20.4	2.00	20.00	0	102	80	130				
sec-Butylbenzene	20.2	1.00	20.00	0	101	85.2	131				
4-Isopropyltoluene	19.6	1.00	20.00	0	97.8	82.5	129				
1,3-Dichlorobenzene	19.9	1.00	20.00	0	99.3	89.8	122				
1,4-Dichlorobenzene	19.8	1.00	20.00	0	98.9	89	122				
n-Butylbenzene	21.7	1.00	20.00	0	108	81.5	141				
1,2-Dichlorobenzene	20.1	1.00	20.00	0	100	87.8	124				
1,2-Dibromo-3-chloropropane	22.0	1.00	20.00	0	110	62.9	142				
1,2,4-Trimethylbenzene	19.7	1.00	20.00	0	98.6	75.1	132				
Hexachloro-1,3-butadiene	20.2	4.00	20.00	0	101	85.3	130				
Naphthalene	22.4	1.00	20.00	0	112	55	158				
1,2,3-Trichlorobenzene	21.6	4.00	20.00	0	108	74	139				
Surr: Dibromofluoromethane	26.2		25.00		105	81.1	118				
Surr: Toluene-d8	26.4		25.00		106	85.7	113				
Surr: 1-Bromo-4-fluorobenzene	26.9		25.00		108	84.2	111				

NOTES:
S - Outlying spike recovery observed.

Sample ID: **2001117-029AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128507**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	17.5	1.00	20.00	0	87.5	32.2	196	16.87	3.67	30	
Chloromethane	39.5	2.00	20.00	0	198	37.8	173	38.25	3.25	30	S
Vinyl chloride	22.2	0.200	20.00	0	111	67.7	154	21.49	3.45	30	
Bromomethane	21.1	1.00	20.00	0	105	21.9	223	19.35	8.47	30	
Trichlorofluoromethane (CFC-11)	21.9	1.00	20.00	0	109	80.7	139	21.04	3.94	30	
Chloroethane	21.6	1.00	20.00	0	108	72.5	149	21.10	2.34	30	
1,1-Dichloroethene	21.9	1.00	20.00	0	109	82.5	140	21.01	4.11	30	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001117-029AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128507**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	21.4	1.00	20.00	0	107	77.9	131	20.87	2.68	30	
trans-1,2-Dichloroethene	21.6	1.00	20.00	0	108	80.5	133	20.72	4.24	30	
Methyl tert-butyl ether (MTBE)	22.4	1.00	20.00	0	112	65	138	21.41	4.40	30	
1,1-Dichloroethane	22.7	1.00	20.00	0	113	77.8	135	21.65	4.74	30	
cis-1,2-Dichloroethene	21.2	1.00	20.00	0	106	82.1	130	20.68	2.47	30	
Chloroform	21.8	1.00	20.00	0	109	78.6	133	21.35	1.87	30	
1,1,1-Trichloroethane (TCA)	21.7	1.00	20.00	0	108	79.9	135	21.01	3.09	30	
1,1-Dichloropropene	21.4	1.00	20.00	0	107	83	134	21.49	0.501	30	
Carbon tetrachloride	21.2	1.00	20.00	0	106	79.3	137	20.67	2.44	30	
1,2-Dichloroethane (EDC)	22.1	1.00	20.00	0	111	71.1	134	21.76	1.68	30	
Benzene	21.6	1.00	20.00	0	108	82.4	131	21.31	1.20	30	
Trichloroethene (TCE)	21.6	0.500	20.00	0	108	80.9	133	21.01	2.93	30	
1,2-Dichloropropane	22.2	1.00	20.00	0	111	78.5	131	21.92	1.28	30	
Bromodichloromethane	21.3	1.00	20.00	0	106	75.9	132	20.61	3.28	30	
Dibromomethane	21.3	1.00	20.00	0	107	77.6	130	21.20	0.671	30	
cis-1,3-Dichloropropene	20.9	1.00	20.00	0	104	71.6	127	20.38	2.43	30	
Toluene	21.6	1.00	20.00	0	108	75.9	137	21.15	2.31	30	
trans-1,3-Dichloropropylene	21.1	1.00	20.00	0	106	65.2	126	20.67	2.29	30	
1,1,2-Trichloroethane	21.7	1.00	20.00	0	109	71.7	136	21.56	0.727	30	
1,3-Dichloropropane	22.0	1.00	20.00	0	110	72.7	132	21.78	0.814	30	
Tetrachloroethene (PCE)	20.3	1.00	20.00	0	101	81.5	132	20.03	1.31	30	
Dibromochloromethane	20.6	1.00	20.00	0	103	70.8	131	20.17	2.16	30	
1,2-Dibromoethane (EDB)	21.2	0.250	20.00	0	106	70.1	133	20.98	1.04	30	
Chlorobenzene	20.8	1.00	20.00	0	104	84.5	124	20.16	3.03	30	
1,1,1,2-Tetrachloroethane	20.2	1.00	20.00	0	101	81.4	124	19.58	2.96	30	
Ethylbenzene	21.2	1.00	20.00	0	106	82.8	132	20.54	2.96	30	
m,p-Xylene	42.2	1.00	40.00	0	106	80.7	130	40.99	3.01	30	
o-Xylene	21.0	1.00	20.00	0	105	82	126	20.23	3.67	30	
Styrene	20.7	1.00	20.00	0	104	80.7	123	20.20	2.60	30	
Isopropylbenzene	21.2	1.00	20.00	0	106	85.1	129	20.53	3.05	30	
Bromoform	19.5	2.00	20.00	0	97.7	70.6	122	19.21	1.68	30	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001117-029AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/14/2020** SeqNo: **1128507**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	21.2	1.00	20.00	0	106	78.7	124	20.75	2.31	30	
n-Propylbenzene	21.4	1.00	20.00	0	107	83.6	132	20.78	2.86	30	
Bromobenzene	19.8	1.00	20.00	0	99.1	80.3	124	19.19	3.21	30	
1,3,5-Trimethylbenzene	20.5	1.00	20.00	0	103	81.6	128	20.04	2.43	30	
2-Chlorotoluene	20.8	1.00	20.00	0	104	81.6	136	20.30	2.30	30	
4-Chlorotoluene	20.4	1.00	20.00	0	102	81.7	127	19.96	2.32	30	
tert-Butylbenzene	20.7	1.00	20.00	0	103	79.9	133	20.07	3.06	30	
1,2,3-Trichloropropane	21.0	1.00	20.00	0	105	63.1	137	20.50	2.18	30	
1,2,4-Trichlorobenzene	21.4	2.00	20.00	0	107	80	130	20.39	5.03	30	
sec-Butylbenzene	20.9	1.00	20.00	0	105	85.2	131	20.19	3.48	30	
4-Isopropyltoluene	20.3	1.00	20.00	0	102	82.5	129	19.56	3.89	30	
1,3-Dichlorobenzene	20.5	1.00	20.00	0	102	89.8	122	19.85	2.97	30	
1,4-Dichlorobenzene	20.4	1.00	20.00	0	102	89	122	19.79	2.88	30	
n-Butylbenzene	22.7	1.00	20.00	0	114	81.5	141	21.66	4.83	30	
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	87.8	124	20.07	3.71	30	
1,2-Dibromo-3-chloropropane	22.8	1.00	20.00	0	114	62.9	142	21.95	3.59	30	
1,2,4-Trimethylbenzene	20.3	1.00	20.00	0	101	75.1	132	19.72	2.78	30	
Hexachloro-1,3-butadiene	20.9	4.00	20.00	0	104	85.3	130	20.21	3.36	30	
Naphthalene	25.0	1.00	20.00	0	125	55	158	22.41	10.8	30	
1,2,3-Trichlorobenzene	23.1	4.00	20.00	0	115	74	139	21.55	6.93	30	
Surr: Dibromofluoromethane	26.0		25.00		104	81.1	118		0		
Surr: Toluene-d8	26.3		25.00		105	85.7	113		0		
Surr: 1-Bromo-4-fluorobenzene	26.8		25.00		107	84.2	111		0		

NOTES:
S - Outlying spike recovery observed.

Sample ID: **2001171-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/15/2020** SeqNo: **1128515**

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	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001171-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/15/2020** SeqNo: **1128515**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	ND	2.00						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	
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	
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-Dichloropropylene	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	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	

Work Order: 2001166
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2001171-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/14/2020** RunNo: **56644**
Client ID: **BATCH** Batch ID: **27113** Analysis Date: **1/15/2020** SeqNo: **1128515**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	2.00						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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	25.7		25.00		103	81.1	118		0		
Surr: Toluene-d8	26.5		25.00		106	85.7	113		0		
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.4	84.2	111		0		

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**2001166**
Logged by:	**Carissa True**	Date Received:	**1/9/2020 4:00:00 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 ☐
	Samples received straight from field			
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: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	16.6
Sample 1	12.8
Temp Blank 1	16.1

* 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

Chain of Custody Record & Laboratory Services Agreement

Date: 1/9/20 Page: of:

Laboratory Project No (internal): 2001166

Project Name: Bethel Junction

Special Remarks:

Client: PES Environmental

Project No: 1246.030.04.003

Address: 1215 4th Ave #1350

Collected by: Sean K

City, State, Zip: Seattle WA, 98161

Location: Port Orchard, WA

Telephone: 206-529-3980

Report To (PM): Matt Dahl

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax: 206-529-3985

PM Email: mdahl@pesenv.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	WaterComp-010920	1/9/20	1400	W	X												
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	1/9/20 1600	x [signature]	1/9/20 1600
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

STRAIGHT BILL OF LADING

ORIGINAL — NOT NEGOTIABLE

Shipper No. 24031

Carrier No. ______

Date 9/2/20

Page ______ **of** ______

Marine Vacuum Service Inc.
(Name of carrier) (SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee Marine Vacuum Service Inc.
Street 1516 South Graham Street
City Seattle State WA Zip Code 98108

FROM:
Shipper PES Env.
Street 2355 Bethel Rd SE
City Port Orchard State WA Zip Code

24 hr. Emergency Contact Tel. No. ChemTel 1-800-255-3924
Contract MIS3627926

Route

Vehicle Number 046

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TT	X	(DOT Spec Tank Required) UN1863 Fuel Aviation, Turbin Engine, Class 3, PG I				
1 TT	X	(DOT Spec Tank Required) UN1863 Fuel Aviation, Mixture, Class 3, PG I				
1 TT	X	(DOT Spec Tank Required) UN1203 Gasoline, Mixture Class 3, PG II				
1 TT	X	(DOT Spec Tank Required) UN1203 Gasoline, Class 3, PG II				
1 TT	X	NA1993 Diesel Mixture, Class 3, PG III				
1 TT	X	NA1993 Diesel, Class 3, PG III				
1 TT	X	NA1270 Petroleum Oil, Class 3, PG I				
1 TT	X	NA1270 Petroleum Oil, Mixture, Class 3, PG I				
1 TT		Oily Waste Water Non Reg by DOT	165 Gal			
1 TT		Waste Water Non Reg by DOT				
1 TT		Used Oil Non Reg by DOT				
1 TT		Used Coolant Non Reg by DOT				

PLACARDS TENDERED: YES ☐ **NO** ☑

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding ______ per ______."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

______ Signature

REMIT
C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

______
(Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked
Check box if charges are to be collect ☐

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER [signature] on behalf of [illegible] LLC	CARRIER
PER 9/2/2020	PER [signature]
	DATE 9/2/20

Permanent post-office address of shipper.

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
Work Order Number: 2006255

June 19, 2020

Attention Brian O'Neal:

Fremont Analytical, Inc. received 2 sample(s) on 6/15/2020 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260D

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,

Brianna Barnes
Project Manager

Date: *06/19/2020*

CLIENT: PES Environmental, Inc.
Project: Bethel Junction
Work Order: 2006255

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2006255-001	WaterComp-061520	06/15/2020 12:50 PM	06/15/2020 3:53 PM
2006255-002	Trip Blank	06/05/2020 4:40 PM	06/15/2020 3:53 PM

Case Narrative

WO#: **2006255**
Date: **6/19/2020**

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: 6/15/2020 12:50:00 PM
Project: Bethel Junction
Lab ID: 2006255-001
Matrix: Water
Client Sample ID: **WaterComp-061520**

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 28672 Analyst: KT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Chloromethane	ND	2.00		µg/L	1	6/16/2020 7:26:18 PM
Vinyl chloride	ND	0.200		µg/L	1	6/16/2020 7:26:18 PM
Bromomethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Chloroethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Methylene chloride	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Chloroform	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Carbon tetrachloride	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Benzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	6/16/2020 7:26:18 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Bromodichloromethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Dibromomethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Toluene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Dibromochloromethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	6/16/2020 7:26:18 PM
Chlorobenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Ethylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
m,p-Xylene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
o-Xylene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Styrene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Isopropylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Bromoform	ND	2.00		µg/L	1	6/16/2020 7:26:18 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM

Analytical Report

Work Order: **2006255**
Date Reported: **6/19/2020**

Client: PES Environmental, Inc.
Collection Date: 6/15/2020 12:50:00 PM
Project: Bethel Junction
Lab ID: 2006255-001
Matrix: Water
Client Sample ID: WaterComp-061520

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 28672		Analyst: KT
n-Propylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Bromobenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
2-Chlorotoluene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
4-Chlorotoluene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
tert-Butylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	6/16/2020 7:26:18 PM
sec-Butylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
n-Butylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	6/16/2020 7:26:18 PM
Naphthalene	ND	1.00		µg/L	1	6/16/2020 7:26:18 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	6/16/2020 7:26:18 PM
Surr: Dibromofluoromethane	95.1	83.7 - 117		%Rec	1	6/16/2020 7:26:18 PM
Surr: Toluene-d8	96.3	87.6 - 113		%Rec	1	6/16/2020 7:26:18 PM
Surr: 1-Bromo-4-fluorobenzene	98.6	81.2 - 113		%Rec	1	6/16/2020 7:26:18 PM

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-28672** SampType: **LCS** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **LCSW** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	12.2	1.00	20.00	0	61.0	20.6	156				
Chloromethane	14.8	2.00	20.00	0	74.1	37.6	157				
Vinyl chloride	16.0	0.200	20.00	0	80.1	63.7	126				
Bromomethane	17.1	1.00	20.00	0	85.5	53.5	142				
Trichlorofluoromethane (CFC-11)	18.1	1.00	20.00	0	90.5	80	118				
Chloroethane	17.3	1.00	20.00	0	86.7	69.7	122				
1,1-Dichloroethene	18.1	1.00	20.00	0	90.7	83.1	115				
Methylene chloride	18.5	1.00	20.00	0	92.4	79.5	116				
trans-1,2-Dichloroethene	18.2	1.00	20.00	0	91.2	85.4	114				
Methyl tert-butyl ether (MTBE)	18.4	1.00	20.00	0	91.8	76.9	123				
1,1-Dichloroethane	18.2	1.00	20.00	0	90.8	79.1	118				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.3	85.3	114				
Chloroform	18.8	1.00	20.00	0	93.9	85.4	114				
1,1,1-Trichloroethane (TCA)	18.8	1.00	20.00	0	94.2	87.1	114				
1,1-Dichloropropene	18.5	1.00	20.00	0	92.5	88.4	114				
Carbon tetrachloride	19.3	1.00	20.00	0	96.6	86.1	115				
1,2-Dichloroethane (EDC)	18.8	1.00	20.00	0	93.8	84.9	115				
Benzene	18.6	1.00	20.00	0	92.8	89	112				
Trichloroethene (TCE)	18.9	0.500	20.00	0	94.4	85.8	117				
1,2-Dichloropropane	18.5	1.00	20.00	0	92.6	84.6	116				
Bromodichloromethane	19.3	1.00	20.00	0	96.7	83.5	118				
Dibromomethane	18.8	1.00	20.00	0	94.2	83.9	114				
cis-1,3-Dichloropropene	19.3	1.00	20.00	0	96.5	83.1	120				
Toluene	19.0	1.00	20.00	0	94.9	86.7	115				
trans-1,3-Dichloropropylene	19.4	1.00	20.00	0	96.8	82	119				
1,1,2-Trichloroethane	18.9	1.00	20.00	0	94.7	84.1	117				
1,3-Dichloropropane	18.7	1.00	20.00	0	93.7	81	119				
Tetrachloroethene (PCE)	19.6	1.00	20.00	0	97.8	85.7	116				
Dibromochloromethane	19.7	1.00	20.00	0	98.4	81.1	118				
1,2-Dibromoethane (EDB)	19.0	0.250	20.00	0	95.1	80	119				
Chlorobenzene	19.4	1.00	20.00	0	97.2	88.2	110				

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-28672** SampType: **LCS** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **LCSW** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198848**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.9	1.00	20.00	0	99.4	85.9	112				
Ethylbenzene	19.3	1.00	20.00	0	96.5	86.8	114				
m,p-Xylene	39.1	1.00	40.00	0	97.7	85.3	116				
o-Xylene	19.7	1.00	20.00	0	98.4	84.9	115				
Styrene	19.3	1.00	20.00	0	96.7	86.1	114				
Isopropylbenzene	19.4	1.00	20.00	0	97.1	85.6	117				
Bromoform	20.1	2.00	20.00	0	100	76.7	120				
1,1,2,2-Tetrachloroethane	19.2	1.00	20.00	0	95.9	68.1	128				
n-Propylbenzene	19.4	1.00	20.00	0	96.9	81.8	125				
Bromobenzene	19.8	1.00	20.00	0	99.1	80.8	119				
1,3,5-Trimethylbenzene	19.6	1.00	20.00	0	98.0	75.1	125				
2-Chlorotoluene	19.3	1.00	20.00	0	96.4	81.9	119				
4-Chlorotoluene	19.3	1.00	20.00	0	96.7	78.1	123				
tert-Butylbenzene	19.7	1.00	20.00	0	98.3	76	126				
1,2,3-Trichloropropane	18.9	1.00	20.00	0	94.7	70.7	127				
1,2,4-Trichlorobenzene	20.3	2.00	20.00	0	102	84.4	122				
sec-Butylbenzene	20.7	1.00	20.00	0	104	76.5	128				
4-Isopropyltoluene	20.0	1.00	20.00	0	99.8	76.8	125				
1,3-Dichlorobenzene	21.1	1.00	20.00	0	105	91.6	113				
1,4-Dichlorobenzene	20.3	1.00	20.00	0	102	88.9	114				
n-Butylbenzene	20.0	1.00	20.00	0	99.8	88.3	122				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	89	114				
1,2-Dibromo-3-chloropropane	20.4	1.00	20.00	0	102	61.5	137				
1,2,4-Trimethylbenzene	19.5	1.00	20.00	0	97.5	76.4	125				
Hexachloro-1,3-butadiene	21.2	4.00	20.00	0	106	87.3	119				
Naphthalene	21.2	1.00	20.00	0	106	73.7	135				
1,2,3-Trichlorobenzene	20.7	4.00	20.00	0	104	81.2	124				
Surr: Dibromofluoromethane	25.1		25.00		100	83.7	117				
Surr: Toluene-d8	24.4		25.00		97.7	87.6	113				
Surr: 1-Bromo-4-fluorobenzene	25.1		25.00		100	81.2	113				

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCSD-28672** SampType: **LCSD** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **LCSW02** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198849**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	11.3	1.00	20.00	0	56.5	20.6	156	12.21	7.65	20	
Chloromethane	14.1	2.00	20.00	0	70.7	37.6	157	14.82	4.63	20	
Vinyl chloride	16.0	0.200	20.00	0	80.0	63.7	126	16.02	0.185	20	
Bromomethane	15.4	1.00	20.00	0	77.1	53.5	142	17.10	10.3	20	
Trichlorofluoromethane (CFC-11)	18.0	1.00	20.00	0	90.0	80	118	18.11	0.600	20	
Chloroethane	17.2	1.00	20.00	0	86.1	69.7	122	17.34	0.646	20	
1,1-Dichloroethene	17.9	1.00	20.00	0	89.6	83.1	115	18.14	1.27	20	
Methylene chloride	18.5	1.00	20.00	0	92.7	79.5	116	18.49	0.298	20	
trans-1,2-Dichloroethene	18.8	1.00	20.00	0	94.2	85.4	114	18.23	3.29	20	
Methyl tert-butyl ether (MTBE)	18.5	1.00	20.00	0	92.5	76.9	123	18.37	0.728	20	
1,1-Dichloroethane	18.8	1.00	20.00	0	94.1	79.1	118	18.17	3.48	20	
cis-1,2-Dichloroethene	18.6	1.00	20.00	0	92.8	85.3	114	18.85	1.60	20	
Chloroform	18.6	1.00	20.00	0	93.2	85.4	114	18.78	0.764	20	
1,1,1-Trichloroethane (TCA)	19.1	1.00	20.00	0	95.3	87.1	114	18.84	1.18	20	
1,1-Dichloropropene	18.9	1.00	20.00	0	94.4	88.4	114	18.49	2.05	20	
Carbon tetrachloride	19.6	1.00	20.00	0	98.0	86.1	115	19.32	1.45	20	
1,2-Dichloroethane (EDC)	18.7	1.00	20.00	0	93.4	84.9	115	18.77	0.435	20	
Benzene	18.7	1.00	20.00	0	93.5	89	112	18.55	0.770	20	
Trichloroethene (TCE)	19.0	0.500	20.00	0	94.8	85.8	117	18.89	0.391	20	
1,2-Dichloropropane	18.5	1.00	20.00	0	92.4	84.6	116	18.52	0.190	20	
Bromodichloromethane	19.2	1.00	20.00	0	96.2	83.5	118	19.33	0.507	20	
Dibromomethane	18.9	1.00	20.00	0	94.4	83.9	114	18.84	0.187	20	
cis-1,3-Dichloropropene	19.3	1.00	20.00	0	96.5	83.1	120	19.30	0.0358	20	
Toluene	19.0	1.00	20.00	0	95.1	86.7	115	18.98	0.198	20	
trans-1,3-Dichloropropylene	19.2	1.00	20.00	0	96.1	82	119	19.35	0.681	20	
1,1,2-Trichloroethane	18.9	1.00	20.00	0	94.6	84.1	117	18.94	0.0865	20	
1,3-Dichloropropane	18.8	1.00	20.00	0	93.9	81	119	18.75	0.207	20	
Tetrachloroethene (PCE)	19.7	1.00	20.00	0	98.3	85.7	116	19.56	0.513	20	
Dibromochloromethane	19.9	1.00	20.00	0	99.4	81.1	118	19.67	1.08	20	
1,2-Dibromoethane (EDB)	19.0	0.250	20.00	0	94.9	80	119	19.03	0.262	20	
Chlorobenzene	19.4	1.00	20.00	0	97.1	88.2	110	19.44	0.0867	20	

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCSD-28672** SampType: **LCSD** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **LCSW02** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198849**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.8	1.00	20.00	0	99.1	85.9	112	19.89	0.386	20	
Ethylbenzene	19.3	1.00	20.00	0	96.6	86.8	114	19.29	0.135	20	
m,p-Xylene	39.2	1.00	40.00	0	97.9	85.3	116	39.08	0.217	20	
o-Xylene	19.7	1.00	20.00	0	98.3	84.9	115	19.67	0.0910	20	
Styrene	19.4	1.00	20.00	0	97.1	86.1	114	19.34	0.420	20	
Isopropylbenzene	19.6	1.00	20.00	0	97.9	85.6	117	19.41	0.885	20	
Bromoform	20.1	2.00	20.00	0	101	76.7	120	20.09	0.189	20	
1,1,2,2-Tetrachloroethane	19.3	1.00	20.00	0	96.3	68.1	128	19.17	0.455	20	
n-Propylbenzene	19.3	1.00	20.00	0	96.5	81.8	125	19.37	0.408	20	
Bromobenzene	19.8	1.00	20.00	0	99.2	80.8	119	19.82	0.119	20	
1,3,5-Trimethylbenzene	19.7	1.00	20.00	0	98.3	75.1	125	19.61	0.251	20	
2-Chlorotoluene	19.5	1.00	20.00	0	97.3	81.9	119	19.29	0.856	20	
4-Chlorotoluene	19.4	1.00	20.00	0	97.2	78.1	123	19.33	0.506	20	
tert-Butylbenzene	19.8	1.00	20.00	0	99.2	76	126	19.66	0.957	20	
1,2,3-Trichloropropane	20.0	1.00	20.00	0	100	70.7	127	18.94	5.47	20	
1,2,4-Trichlorobenzene	20.7	2.00	20.00	0	103	84.4	122	20.34	1.58	20	
sec-Butylbenzene	20.8	1.00	20.00	0	104	76.5	128	20.70	0.419	20	
4-Isopropyltoluene	20.0	1.00	20.00	0	100	76.8	125	19.97	0.123	20	
1,3-Dichlorobenzene	20.2	1.00	20.00	0	101	91.6	113	21.10	4.22	20	
1,4-Dichlorobenzene	20.2	1.00	20.00	0	101	88.9	114	20.32	0.580	20	
n-Butylbenzene	20.6	1.00	20.00	0	103	88.3	122	19.96	3.08	20	
1,2-Dichlorobenzene	20.4	1.00	20.00	0	102	89	114	20.18	1.17	20	
1,2-Dibromo-3-chloropropane	20.4	1.00	20.00	0	102	61.5	137	20.42	0.0979	20	
1,2,4-Trimethylbenzene	19.7	1.00	20.00	0	98.6	76.4	125	19.50	1.17	20	
Hexachloro-1,3-butadiene	21.3	4.00	20.00	0	106	87.3	119	21.24	0.0935	20	
Naphthalene	21.8	1.00	20.00	0	109	73.7	135	21.20	2.60	20	
1,2,3-Trichlorobenzene	20.8	4.00	20.00	0	104	81.2	124	20.73	0.393	20	
Surr: Dibromofluoromethane	25.2		25.00		101	83.7	117		0		
Surr: Toluene-d8	24.3		25.00		97.4	87.6	113		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	81.2	113		0		

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-28672** SampType: **MBLK** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **MBLKW** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198850**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
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									
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-Dichloropropylene	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	0.250									
Chlorobenzene	ND	1.00									

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-28672** SampType: **MBLK** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **MBLKW** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198850**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	2.00									
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									
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.0		25.00		96.0	83.7	117				
Surr: Toluene-d8	24.1		25.00		96.4	87.6	113				
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.2	81.2	113				

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-28672** SampType: **MBLK** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **MBLKW** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198850**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **2006246-004ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198838**

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	2.00						0		30	Q
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	
cis-1,2-Dichloroethene	4.27	1.00						4.316	1.06	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	

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2006246-004ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198838**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2006246-004ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198838**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.5		25.00		94.2	83.7	117		0		
Surr: Toluene-d8	24.2		25.00		96.7	87.6	113		0		
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.6	81.2	113		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: **2006248-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198842**

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	2.00						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	
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	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2006248-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198842**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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-Dichloropropylene	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	0.250						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	2.00						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	

Work Order: 2006255
CLIENT: PES Environmental, Inc.
Project: Bethel Junction

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **2006248-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/16/2020** RunNo: **59897**
Client ID: **BATCH** Batch ID: **28672** Analysis Date: **6/16/2020** SeqNo: **1198842**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
Hexachloro-1,3-butadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	23.6		25.00		94.5	83.7	117		0		
Surr: Toluene-d8	24.0		25.00		96.0	87.6	113		0		
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.2	81.2	113		0		

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**2006255**
Logged by:	**Carissa True**	Date Received:	**6/15/2020 3:53:00 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 Present ☐
6.	Was an attempt made to cool the samples?	Yes	☑	No	☐	NA ☐
7.	Were all items received at a temperature of >2°C to 6°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: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	1.7
Sample 1	1.3
Temp Blank 1	11.1

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

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 06/15/2020 Page: 1 of: 1

Laboratory Project No (internal): 2006255

Special Remarks:

Project Name: Bethel Junction

Project No: 1246.030.04.003

Client: PES Environmental, Inc.

Address: 1215 4th Ave #1350

City, State, Zip: Seattle WA, 98161

Telephone: 206-529-3980

Fax: 206-529-3985

Collected by: Sean Kounovsky

Location: Port Orchard, WA

Report To (PM): Brian O'Neal

PM Email: Boneal@pesenv.com

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/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 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)				Comments
1	WaterComp-061520	6/15	1250	W	X																
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: 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

**Metals (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 Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	6/15/20 @1500	x [signature]	6/15/20 @1553
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

APPENDIX D

BORING LOGS

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-27

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Depth (Feet)	Lithologic Description
Concrete				0	Concrete (4 inches)
	0.4	SB-27-0.5			BROWN SAND (SP), moist, fine, few fines, occasional cobbles, (soil hand cleared to 3 feet)
				2	
	1.1	SB-27-3			
				4	BROWN SILTY SAND (SM), moist, fine, little fines, few fine to coarse subrounded gravel up to 1.5-inch diameter
	0.9		40		
	1.0	SB-27-6		6	BROWN SAND (SP), moist, fine, few fines, few fine to coarse subangular gravel up to 1-inch diameter
Bentonite Chips					
	0.7			8	BROWN SILTY SAND (SM), moist to wet, fine, little fines
			48		
	0.6			10	LIGHT BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, few fine subrounded gravel
					at 10.5 feet: gray
	1.0				
	0.7			12	
			36		
	0.5			14	Bottom of boring at 14 feet (Refusal)
					Temporary Well: 3/4-inch Sch. 40 PVC screen from 9-14 feet bgs Depth to water: 9.4 feet bgs at time of drilling Water Sample: SB-27-W
				16	Boring backfilled with hydrated bentonite chips and concrete patch
				18	
				20	

Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 14 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/24/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-28

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Depth (Feet)	Lithologic Description
Concrete				0	Concrete (4 inches)
	1.1	SB-28-0.5			BROWN SAND (SP), moist, fine to medium, few fines, (hand cleared to 3 feet)
				2	BROWN SILTY SAND (SM), moist, fine to medium, little fines, few fine to coarse subrounded gravel, frequent orange staining, (hand cleared to 3 feet)
	0.6				
		SB-28-3			
	0.9			4	
	1.1		40		
	0.6	SB-28-6		6	
	1.0				GRAY SAND (SP), moist, fine to medium, few fines
Bentonite Chips				8	
	0.3				
			48		GRAY-BROWN SILTY SAND WITH GRAVEL (SM), moist, fine, little fine to coarse subrounded gravel, little fines
	0.1			10	
					at 11 feet: trace gravel
	1.0				
	0.6			12	
			48		at 13 feet: higher moisture content
	0.3			14	
					at 14.5 feet: lower moisture content
	1.0				Bottom of boring at 15 feet Boring backfilled with hydrated bentonite chips and concrete patch
				16	
				18	
				20	

Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 15 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/24/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-29

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Depth (Feet)	Lithologic Description
Concrete	1.0	SB-29-0.5		0	Concrete (4 inches)
					BROWN SILTY SAND (SM), moist, fine, little fines, few fine to coarse subrounded gravel, (soil hand cleared to 3 feet)
	0.6			2	
	0.3	SB-29-3			
				4	at 4 feet: fine to medium
	1.1		36		
	0.9	SB-29-6		6	
					GRAY SILTY SAND (SM), moist, fine to medium, little fines, few fine to coarse subrounded gravel
Bentonite Chips	1.2			8	
	0.3		48		
	0.3			10	
	0.6				
	1.0			12	
			48		at 13 feet: wet
	1.1			14	
	1.3				Bottom of boring at 15 feet
				16	Temporary Well: 3/4-inch Sch. 40 PVC screen from 10-15 bgs Depth to water: 13.2 feet bgs at time of sampling Water Sample: SB-29-W
					Boring backfilled with hydrated bentonite chips and concrete patch
				18	
				20	

Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 15 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/24/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-30

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Depth (Feet)	Lithologic Description
Concrete	0.5	SB-30-0.5		0	Concrete (4 inches)
					BROWN SILTY SAND (SM), moist, fine, little fines, few fine to coarse subangular gravel, (soil hand cleared to 3 feet)
	1.0			2	
	1.0	SB-30-3			
	1.0			4	BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, few fines, little fine to coarse subrounded gravel
	0.8		36		
		SB-30-6		6	
	0.1				
Bentonite Chips					
	0.0			8	GRAY-BROWN SILTY SAND (SM), moist, fine to medium, little fines, few fine to coarse subrounded gravel
			48		
	0.1				
				10	at 10 feet: wet to moist, little gravel
	0.5				
				12	
	0.1				
			40		
	0.1			14	
	0.3				Bottom of boring at 15 feet Boring backfilled with hydrated bentonite chips and concrete patch
				16	
				18	
				20	

Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 15 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/24/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-31

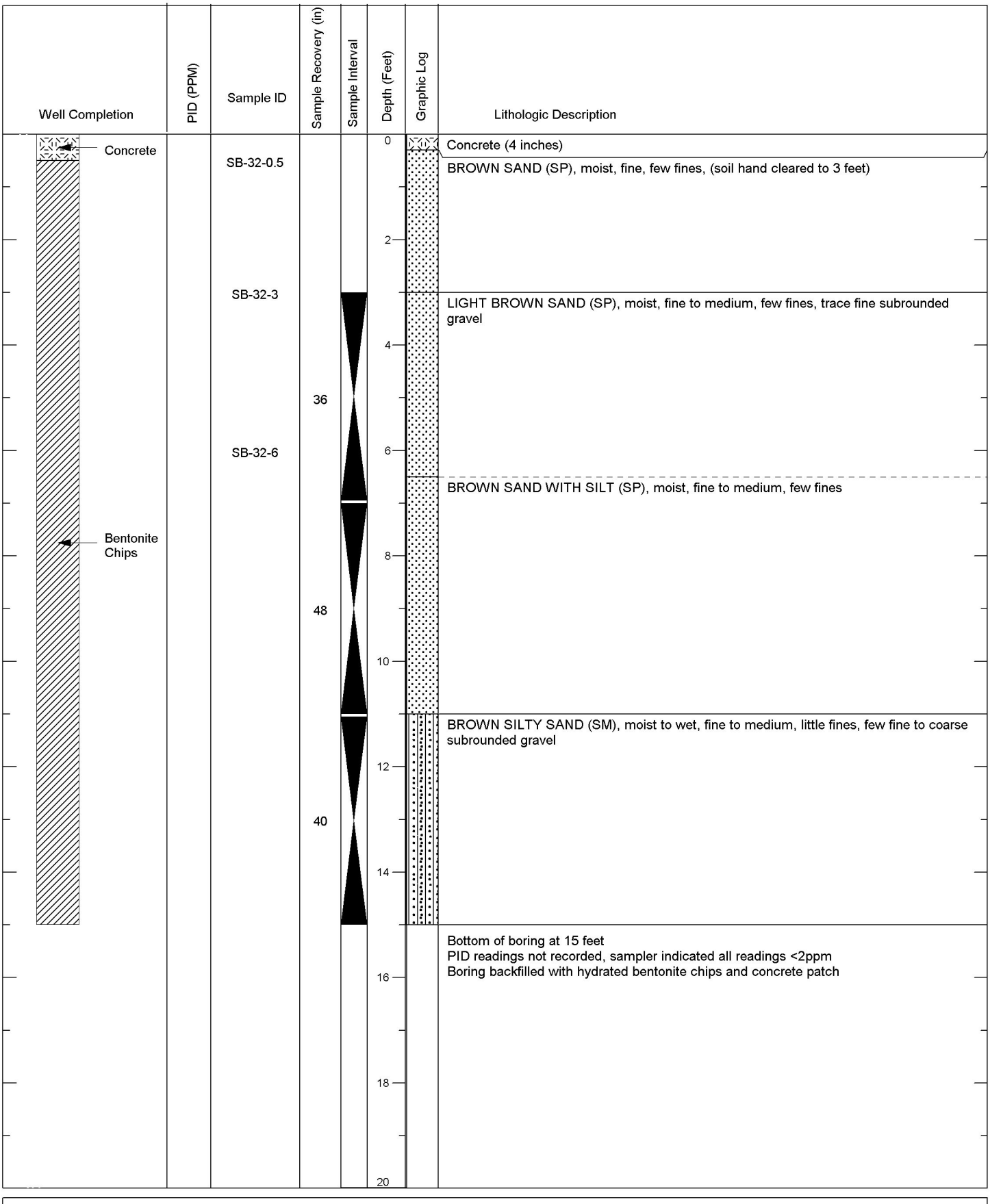
Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Depth (Feet)	Lithologic Description
Concrete	0.5	SB-31-0.5		0	Concrete (4 inches)
					BROWN SAND WITH SILT (SP), moist, fine, few fines, trace fine subangular gravel, (soil hand cleared to 3 feet)
	1.0			2	
	0.6	SB-31-3			
	0.3			4	at 4 feet: fines percentage varies in 2- to 4-inch horizons
	0.1		40		
	1.1	SB-31-6		6	
Bentonite Chips					
	0.1			8	
	0.5		48		
	0.5			10	BROWN SILTY SAND (SM), moist, fine to medium, little fines
	0.4				at 11 feet: moist to wet
	1.1			12	
	1.0		48		at 13 feet: gray, lower moisture content
	0.0			14	at 14 feet: dark gray
	0.0				
					Bottom of boring at 15 feet Boring backfilled with hydrated bentonite chips and concrete patch
				16	
				18	
				20	

Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 15 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/25/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-32



Project: Bethel Junction
Project Number: 1246.030.04.003
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes: N/A

Total Drilled Depth: 15 feet
Diameter of Boring: 2.25 inches
Drill Date: 9/25/2019
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-33

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Concrete (5 inches)
	0.0	SB-33-0.5					BROWN SILTY SAND (SM), moist, fine, little fines, few fine to coarse subrounded gravel up to 2.5-inch diameter, (soil hand cleared to 2.5 feet)
	0.2				2		
Bentonite Chips	0.0	SB-33-3	24				BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subrounded gravel, few fines
					4		
	0.1		24				
		SB-33-6			6		Bottom of boring at 6 feet Boring backfilled with hydrated bentonite chips and concrete patch
					8		
					10		
					12		
					14		
					16		
					18		
					20		

Project: Bethel Junction
Project Number: 1246.030.04
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes:

Total Drilled Depth: 6 feet
Diameter of Boring: 2.25 inches
Drill Date: 8/7/20
Drilled By: ESN Northwest, Inc.
Drill Method: Direct Push

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-34

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.1	SB-34-0.5	6		0		Concrete (5 inches)
							BROWN SILTY SAND (SM), moist, fine, little fines, few fine subrounded gravel
							Bottom of boring at 1 feet. Boring backfilled and patched with concrete.
					2		
					4		
					6		
					8		
					10		
					12		
					14		
					16		
					18		
					20		

Project: Bethel Junction
Project Number: 1246.030.04
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes:

Total Drilled Depth: 1 foot
Diameter of Boring: 3 inches
Drill Date: 8/7/20
Drilled By: ESN Northwest, Inc.
Drill Method: Hand Auger

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-35

Well Completion	PID (PPM)	Sample ID	Sample Recovery (in)	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Concrete (5 inches)
	0.1						BROWN SILTY SAND (SM), moist, fine, little fines, few fine to coarse subrounded gravel
Bentonite Chips			30		2		
	0.0	SB-35-3					
							Bottom of boring at 3 feet Boring backfilled with hydrated bentonite chips and concrete patch
					4		
					6		
					8		
					10		
					12		
					14		
					16		
					18		
					20		

Project: Bethel Junction
Project Number: 1246.030.04
Site Location: Port Orchard, Washington
Logged By: C. DeBoer
Notes:

Total Drilled Depth: 3 feet
Diameter of Boring: 3 inches
Drill Date: 8/7/20
Drilled By: ESN Northwest, Inc.
Drill Method: Hand Auger