PES Environmental, Inc.
Engineering & Environmental Services

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STATUS REPORT – NOVEMBER 2017 THROUGH DECEMBER 2018
MANHATTAN VILLAGE SHOPPING CENTER AND HARRIS PROPERTIES
NORMANDY PARK, WASHINGTON

Dear Mr. Grant and Mr. Bloch:

PES Environmental, Inc. (PES) has prepared this letter to summarize the remediation system operation and maintenance (O&M) activities through December 2018 and groundwater monitoring and sampling events performed in January, April, July, and October 2018 for the Manhattan Village Shopping Center (MVSC) property located at 17835 First Avenue South (the "MVSC property") and the Harris property located at 17817 – 17825 First Avenue South in Normandy Park, Washington (the "Harris property"), collectively referred to as the "Property." This letter also presents the results of the supplemental investigation conducted in April 2018. The location and current features of the Property are shown on Figures 1 and 2. The O&M and sampling was conducted in accordance the Remedial Action Work Plan (RAWP[1]) and the Operations and Maintenance Plan (O&M Plan)[2]. A Sampling and Analysis Plan (SAP) is included as Appendix H to the RAWP.

REMEDIATION SYSTEM O&M

Air Sparging and Soil Vapor Extraction System Description

The air sparging (AS) and soil vapor extraction (SVE) system includes 22 SVE wells, 31 AS wells, and a remediation equipment enclosure containing the AS and SVE mechanical equipment and controls (Figure 3). The AS/SVE system was started up in October 2016. The SVE system

[1] PES Environmental, Inc. 2016. *Remedial Action Work Plan, Manhattan Village Shopping Center and Harris Properties, VCP NW1873, Normandy Park, Washington*. October.
[2] PES Environmental, Inc. 2016. *Operations and Maintenance Plan, Manhattan Village Shopping Center and Harris Properties, VCP NW1873, Normandy Park, Washington*. December.

consists of a well manifold, positive displacement blower, inline silencers, moisture knockout, condensate storage and transfer pumps, and discharge stack. The SVE manifold includes a vacuum gauge, and each leg of the manifold includes a balancing valve, sampling port, and flow and vacuum monitoring port. The discharge stack includes a temperature gauge, flow meter, sampling port, and an inline silencer. The AS system consists of a well manifold, positive displacement blower, inline silencers, and a heat exchanger. Each leg of the manifold includes a pressure gauge, flow meter, and balancing valve. The AS blower and heat exchanger include pressure and temperature gauges. The SVE blower, AS blower, and heat exchanger are mounted inside insulated enclosures to dampen the equipment noise.

The AS wells are designed to target the sand and silty sand aquifer directly above the silt and clay layer that has been encountered at depths of 46.5 to 50 feet below ground surface (ft bgs) on the Harris property and 55 to 56 ft bgs on the MVSC property. The SVE wells are installed at two levels within the vadose zone. Shallow screened wells (5 to 20 ft bgs) target the upper vadose zone, and deeper screened wells (20 to 30 ft bgs on Harris property and 20 to 35 ft bgs on MVSC property) target the lower vadose zone. Detailed descriptions of the AS/SVE system, remediation wells, as-built drawings, and O&M procedures are included in the O&M Plan.

Air Sparging and Soil Vapor Extraction System O&M

O&M activities during the reporting period included field inspections, testing, and O&M of AS/SVE components monthly. Specific work included documenting and maintaining the operational status of the AS/SVE equipment, general operating conditions (leaks, breakage, alarms), monitoring water levels and dissolved oxygen (DO) concentrations within the AS zone of influence (ZOI), monitoring and balancing AS wells (flow rate, pressure), monitoring and balancing SVE wells (flow rate, vacuum), monitoring field volatile organic compound (VOC) concentrations from SVE wells and the discharge stack, and responding to system alarms. Annual brush cutting on Harris property to maintain access to remediation and monitoring wells was conducted in October 2018.

Performance vapor samples were collected each month from the SVE discharge stack, and the samples were analyzed by ALS Environmental (an accredited laboratory) for VOCs by United States Environmental Protection Agency (EPA) Method TO-15 to evaluate mass removed and to verify compliance with Puget Sound Clean Air Agency (PSCAA) and Washington State Department of Ecology (Ecology) discharge criteria. The April 2018 sample was collected but not analyzed due to a faulty summa canister valve.

The system operated with an uptime of approximately 91% during this reporting period, with most of the down time due to the shutdowns for the routine performance groundwater sampling events. The entire system was shut down in January and June for routine maintenance (oil change, bearing and belt maintenance, filter replacement), and the remaining down time was due to power outages. The heat exchanger fan motor and one of the two condensate transfer pumps were replaced in mid-May. The AS system was down for two weeks in May prior to replacement of the heat exchanger fan motor. The remediation system was temporarily shut down on December 13, 2018 to evaluate potential rebound conditions in groundwater. The SVE

system operating data is summarized in Table 1, and the AS system operating data is summarized in Table 2.

The SVE system operated with a total flow rate of between 790 and 892 standard cubic feet per minute (scfm) and vacuums of 20 to 35 inches of water column (in.w.c.) on the SVE well field. Individual SVE wells operated between approximately 14 to 46 scfm per well, with an average flow of 39 scfm per well. The AS system operated at pressures between approximately 5 and 10 pounds per square inch (psi), and individual AS wells operated at approximately 10 scfm.

SVE Sampling. The PCE concentrations in the SVE effluent stack were between 130 (March 2018) to 400 micrograms per cubic meter (µg/m^3; August 2018). The average PCE stack concentration during the reporting period was approximately 220 µg/m^3. There appears to be a seasonal component to the SVE system concentrations, with the highest concentrations occurring in the late summer and early fall months in both 2017 and 2018.

The PCE removal rates ranged from 0.009 pounds per day (lbs/day) to 0.031 lbs/day, and a total of 6.5 pounds of PCE was removed between October 17, 2017 and December 13, 2018. A total of 117.7 pounds of PCE have been removed throughout the lifetimes of the SVE systems that operated from September 2009 through December 13, 2018. The PCE mass removal rate has continued to decline, and removal during the reporting period is roughly half compared to the previous year. Charts showing SVE effluent PCE concentrations and cumulative PCE mass removal are included as Attachments A1 and A2.

Samples from each of the 22 SVE wells are collected annually for VOC analysis using EPA Method TO-15. Samples were collected on December 28, 2017 and September 27, 2018.

- **December 2017 SVE Well Sampling.** PCE concentrations were between 5.9 µg/m^3 (SVE-17) to 350 µg/m^3 (SVE-7) on the Harris property, and between to 24 µg/m^3 (SVE-11B) to 310 µg/m^3 (SVE-16) on the MVSC property. SVE wells with the highest concentrations were SVE-7, SVE-8, and SVE-10 on the Harris property (290 to 350 µg/m^3), and SVE-12A and SVE-16 on the MVSC property (both 310 µg/m^3). The average PCE concentration of all wells was approximately one-third of the average concentration in December 2016, and SVE-6 (150 µg/m^3) was a factor of 10 times lower compared to December 2016 (1,490 µg/m^3).

- **September 2018 SVE Well Sampling.** PCE concentrations were between 3.3 µg/m^3 (SVE-17) to 750 µg/m^3 (SVE-3) on the Harris property and between 68 µg/m^3 (SVE-11B) to 950 µg/m^3 (SVE-6) on the MVSC Property. SVE wells with the highest concentrations were SVE-3 (750 µg/m^3), SVE-7 (400 µg/m^3), and SVE-10 (270 µg/m^3) on the Harris property, and SVE-6 (950 µg/m^3) and SVE-16 (330 µg/m^3) on the MVSC property. The average PCE concentration of all wells was approximately 1.5 times the average concentration in December 2017. The increase in concentrations appears seasonal, with the highest concentrations occurring in the late summer and early fall months.

The annual SVE well sampling results are summarized in Tables 3 and 4, and historical results are included in Attachment A3. Copies of the laboratory analytical reports and data validation memorandum are included in Attachment B.

The SVE system discharge is in compliance with the PSCAA exemption limits (e.g., less than 500 lb/year of total VOCs), and is below the Ecology small quantity emission rate of 32.4 lb/year of PCE.

SVE System Capture Zone Evaluation. The SVE-10 capture zone (CZ) was evaluated in January 2018 during a routine O&M inspection of the AS/SVE system. Routine SVE system monitoring parameters were measured to verify normal operating conditions prior to starting the CZ test. Baseline conditions were established by shutting off SVE-10, nearby SVE-7, SVE-8, and SVE-9, and measuring baseline vacuum in the off-line SVE wells and nearby monitoring wells DC-11, DC-12, DC-13, DC-18, DC-20, and MW-2. The rest of the SVE system remained operational during the SVE-10 test, and the blower speed was temporarily slowed to maintain normal operating conditions in the SVE wellfield. The SVE-10 test included opening the well and adjusting the flow and vacuum to its pre-test conditions, allowing SVE-10 to operate for approximately 10 minutes, and measuring a single round of vacuums in the nearby off-line SVE wells and monitoring wells. The SVE-10 flow and vacuum were rechecked at the end of the test to verify that they had not changed significantly. Following testing, the SVE wells were placed back online, the blower speed was readjusted to its normal level, and the well-field was rebalanced.

Since residual vacuum levels were measured during baseline monitoring, the baseline vacuums were subtracted from the vacuums measured during the SVE-10 test to determine the differential/additive effects from running SVE-10. The following is a summary of the individual SVE-10 CZ test:

- **SVE-10.** Well screen interval is 10 – 30 ft bgs. The test was performed at approximately 16 in.w.c vacuum and 46 scfm flow. Monitoring points were between 14 and 172 feet from SVE-10, and normalized vacuums were between 0.6 and 6.1 percent of the test vacuum.

The vacuum influence measurements from the test were normalized to the test well vacuum and plotted on a semi-log chart for purposes of estimating a capture zone. Common practice considers normalized vacuum between 1 and 10 percent to be adequate for designing SVE well CZ. Vacuum influence during testing was observed more than 100 feet from SVE-10. Based on experience, however, a CZ of more than 100 feet is generally not practical, and a CZ of between 50 and 60 feet is likely to be more representative of site conditions. Normalized vacuum curves and site maps showing vacuums measured before, during, and after the CZ evaluation are included in Attachment C.

Dissolved Oxygen Monitoring. The DO concentrations have increased since startup of the AS system in October 2016 from an average of 6.4 milligrams per liter (mg/L). The average DO concentration during the reporting period was approximately 11.2 mg/L within the AS ZOI. Average DO concentrations in monitoring wells downgradient of the AS ZOI to the south side of

SW 178th Street were approximately 10.5 mg/L indicating distribution of oxygenated water downgradient. Routine DO and associated water level monitoring data are summarized in Attachment A4.

PERFORMANCE GROUNDWATER MONITORING AND SAMPLING

Four quarterly rounds of groundwater performance monitoring and sampling were conducted during the reporting period. The scope included water level monitoring in all shallow wells (40 total) and select deep wells, and sampling shallow wells per the RAWP. The April and October events included a full round of 30 monitoring wells. The January and July events consisted of select wells including (1) those within the air sparging ZOI which had been below the PCE cleanup level (CUL) for less than four consecutive quarters, and (2) those which were above the CUL.

- January 2018 performance sampling consisted of 10 monitoring wells including MW-7, MW-11, DC-7, DC-8, DC-10A, DC-14, DC-15, DC-17, KMW-3, and KMW-8;

- April 2018 performance sampling consisted of 30 monitoring wells including MW-2, MW-3, MW-4, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, DC-3, DC-4, DC-7, DC-8, DC-10A, DC-11, DC-12, DC-13, DC-14, DC-15, DC-17, DC-18, DC-20, KMW-2, KMW-3, KMW-7, KMW-8, and KMW-9;

- July 2018 performance sampling consisted of 10 monitoring wells including MW-2, MW-7, DC-7, DC-8, DC-10A, DC-14, DC-15, DC-17, KMW-3, and KMW-8;

- October 2018 performance sampling consisted of 28 monitoring wells including MW-2, MW-3, MW-4, MW-7, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, MW-16, DC-3, DC-4, DC-7, DC-8, DC-11, DC-12, DC-13, DC-15, DC-17, DC-18, DC-20, KMW-2, KMW-3, KMW-7, KMW-8, and KMW-9. DC-10A was not sampled due to low water levels, and DC-14 was not sampled because it had been buried beneath a temporary road constructed by a utility contractor.

The AS/SVE system was shut down approximately one to two days prior to collecting groundwater samples within the AS influence area during each of the sampling events.

Groundwater Level Monitoring

Groundwater level monitoring was conducted on January 24, 2018, April 17, 2018, July 18, 2018, and on October 15, 2018, in all shallow monitoring wells. Depth to water was measured from the surveyed top of casing (TOC) to the nearest 0.01 foot using an electronic water level probe. MW-14, DC-1, and DC-20 were not monitored in July due to access restrictions, and DC-14 was not monitored in October because it was covered.

Groundwater Sampling

Groundwater samples were collected using low-flow sampling techniques. For each sampling event, a bladder pump with a dedicated bladder was lowered into each well. Groundwater was purged prior to sample collection until parameters stabilized. Field parameters measured during sampling consisted of temperature, pH, specific conductance, DO, and oxidation reduction potential (ORP). The pump intake was set at approximately two to three feet below the static water level, generally consistent with previous sampling events. For wells with completed submerged screened intervals, the pump intake was typically set within approximately one to two feet below the top of the screen, except for DC-4 in April 2018, where the intake was mistakenly set approximately 2.3 feet above the top of the screen inside the blank well casing.

Samples were collected into preserved 40-ml VOA sampling containers and submitted to ESC Lab Sciences (ESC) in Mt. Juliet, TN (an Ecology accredited laboratory) for analysis of VOCs by EPA Method 8260C.

Quality Assurance/Quality Control

Equipment blank, trip blank, and field duplicate samples were collected in accordance with the 2016 Sampling and Analysis Plan (included as Appendix H of the RAWP). Equipment blank and field duplicate samples are to be collected at a rate of approximately one per twenty samples, and a trip blank is to be submitted with each cooler. Equipment blank and field blank samples were collected and analyzed at the appropriate frequency during the reporting period. One trip blank was analyzed per cooler, except in October 2018, when the trip blank in the third cooler was inadvertently not analyzed. Duplicate samples collected during the reporting period were from MW-4 (April), MW-7 (January, April and October), DC-15 (July), and KMW-3 (October).

GROUNDWATER MONITORING RESULTS

Groundwater Level Monitoring

Water level measurements and groundwater elevations for the four sampling events in 2018 are summarized in Table 5, and field parameter measurements are summarized in Table 6. Groundwater elevations in the shallow wells on the Property vary seasonally, with the lowest levels in fall and highest levels in spring to early summer. The average difference in the high and low water elevations during the reporting period was approximately 1.3 feet per well in 2018. Groundwater elevations in 2018 were lowest in October, ranging from 253.57 to 273.02 feet above North American Vertical Datum of 1988 (NAVD 88), and highest in April, ranging from 254.54 to 274.39 feet NAVD 88.

Groundwater elevations in July 2017 were at or near their highest since 1999 and declined in 2018. On average, the 2018 groundwater elevations were approximately 0.9 feet lower compared to the average seasonal high elevations and the average seasonal low elevations in 2017. The groundwater elevations in October 2018 were 0.4 feet lower compared to elevations measured in October 2016 during AS/SVE system startup.

Groundwater gradients in 2018 remained generally consistent with historical results, with a north-northeast directional component on the Property and a more northerly component across SW 178th Street. The gradient across the Property (0.004 ft/ft) is approximately an order of magnitude lower than the gradient to the north of the Property (0.03 ft/ft). The on-Property gradient is estimated from MW-12 to DC-7 and KMW-9 to DC-8, and the off-Property gradient is estimated from MW-7 and KMW-8 to MW-9. Groundwater elevations in KMW-7 in January and DC-13 in April were not used for contouring because they were inconsistent with surrounding water levels. The 2018 groundwater elevations and elevation contours are shown on Figures 4 through 7. Monitoring well details are included as Attachment D1, and a complete summary of historical groundwater elevations is included as Attachment D2.

Groundwater Analytical Results

The laboratory analytical results from the January, April, July, and October 2018 sampling events for PCE are summarized on Table 7 and shown on Figures 4 through 7. A complete summary of historical PCE concentrations in groundwater monitoring wells is included as Attachment D3.

The results from the January 2018 sampling event (10 wells) are summarized as follows:

- PCE was below Ecology's Model Toxics Control Act (MTCA) Method A CUL (5 µg/L) in three wells, including MW-11, DC-10A, and KMW-3; and
- PCE was above the CUL in seven wells, including MW-7, DC-7, DC-8, DC-14, DC-15, DC-17, and KMW-8 at concentrations between 5.89 and 12.1 µg/L.

The results from the April 2018 sampling event (30 wells) are summarized as follows:

- PCE was below the laboratory method reporting limit (MRL) in six wells, including MW-4, MW-9, MW-12, MW-13, DC-4, and KMW-2;
- PCE was below the CUL in sixteen wells including MW-2, MW-3, MW-10, MW-11, MW-14, MW-15, MW-16, DC-3, DC-10A, DC-11, DC-12, DC-13, DC-18, DC-20, KMW-7, and KMW-9; and
- PCE was above the CUL in eight wells including MW-7, DC-7, DC-8, DC-14, DC-15, DC-17, KMW-3, and KMW-8 at concentrations between 5.14 and 13.0 µg/L.

The results from the July 2018 sampling event (10 wells) are summarized as follows:

- PCE was below the CUL in two wells including MW-2 and DC-10A; and
- PCE remained above the CUL in eight wells including MW-7, DC-7, DC-8, DC-14, DC-15, DC-17, KMW-3, and KMW-8 at concentrations between 5.17 and 12.3 µg/L.

The results from the October 2018 sampling event (28 wells) are summarized as follows:

- PCE was below the laboratory MRL in twelve wells including MW-3, MW-4, MW-9, MW-10, MW-12, MW-13, MW-14, MW-15, DC-3, DC-4, KMW-2, and KMW-9;

- PCE was below the CUL in wells nine wells including MW-2, MW-11, MW-16, DC-11, DC-12, DC-13, DC-18, DC-20, and KMW-7; and
- PCE was above the CUL in seven wells including MW-7, DC-7, DC-8, DC-15, DC-17, KMW-3, and KMW-8 at concentrations between 5.26 and 12.1 µg/L. DC-14, which had been above the CUL earlier in 2018, was not sampled because it was inaccessible.

Discussion of Groundwater Monitoring Results

By the October sampling event, PCE had been below the CUL for at least six consecutive sampling events in all wells within the air sparging ZOI. Time trend plots showing the PCE concentration and water table elevation over time for wells MW-2, MW-4, MW-7, DC-3, DC-4, DC-7, DC-8, DC-13, DC-14, DC-15, DC-17, KMW-3, KMW-8, and KMW-9 are presented in Attachment E. The time trend plots indicate the following:

- A correlation between increasing PCE concentrations and higher groundwater elevations is evident in most of the time trend plots. PCE concentrations tended to be higher in January and April compared to July and October;
- PCE concentrations on the MVSC property remained below the CUL. DC-3 and DC-4, within the AS ZOI, remained near or below the laboratory MRL;
- PCE concentrations on the southern half of the Harris property remained below the CUL. PCE concentrations in the northern half of the Harris property and in SW 178th Street remained above the CUL in DC-7, DC-8, DC-14, DC-15, DC-17, KMW-3, and KMW-8;
- PCE concentrations in the northwest quarter of the Harris property were slightly higher compared to the prior reporting period in DC-7, DC-8, DC-15, and DC-17. PCE in KMW-3 in SW 178th Street northwest of the Harris property has had a slight increasing trend since 2014, and PCE was just above the CUL during the reporting period; and
- PCE concentrations in downgradient well MW-7 on the Dunn Lumber property continued to decline and was at its historical low concentration in October (5.79 µg/L). PCE has never been detected above the laboratory MRL in the furthest downgradient monitoring well MW-9.

Laboratory Data Validation

The laboratory analytical reports were validated in accordance with the EPA guidelines for organic data review[3]. All of the data were judged to be acceptable for their intended use. Copies of the laboratory analytical reports and data validation memoranda are included in Attachment B.

[3] *EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*. OSWER 9240.1-05A-P PB99-963506 EPA540/R-99/008, October.

SUPPLEMENTAL INVESTIGATION

A supplemental soil and groundwater assessment was conducted in April 2018 for the purposes of (1) collecting confirmation soil samples as described in Section 6.2.1 of the RAWP, and (2) evaluating the PCE groundwater plume south of DC-8 and DC-15 on the Harris property. The work included drilling 16 borings for confirmation soil sampling and 8 borings for groundwater sampling. Soil samples were collected to evaluate soil conditions adjacent to the 13 locations where prior soil results above the MTCA Method A CUL (0.050 milligrams per kilogram [mg/kg]) had not previously been confirmed. The confirmation soil sampling locations were within or downgradient of the ZOI of the AS/SVE system. The sampling locations are shown on Figure 8.

The locations of prior soil samples were not surveyed; their locations on the figures have been estimated based on review of prior consultants site maps and on field evidence of decommissioned boreholes.

Field Activities

On April 16 through April 26, 2018, PES oversaw the drilling of 24 direct-push borings including SB-10 through SB-30 and SB-13A, SB-13B, and SB-14A. Holt Services, Inc. (Holt), a Washington State licensed drilling company, was subcontracted to drill the borings with a track-mounted direct-push drilling rig. The direct-push borings were advanced to evaluate shallow soil and groundwater conditions at the following locations:

- SB-10, SB-11, and SB-12 were drilled on the MVSC property near borings BH-5, AS-19, and BH-7 where PCE in soil had exceeded the CUL at 6, 8, and 1 ft bgs, respectively. These locations are presumed to be near the estimated alignment of a former sanitary sewer line, which drained into a former septic tank. These features are shown as estimated on the figures as they have not been located in the field;

- SB-13, SB-13A, SB-13B, SB-14, SB-14A, and SB-15 were drilled in the area northeast of the Four Star Cleaners on the MVSC property and Harris property near borings KGP-1, KGP-2, and monitoring well KMW-9. PCE soil had previously exceeded the CUL at multiple depths including KGP-1 (4 to 38 ft bgs), KGP-2 (4 to 20 ft bgs), and KMW-9 (14 to 40.5 ft bgs).

  SB-13, SB-13A, and SB-14 met drilling refusal in the alley at 29, 33, and 31.5 ft bgs, respectively. SB-13B was drilled approximately 11 feet away on the north side of the retaining wall because there was limited space in the alley due to buried utilities, overhead power, the building, and the retaining wall. There is an approximate -4 ft grade change to the north across the retaining wall in this area;

- SB-16, SB-17, SB-18, and SB-28 were drilled west and northwest of the former Manhattan Cleaners and Coin-Op Laundry on the Harris property near borings KB-1, KB-2, KB-4, and KB-5. PCE in soil had previously exceeded the CUL at multiple

depths including KB-1 (25 to 36 ft bgs), KB-2 (25 to 36 ft bgs), KB-4 (19 to 20 ft bgs), and KB-5 (35 to 36 ft bgs);

- Borings SB-26 and SB-27 were drilled south of the former septic tank behind the former Manhattan Cleaners and Coin-Op Laundry on the Harris property, near test pit samples TP-2-south and TP-5, where PCE had previously exceeded the CUL at 2.5 and 4 ft bgs, respectively. SB-26 and SB-27 were drilled to a depth of 40 ft bgs, to be consistent with surrounding supplemental investigation borings;

- Boring SB-30 was drilled adjacent to monitoring well DC-17 on the Harris property where PCE had previously exceeded the CUL at 35-36.5 ft bgs; and

- Borings SB-19 through SB-25 and SB-29 were drilled on the Harris property to evaluate groundwater north of monitoring well MW-15 and south of DC-8 and DC-15. Borings SB-19, SB-20, SB-21, and SB-22 were positioned along the heavily vegetated northern edge of the northeast/southwest gravel access road to the remediation equipment. Borings SB-23, SB-24, SB-25, SB-29 were positioned in a largely east/west oriented row located slightly north of MW-15. PCE in monitoring wells located upgradient and within the sampling area had been below the CUL for several years, while PCE in DC-8 and DC-15 had consistently been above the CUL.

Field Methods

SB-10, SB-11, and SB-12 were drilled to 11, 15, and 11 ft bgs, respectively. The remaining borings were drilled to 40 ft bgs, except for SB-13, SB-13A, and SB-14, which encountered refusal at 29, 33, and 31.5 ft bgs, respectively. The 40 ft bgs samples were collected in soil that is saturated for at least part of the year. Drilling locations were cleared for utilities prior to drilling, and the first 3 ft of each boring was advanced with a hand auger. Continuous soil samples were collected using five-foot-long core barrels lined with new acetate sleeves. Each soil core was screened with a photoionization detector (PID) for the presence of VOCs and observed for lithology. Lithologic observations and PID readings were recorded on field boring log forms (Attachment F).

Soil samples were collected from SB-10 through SB-18, SB-26 through SB-28, and SB-30 to characterize soil at and below depths that had previously exceeded the PCE CUL. Samples were collected consistent with EPA Method 5035 and were placed in laboratory supplied containers, sealed, labeled, and placed in a cooler on ice under chain-of-custody protocols for delivery to Fremont Analytical Laboratory (Fremont), a Washington State accredited analytical laboratory.

Groundwater samples were collected from SB-19, SB-20, SB-21, SB-22, SB-23, SB-24, SB-25, and SB-29 by pushing a 4-ft long temporary stainless steel screen to approximately 5 feet into groundwater and exposing the screen at the targeted water table zone (36 to 40 ft bgs). Depth to water was measured in nearby monitoring wells to provide a reference point for saturated soil and groundwater samples. New and non-reactive disposable polyethylene tubing was attached to a foot-valve and inserted into the screen. Groundwater was purged from each temporary well by raising and lowering the polyethylene tubing to actuate the foot-valve. Approximately 3 to 5

gallons of water was purged from each temporary well over a period of 15 minutes to an hour to improve the water clarity (turbidity was not measured). As with the soil samples, each groundwater sample was placed in laboratory supplied containers, sealed, labeled, and placed in a cooler on ice under chain-of-custody protocols for delivery to Fremont.

All drilling and non-dedicated sampling equipment was decontaminated between each drilling location. Upon completion of the soil and groundwater sampling activities, the borings were filled from the bottom of the boring to the surface with bentonite chips and sealed at the surface to match the surrounding surface conditions, consistent with WAC 173-160. Soil and water generated during the field investigation was placed in drums and stored on-site pending disposal.

Boring locations were surveyed on May 1, 2018, by Lanktree Surveying, Inc., a licensed Washington State surveyor. The survey coordinates and boring details are included in Attachment D1.

Subsurface Conditions

Soil encountered during the subsurface investigation consisted predominantly of sand, sand with silt, silty sands, sandy silts, and silt with sand, all with variable gravel. Fill material composed of silty sand and sandy silt was encountered in the upper 3 to 10 ft bgs, consistent with previous investigations. The fill was underlain by a fine to medium sand, sand with silt, and silty sand to the maximum depth of exploration (40 ft bgs). The sand layer contained discontinuous layers of silty sand and silt and became denser below approximately 20 to 25 ft bgs. Coarser sand and pockets of gravel were also encountered below 20 to 25 ft bgs. Other features, including gradational grain size variation, bedding, and fining upward sequences, appear to be consistent with previous interpretations of these units as recessional outwash. The presence of gravel caused difficult drilling conditions in several locations and resulted in drilling refusal in SB-13, SB-13A, and SB-14.

No odors were detected in any of the borings. Field PID readings were variable, ranging from less than 1 to 22 parts per million by volume (ppmv). Similar to previous drilling on the Property, the field PID readings did not tend to correlate with laboratory results.

Wet soil was generally encountered at between 37 to 40 ft bgs in the borings, and water in temporary well screens installed in SB-19 through SB-25 and SB-29 equilibrated between approximately 35 to 36 ft bgs. Water depths were consistent with nearby monitoring wells.

Shallow wet or moist-to-wet soil was also observed at varying depths within the upper 10 ft bgs in SB-13B, SB-14, SB-14A, SB-15, SB-16, SB-17, SB-18, SB-20, SB-21, SB-22, SB-23, SB-25, SB-25, SB-28, and SB-29. The source of elevated soil moisture is assumed to be related to surface runoff in the alley (SB-14 and SB-14A) or accumulation on unpaved soil (the remaining borings). A catch basin is located in the alley behind Four Star Cleaners near SB-13 and SB-13A and the storm line currently runs to the west along the south side of the retaining wall. Utility markings indicate that the storm line may also extend to the east for an unknown distance either currently or historically.

Soil Analytical Results

Multiple confirmation soil samples were collected from each boring at predetermined depths. A total of 48 soil samples were submitted to the lab for analysis of VOCs by EPA Method 8260C. PCE exceeded the CUL (0.050 mg/kg) in at least one depth in all borings except for SB-11, SB-17, and SB-18. Soil results are summarized on Table 8 and shown on Figure 8. Historical soil data is included in Attachment D4.

- **West of the QFC on MVSC Property.** This area was assessed to investigate soil exceeding the CUL at depths ranging between 1 to 8 ft bgs near the estimated alignment of the former sanitary sewer line. Samples were collected from SB-10 (6 and 10 ft), SB-11 (8 and 15 ft), and SB-12 (1, 5, and 10 ft). The results indicated that samples exceeded the CUL in SB-10 at 6 ft (0.193 mg/kg) and in SB-12 at 5 ft (0.138 mg/kg). The samples from SB-11 and the remaining samples from SB-10 and SB-12 were below the laboratory MRL.

- **Northeast of the Four Star Cleaners on MVSC Property and Harris Property.** This area was assessed to investigate soil exceeding the CUL at depths ranging from 4 to 40.5 ft bgs. Samples were collected from SB-13 and SB-13B (5, 10, 20, 29, 36, and 40 ft), SB-14 and SB-14A (5, 10, 20, 30, and 40 ft), and SB-15 (10, 20, 30, and 40 ft). The results indicated that samples exceeded the CUL in SB-13 and SB-13B between 10 and 40 ft (0.0829 to 6.03 mg/kg), in SB-14 and SB-14A at 30 and 40 ft (0.105 to 0.109 mg/kg), and in SB-15 between 20 and 40 ft (0.0645 to 0.132 mg/kg). The remaining samples were below the laboratory MRL.

- **West of the Former Manhattan Cleaners and Coin-Op Laundry on Harris Property.** This area was assessed to investigate soil exceeding the CUL at depths ranging from 19 to 36 ft bgs. Samples were collected from SB-16 (20, 30, and 40 ft), SB-17 (20, 30, and 40 ft), SB-18 (30 and 40 ft), and SB-28 (20, 30, and 40 ft). The results indicated that samples exceeded the CUL in SB-16 at 30 and 40 ft (0.0505 to 0.0575 mg/kg) and in SB-28 at 30 ft (0.0784 mg/kg). The remaining samples from SB-16, SB-17, SB-18, and SB-28 were below the CUL.

- **Near the Former Septic Tank West of the Former Manhattan Cleaners and Coin-Op Laundry on Harris Property.** This area was assessed to investigate soil exceeding the CUL in shallow soil between 2 to 4.5 ft bgs and to assess deeper soil at depths similar to those in surrounding borings. Samples were collected from SB-26 and SB-27 at 2, 4, 10, 20, 30, and 40 ft. The results indicated that samples exceeded the CUL in SB-26 at 2, 20, and 30 ft (0.0647 to 0.0960 mg/kg) and in SB-27 at 2, 20, 30, and 40 ft (0.0800 to 0.169 mg/kg). The remaining samples were below the laboratory MRL.

- **Plume area on West Side of Harris Property.** This area was assessed to investigate soil exceeding the CUL near the water table in DC-17 at 35 to 36.5 ft bgs. Samples were collected from SB-30 at 30, 35, and 40 ft bgs. The results indicated that

samples exceeded the CUL in SB-30 at 35 and 40 ft (0.0665 to 0.142 mg/kg) and was below the laboratory MRL at 30 ft.

Groundwater Analytical Results

A total of 8 groundwater samples (SB-19 through SB-25 and SB-29) were submitted to the lab for analysis of VOCs by EPA Method 8260C. Groundwater results are summarized on Table 9 and shown on Figure 9.

PCE exceeded the CUL (5 µg/L) in all samples except SB-25 (1.65 µg/L). PCE in the southern line of samples decreased from west to east including SB-29 (13.7 µg/L), SB-24 (10.8 µg/L), SB-23 (6.78 µg/L), and SB-25 (1.65 µg/L). PCE in the northern line of samples also decreased from west to east including SB-19 (14.8 µg/L), SB-20 (10.8 µg/L), SB-22 (8.91 µg/L), and SB-21 (8.18 µg/L). The groundwater samples were visibly turbid and PES suspects that the turbidity may have biased the PCE results high.

Laboratory Data Validation

The final laboratory analytical reports were validated in accordance with the EPA guidelines for organic data review. All of the soil and groundwater data were judged to be acceptable for their intended use. Copies of the laboratory analytical reports and data validation memoranda are included in Attachment B.

Residuals Management and Disposal

Residuals accumulated during the reporting period included SVE system condensate, groundwater sampling purge and decontamination water, and supplemental investigation derived soil. SVE system condensate is managed within the operating SVE system until sufficient volume can be generated for disposal and a waste profile sample is collected shortly prior to disposal. Groundwater sampling purge water, decontamination water, and supplemental investigation soil cuttings were placed in 55-gallon drums and temporarily stored adjacent to the remediation system enclosure. Waste profile samples were collected at the end of each sampling event. Copies of laboratory reports containing waste profile data are included in Attachment B, and copies of disposal documentation are included in Attachment G.

- **Wastewater Disposal.** 1,100 gallons of SVE system condensate and 100 gallons of groundwater sampling purge water were disposed of as non-hazardous wastewater by Marine Vacuum Service, Inc. (MarVac) on December 28, 2017. Approximately 150 gallons of wastewater related to the supplemental investigation and groundwater sampling was disposed of as hazardous waste at the Clean Harbors Grassy Mountain facility in Utah on August 17, 2018.

- **Soil Disposal.** Approximately 1,600 pounds of soil cuttings contaminated with PCE (F002-listed soil) was generated during the supplemental investigation. The soil was disposed as hazardous waste at the Clean Harbors Grassy Mountain facility in Utah on July 19, 2018.

SUMMARY AND CONCLUSIONS

Remediation System

Notable findings from operating the AS and SVE system are as follows:

- The AS and SVE systems continued to operate as designed with 91 percent uptime. Most of the down-time was related to planned shut-downs during groundwater monitoring and for equipment maintenance. The remediation system was temporarily shut down on December 13, 2018 to evaluate the potential for rebound in groundwater in 2019;

- SVE CZ testing on SVE-10 was performed in January 2018 and suggested a CZ of approximately 50 to 60 feet. This is similar to prior CZ testing in other wells;

- Overall PCE concentrations in the SVE discharge stack samples have continued to decline. Increased concentrations in late summer and early fall were observed again in 2018, although the magnitude of the increase was lower compared to 2017. PCE in the individual SVE wells in September 2018 were the highest in SVE-3, SVE-6, SVE-7, SVE-10, and SVE-16;

- Approximately 6.5 pounds of PCE was removed by the SVE system during the reporting period. This is roughly half of the removal rate compared to the previous year; and

- Operation of the AS system continued to elevate groundwater DO within the AS ZOI and in downgradient wells indicating that treated water continues to move through the western portion of the Site.

Groundwater Sampling

Groundwater PCE concentrations throughout the Site have generally continued to improve. Notable findings include the following:

- PCE concentrations in southern half of the Harris property and in all wells on MVSC property are below the CUL. PCE has been below the CUL in all monitoring wells within the AS ZOI for at least six consecutive sampling events. The other monitoring wells in these areas have been below the CUL since at least 2013 (except for MW-2, which was above the CUL during the March 2017 sampling event); and

- The only wells that currently exceed the CUL are DC-7, DC-8, DC-15, and DC-17 on the Harris property; DC-14, KMW-3, and KMW-8 in the SW 178th Street right-of-way; and MW-7 on the Dunn Lumber property. PCE in wells on the Harris property were highest in April, when seasonal groundwater elevations were highest, and declined in the summer and fall. PCE in wells in the SW 178th Street right-of-way remained only slightly above the CUL. PCE in downgradient monitoring well MW-7

on the Dunn Lumber property continued its gradual decline and was at a historical low concentration in October 2018.

- Several of the wells that contain PCE concentrations greater than the groundwater CUL are located hydraulically downgradient of the AS system. Since elevated DO concentrations show that treated groundwater is moving through this area, the downgradient PCE concentrations greater than the CUL indicate that residual PCE within the zone of groundwater fluctuation and the saturated zone beneath the Harris property continues to leach to the groundwater. The continued operation of the AS system will not likely reduce the downgradient PCE concentrations to below the groundwater CUL within a reasonable period of time.

Supplemental Investigation in April 2018

PCE was detected above the cleanup level in at least one soil sample collected at every confirmation sampling location except for SB-11 (located behind the QFC building) and SB-17 and SB-18 (located approximately 30 ft east of the former septic tank on the Harris property). PCE in soil was highest in SB-13 at 20 ft bgs (6.03 mg/kg). The remaining soil CUL exceedances were between 0.051 and 0.193 mg/kg. Overall, soil sampling indicates a significant reduction in vadose zone PCE concentrations over time due to operation of the SVE system. Other notable findings include the following:

- PCE exceeded the soil CUL in 5 and 6 ft bgs vadose zone samples collected west of the QFC building near the former sanitary sewer alignment and former septic tank (SB-10 and SB-12). PCE concentrations in the shallow samples were approximately three to four times the CUL, and deeper samples collected from each boring at 10 ft bgs were below the laboratory MRL. These results indicate that there is a significant separation between the shallow soil contamination and groundwater at approximately 37 to 40 ft bgs;

- PCE exceeded the soil CUL in vadose zone samples in SB-13, SB-13B, and SB-14 located in the vicinity of SVE-6 in the alley behind the Four Star Cleaners. The highest concentration in SB-13 was detected at 20 ft bgs (6.03 mg/kg) and is well below the maximum concentration detected in nearby KGP-1 in 2007 (59 mg/kg at 8 ft bgs). PCE at 5 ft (SB-13 and SB-14) was below the laboratory MRL. Sampling in this area indicates that SVE-6 (screened 5 to 10 ft bgs) has likely been effective at treating vadose zone soil above 10 ft bgs and less effective at treating soil deeper than 10 ft;

- PCE exceeding the soil CUL in the 40 ft bgs samples (i.e., saturated for at least part of the year) does not appear to be causing groundwater to exceed its CUL near the Four Star Cleaners (SB-13B, SB-14A, SB-15) and near the former Manhattan Cleaners and Coin-Op Laundry (SB-16 and SB-27). Nearby groundwater monitoring wells MW-15, DC-2, DC-12, DC-13, and KMW-9 have been below the CUL for several years;

- PCE exceeding the soil CUL in the 40 ft bgs sample collected from SB-30 appears to be related to the long term PCE groundwater plume. Monitoring well DC-17 has exceeded the groundwater CUL for several years. PCE in the vadose zone at 30 ft bgs was below the laboratory MRL, suggesting that this area is not an original source;

- PCE exceeded the soil CUL in vadose zone samples in SB-16, SB-26, SB-27, and SB-28 located within approximately 20 feet of the former septic tank on the Harris property behind the former Manhattan Cleaners and Coin-Op Laundry. Operation of SVE-10 (screened from 10 to 30 ft bgs) appears to have been effective at treating PCE between 4 and 10 ft bgs near the former septic tank (SB-26 and SB-27), to 20 ft near SB-16 and SB-28, to the water table near SB-17 and SB-18. Shallow soil just below ground surface near the septic tank (2 ft bgs in SB-26 and SB-27) and deeper vadose zone soil in SB-16, SB-26, SB-27, and SB-28 remain above the CUL; and

- Groundwater samples collected from temporary wells in the center of the Harris property exceeded the PCE CUL in 7 of the 8 locations at concentrations up to three times the CUL. Concentrations were highest in the western locations and lowest in the eastern locations. PCE concentrations in monitoring wells located slightly upgradient and near the temporary wells have been below the CUL for several years, including MW-15, MW-16, MW-18, and KMW-9. Monitoring well MW-2, located roughly in the middle of the temporary wells, has also been below the CUL for several years except for a one-time exceedance in March 2017.

- The temporary wells were developed to remove turbidity prior to sampling. However, the narrow diameter well screens and natural filter pack did not allow the temporary wells to be developed as thoroughly as a permanent monitoring well would be developed, and the temporary well samples were visibly turbid with fines from the saturated soil matrix. We believe that PCE sorbed to fines in the saturated soil matrix, a result of a long term PCE groundwater plume, could have caused PCE in temporary well samples to be higher compared to the surrounding groundwater concentrations.

PES appreciates the opportunity to conduct these groundwater monitoring activities. If you have any questions regarding this report, or need any additional information, please feel free to contact either of us at (206) 529-3980.

Sincerely,
PES ENVIRONMENTAL, INC.

Chris DeBoer
Senior Staff Geologist

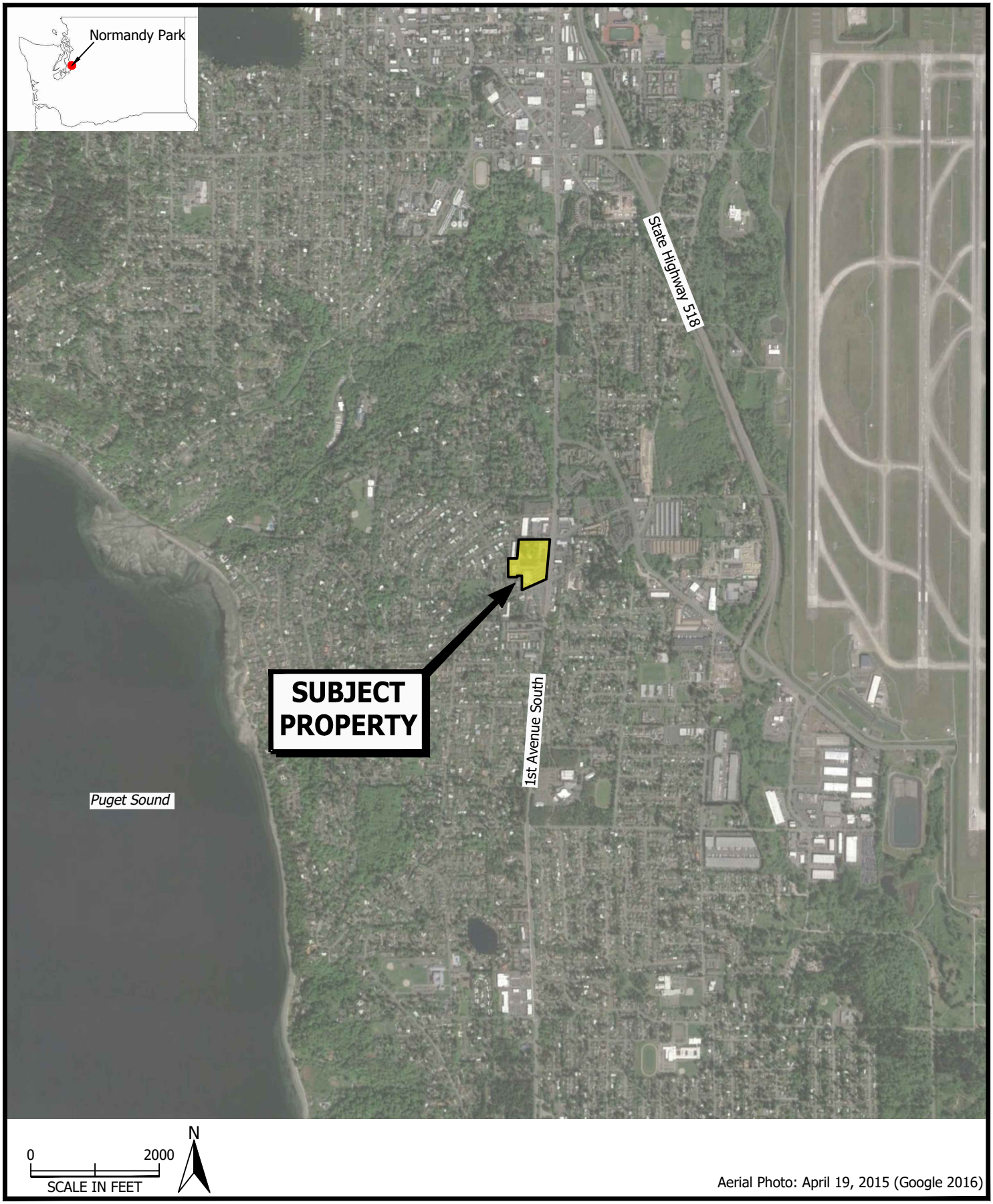
Matthew V. Dahl, P.E.
Senior Engineer

Attachments:

Figures 1 through 10
Tables 1 through 9
Attachment A through G

ILLUSTRATIONS

- Figure 1– Site Location Map
- Figure 2 – Site Plan
- Figure 3 – Remediation Well Locations
- Figure 4 – Groundwater Elevations and PCE Concentrations – January 2018
- Figure 5 – Groundwater Elevations and PCE Concentrations – April 2018
- Figure 6 – Groundwater Elevations and PCE Concentrations – July 2018
- Figure 7 – Groundwater Elevations and PCE Concentrations – October 2018
- Figure 8 – Well and Boring Location Map
- Figure 9 – Supplemental Investigation - Soil Results April 2018
- Figure 10 – Supplemental Investigation – Groundwater Results April 2018



Aerial Photo: April 19, 2015 (Google 2016)

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Subject Property Location Map
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
1

1358.001.01.003	135800101003_17Q3Q4_1-2	MVD	1/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

SW 176th STREET

RESIDENCES

SW 177th STREET

1st AVE SOUTH

RESIDENCES

DUNN LUMBER

DUNN LUMBER

FORMER WATER SUPPLY WELL

COMMERCIAL

SW 178th STREET

2nd AVE SW

TOWN HOUSES

RESIDENCE

RESIDENCE

HARRIS PROPERTY

COMMERCIAL BUILDING

VACANT SHED

WELL HOUSE

RETAINING WALL

FORMER TREATMENT SYSTEM

REMEDIATION EQUIPMENT ENCLOSURE

FORMER SEPTIC TANK

FORMER MANHATTAN DRY CLEANER AND LAUNDROMAT

SHED

PARKING LOT

RETAINING WALL

FORMER DAIRY QUEEN

SECOND BUILDING (VARIOUS SHOPS)

FOUR STAR DRY CLEANERS

DAY CARE

MANHATTAN VILLAGE SHOPPING CENTER

PARKING LOT

QFC BUILDING

FORMER SEPTIC TANK

EXPLANATION

- Approximate Property Boundary
- SS Sanitary Sewer
- SD Storm Drain
- G Natural Gas
- W Water
- E Overhead Electrical
- E Buried Electrical
- T Telephone

0 N 100

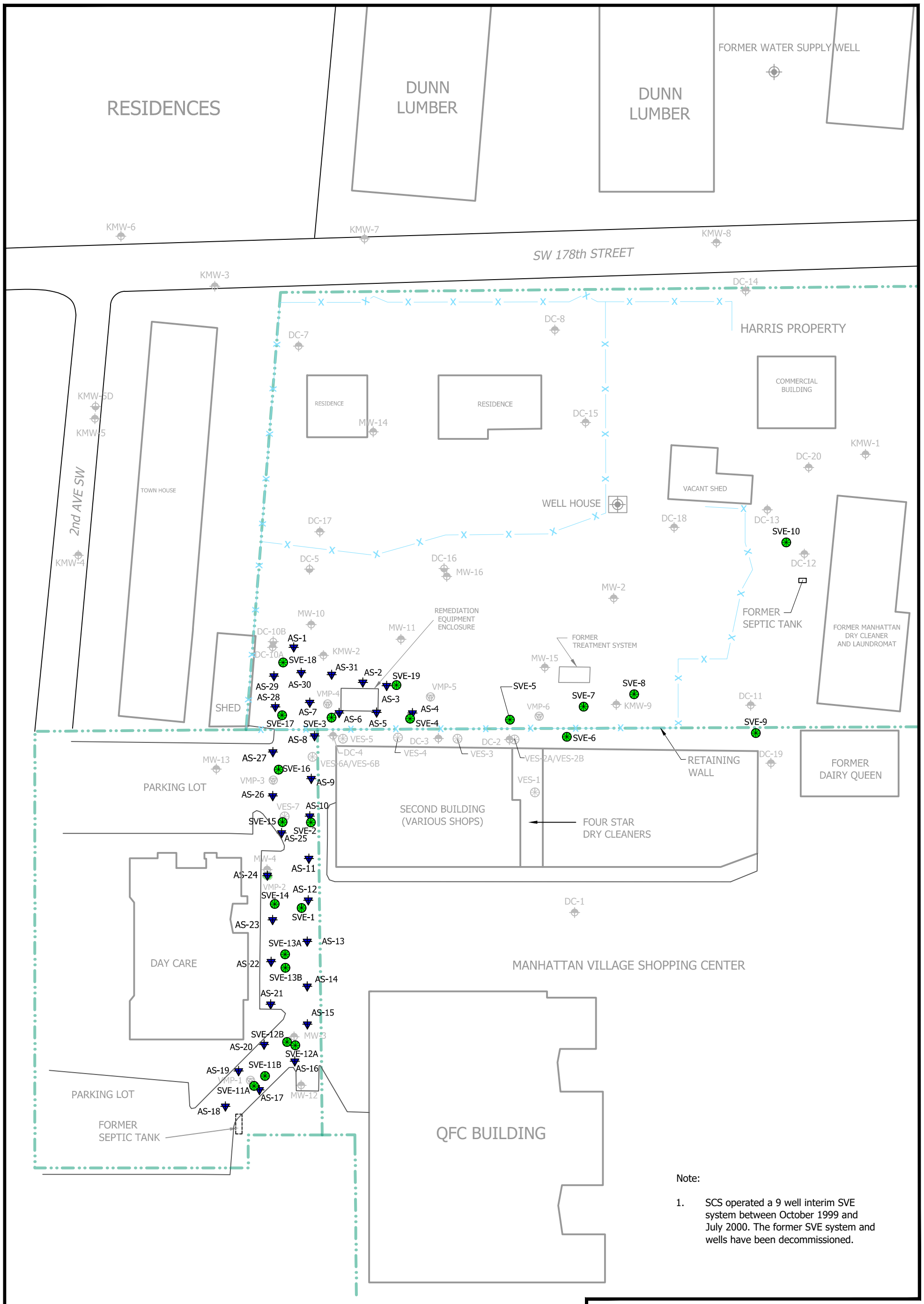
SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

Site Plan
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 2

1358.001.01.003	135800101003_17Q3Q4_1-2	MVD	1/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Note:

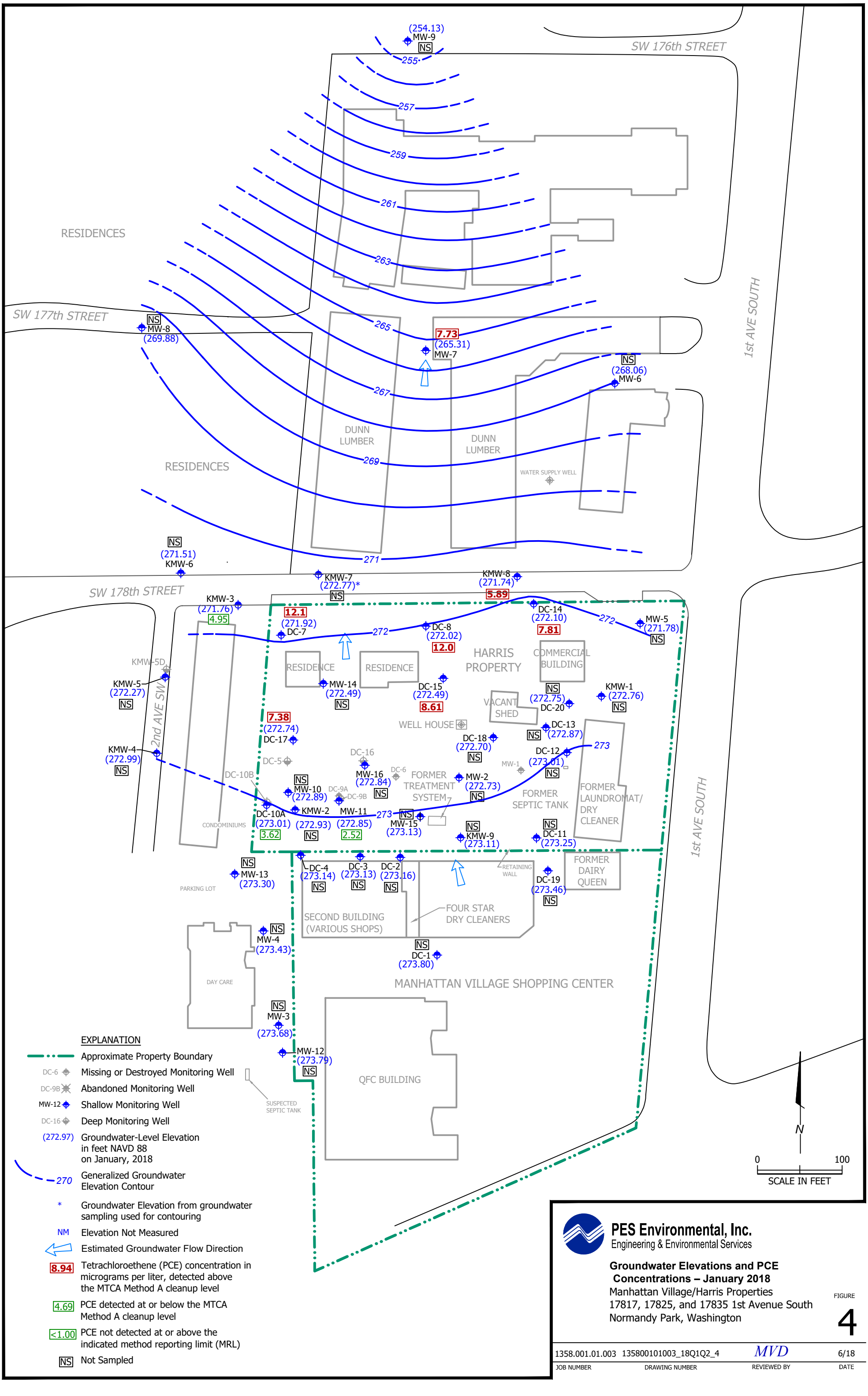
1. SCS operated a 9 well interim SVE system between October 1999 and July 2000. The former SVE system and wells have been decommissioned.

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Remediation Well Locations
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
3

1358.001.01.003	135800101003_17Q3Q4_3	MVD	1/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



PES Environmental, Inc.
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Groundwater Elevations and PCE Concentrations – January 2018
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
4

1358.001.01.003	135800101003_18Q1Q2_4	MVD	6/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

(254.54)
MW-9
<0.500
SW 176th STREET
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
RESIDENCES
SW 177th STREET
MW-8
(270.18)
NS
MW-7
(265.85)
7.64
MW-6
(268.53)
NS
1st AVE SOUTH
DUNN LUMBER
DUNN LUMBER
WATER SUPPLY WELL
RESIDENCES
KMW-6
(272.27)
NS
(272.23)
KMW-3
5.37
KMW-7
(272.15)
1.59
5.74
KMW-8
(272.28)
DC-14
(272.63)
5.14
MW-5
(272.67)
NS
DC-8
(272.59)
13.0
DC-7
(272.42)
12.8
RESIDENCE
RESIDENCE
HARRIS PROPERTY
COMMERCIAL BUILDING
(272.72)
KMW-5
NS
KMW-5D
MW-14
(272.98)
1.27
DC-15
(273.08)
9.88
1.14
(273.33)
KMW-1
(273.32)
NS
DC-20
VACANT SHED
WELL HOUSE
3.31
DC-13
(272.43)*
2.87
10.1
(273.22)
DC-17
DC-18
(273.27)
KMW-4
(273.44)
NS
2nd AVE SW
1.33
(273.38)
DC-16
MW-16
DC-5
3.39
(273.41)
MW-2
DC-6
MW-1
DC-12
(273.58)
1.50
0.716
(273.41)
MW-10
2.97
(273.41)
MW-11
DC-9A
DC-9B
DC-10B
DC-10A
(273.50)
4.67
KMW-2
(273.48)
<0.500
CONDOMINIUMS
FORMER TREATMENT SYSTEM
MW-15
(273.69)
1.13
FORMER SEPTIC TANK
FORMER LAUNDROMAT DRY CLEANER
1.21
DC-11
(273.85)
KMW-9
(273.69)
1.02
(273.77)
MW-13
<0.500
DC-4
(273.74)
<0.500
DC-3
(273.64)
1.23
DC-2
(273.72)
NS
RETAINING WALL
DC-19
(274.05)
NS
FORMER DAIRY QUEEN
SECOND BUILDING (VARIOUS SHOPS)
FOUR STAR DRY CLEANERS
PARKING LOT
MW-4
(273.88)
<0.500
DC-1
(274.39)
NS
MANHATTAN VILLAGE SHOPPING CENTER
DAY CARE
1.00
MW-3
(274.17)
<0.500
MW-12
(274.31)
QFC BUILDING
SUSPECTED SEPTIC TANK

EXPLANATION

- Approximate Property Boundary
- DC-6 — Missing or Destroyed Monitoring Well
- DC-9B — Abandoned Monitoring Well
- MW-12 — Shallow Monitoring Well
- DC-16 — Deep Monitoring Well
- (272.89) — Groundwater-Level Elevation in feet NAVD 88 on April 17, 2018
- 270 — Generalized Groundwater Elevation Contour
- * — Groundwater Elevation not used for contouring
- Estimated Groundwater Flow Direction
- 7.42 — Tetrachloroethene (PCE) concentration in micrograms per liter, detected at or above the MTCA Method A cleanup level
- 1.55 — PCE detected below the MTCA Method A cleanup level
- <0.500 — PCE not detected at or above the indicated method reporting limit (MRL)
- NS — Not Sampled

N

0 100

SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevations and PCE Concentrations – April 2018
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
5

1358.001.01.011	135800101011_18Q1Q2_5	MVD	6/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

SW 176th STREET

1st AVE SOUTH

SW 177th STREET

2nd AVE SW

SW 178th STREET

RESIDENCES

RESIDENCES

DUNN LUMBER

DUNN LUMBER

WATER SUPPLY WELL

HARRIS PROPERTY

COMMERCIAL BUILDING

RESIDENCE

RESIDENCE

VAULT HOUSE

VACANT SHED

FORMER TREATMENT SYSTEM

FORMER SEPTIC TANK

FORMER LAUNDROMAT/ DRY CLEANER

CONDOMINIUMS

FORMER DAIRY QUEEN

RETAINING WALL

SECOND BUILDING (VARIOUS SHOPS)

FOUR STAR DRY CLEANERS

PARKING LOT

DAY CARE

MANHATTAN VILLAGE SHOPPING CENTER

QFC BUILDING

SUSPECTED SEPTIC TANK

(254.37) MW-9 NS

(269.46) MW-8 NS

(265.64) MW-7 **6.60**

(268.43) MW-6 NS

(271.83) KMW-6 NS

(271.88) KMW-3 **5.18**

(271.73) KMW-7 NS

(272.05) KMW-8 **5.17**

(272.35) KMW-5 NS

KMW-5D

(272.13) DC-7 **12.3**

(272.31) DC-8 **11.7**

(272.43) DC-14 **5.40**

(272.49) MW-5 NS

(NS) MW-14 NS

(272.81) DC-15 **7.82**

(NS) DC-20 NS

(273.12) KMW-1 NS

(273.23) DC-13 NS

(272.98) **8.62** DC-17

(273.05) DC-18 NS

(273.07) KMW-4 NS

(273.17) DC-16 MW-16 NS

(273.22) **1.78** MW-2

(273.35) DC-12 NS

(273.16) MW-10 NS

(273.17) MW-11 NS

DC-5

DC-6

MW-1

DC-9A

DC-9B

DC-10B

DC-10A (273.23) **2.68**

KMW-2 (273.24) NS

(273.45) MW-15 NS

KMW-9 (273.46)

(273.62) DC-11 NS

(273.51) MW-13 NS

DC-4 (273.40) NS

(273.44) DC-3 NS

(273.50) DC-2 NS

(273.84) DC-19 NS

(273.61) MW-4 NS

(NS) DC-1 NS

(273.89) MW-3 NS

(274.05) MW-12 NS

270

271

272

273

274

0 100

SCALE IN FEET

N

EXPLANATION

- Approximate Property Boundary
- DC-6 Missing or Destroyed Monitoring Well
- DC-9B Abandoned Monitoring Well
- MW-12 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- (272.89) Groundwater-Level Elevation in feet NAVD 88 on July 18, 2018
- 270 Generalized Groundwater Elevation Contour
- Estimated Groundwater Flow Direction
- **7.42** Tetrachloroethene (PCE) concentration in micrograms per liter, detected at or above the MTCA Method A cleanup level
- 1.55 PCE detected below the MTCA Method A cleanup level
- <0.500 PCE not detected at or above the indicated method reporting limit (MRL)
- NS Not Sampled

Note:

1. MW-14, DC-1, and DC-20 were not accessible for monitoring

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Groundwater Elevations and PCE Concentrations – July 2018
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 6

1358.001.01.011	135800101011_2018_Q3Q4_6	MVD	11/18
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

(253.57)
MW-9 <0.500

SW 176th STREET

255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
274

RESIDENCES

SW 177th STREET

MW-8
(268.59)
NS

MW-7 (264.49)
5.79

MW-6
(267.56)
NS

1st AVE SOUTH

DUNN LUMBER

DUNN LUMBER

WATER SUPPLY WELL

RESIDENCES

5.26
KMW-8
(271.03)

SW 178th STREET

KMW-6
(270.83)
NS

(270.83)
KMW-3
5.41

KMW-7
(270.64)
0.711

DC-14
(NS) NS

MW-5
(271.46)
NS

DC-8
(271.29)
12.1

DC-7
(271.09)
11.6

RESIDENCE

RESIDENCE

HARRIS PROPERTY

COMMERCIAL BUILDING

(271.13)
KMW-5
NS

KMW-5D

MW-14
(271.68)
<0.500

DC-15
(271.77)
7.65

(272.05)
0.885 DC-20

KMW-1 NS
(272.04)

8.24
(271.92)
DC-17

VACANT SHED

WELL HOUSE
2.79

DC-18
(271.97)

DC-13
(272.14)
2.74

KMW-4
(271.97)
NS

DC-5
<0.500

DC-16
(272.06)

MW-16
0.912

DC-6

(272.08)
MW-2

1.17

DC-12
(272.31)
1.66

MW-1

(272.05)
MW-10

2.44
(272.01)
MW-11

DC-9A
DC-9B

DC-10B

FORMER SEPTIC TANK

FORMER LAUNDROMAT/ DRY CLEANER

2nd AVE SW

CONDOMINIUMS

DC-10A
(272.09)
NS

KMW-2
(272.12)
<0.500

MW-15
(272.36)
<0.500

FORMER TREATMENT SYSTEM

1.25

KMW-9
(272.36)
<0.500

DC-11
(272.51)

(272.35)
MW-13
<0.500

DC-4
(272.19)
<0.500

DC-3
(272.31)
<0.500

DC-2
(272.39)
NS

RETAINING WALL

DC-19
(272.72)
NS

FORMER DAIRY QUEEN

SECOND BUILDING (VARIOUS SHOPS)

FOUR STAR DRY CLEANERS

PARKING LOT

MW-4
(272.46)
<0.500

DC-1
(273.02)
NS

DAY CARE

MANHATTAN VILLAGE SHOPPING CENTER

<0.500
MW-3
(272.73)

<0.500
MW-12
(272.86)

QFC BUILDING

SUSPECTED SEPTIC TANK

EXPLANATION

- Approximate Property Boundary
- DC-6 Missing or Destroyed Monitoring Well
- DC-9B Abandoned Monitoring Well
- MW-12 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- (272.89) Groundwater-Level Elevation in feet NAVD 88 on October 15, 2018
- 270 Generalized Groundwater Elevation Contour
- Estimated Groundwater Flow Direction
- 7.42 Tetrachloroethene (PCE) concentration in micrograms per liter, detected at or above the MTCA Method A cleanup level
- 1.55 PCE detected below the MTCA Method A cleanup level
- <0.500 PCE not detected at or above the indicated method reporting limit (MRL)
- NS Not Sampled

Note:
1. DC-14 was not accessible for monitoring

N

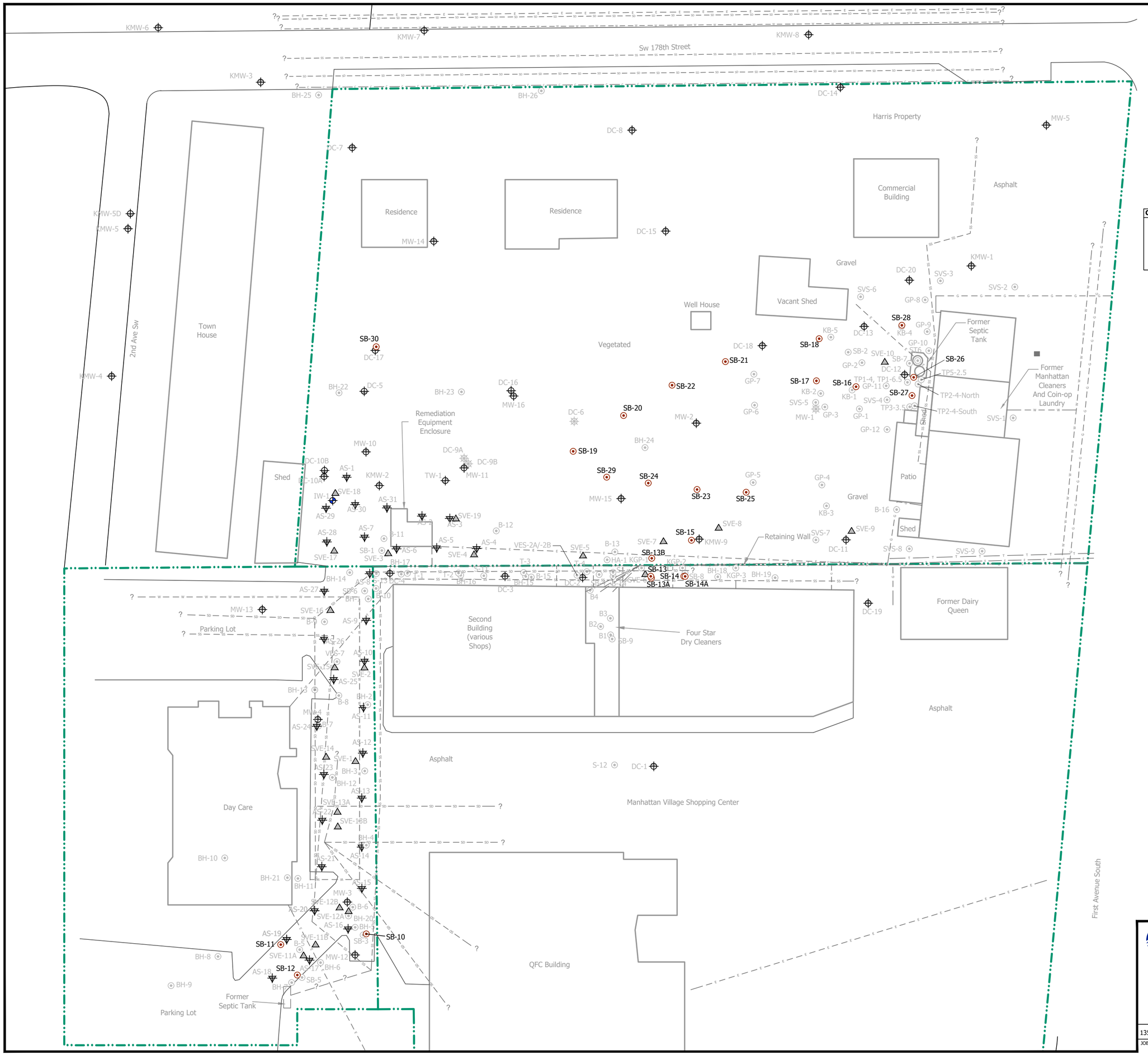
0 100
SCALE IN FEET

PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevations and PCE Concentrations – October 2018
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 7

1358.001.01.01135800101011_2018_Q3Q4_7	MVD	3/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



EXPLANATION

- Approximate Property Boundary
- DC-6 Decommissioned or Missing Monitoring Well
- DC-15 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- SVE-1 Soil Vapor Extraction Well
- AS-1 Air Sparge Well
- TW-1 Pilot Test Well (Kane 2006, ERM 2011)
- KB-3 Boring Location by Others (See Identification List)
- SB-24 Soil Boring (PES, 2018)

Boring Identification List

Consultant	Boring IDs	Year
SCS	B1 - B4 / S1 - S13 / BH-1 - BH-26 / T-1 - T-4	1998-2000
ADAPT	HA-1	1999
Farallon	SVS-1 - SVS-9 / GP-1 - GP-12 / TP1 - TP5	2005 - 2008
Kane	KB-1 - KB-5 / KGP-1 - KGP-3 / ST6	2005 - 2007
ERM	B-5 - B-18 / SB-1 - SB-9	2008 - 2012
PES	SB-10 - SB-30	2018

- W Water
- SS Sanitary Sewer
- E Electrical Line
- SD Storm Drain
- G Gas
- C Communication
- T Telephone

Notes:

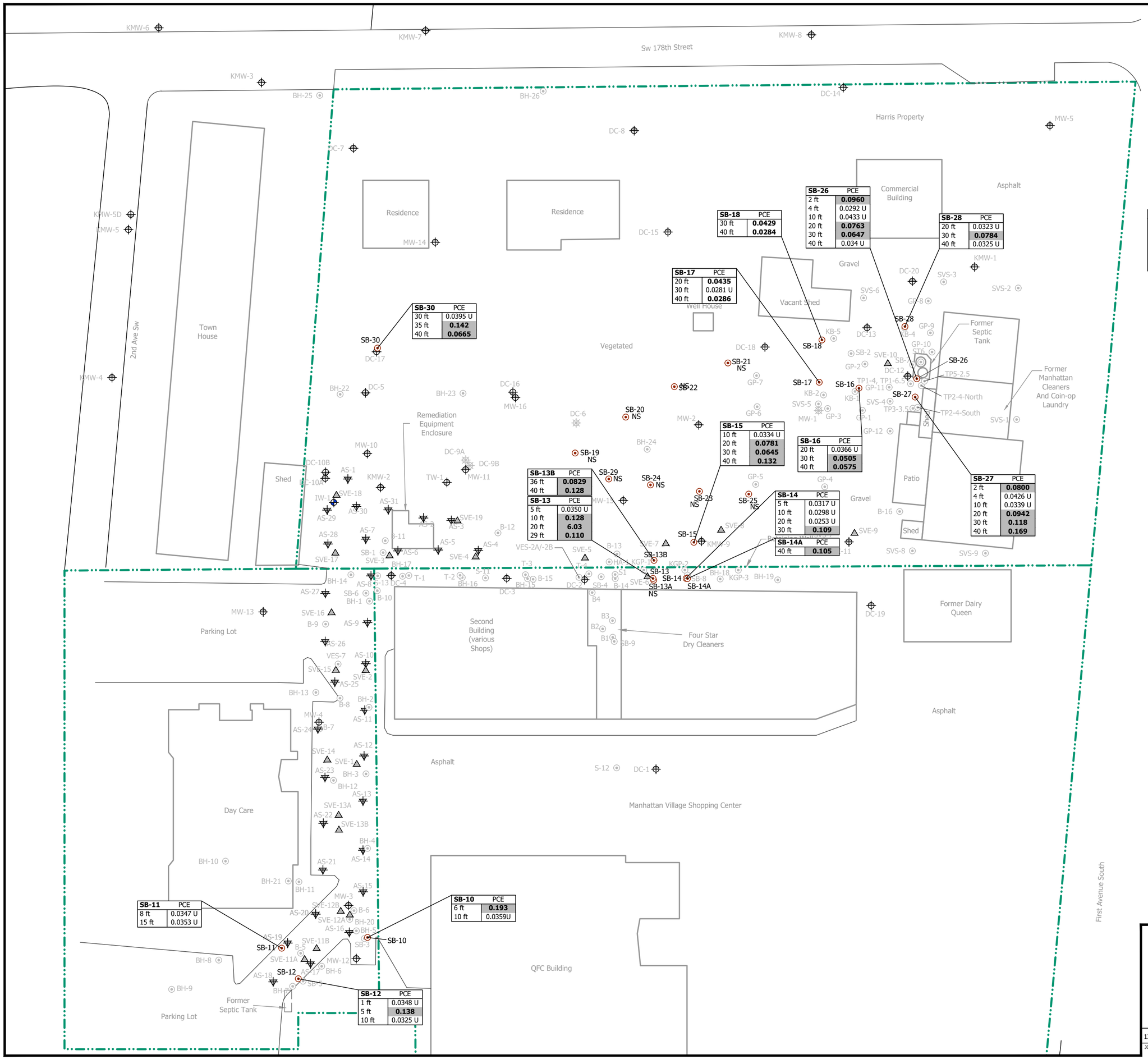
1. Borings drilled from 1998 through 2012 were not surveyed. Locations are estimated from prior consultants' site maps.
2. Investigation borings B-5, B-7, B-9, B-11, B-12, and B-13 were completed as vapor monitoring probes VMP-1 through VMP-6.
3. The temporary SVE system installed in 1999 included nine wells which operated for approximately one year, and were subsequently decommissioned. Six SVE welsl were installed in investigation borings B-1 (VES-1), BH-1 (VES6A/6B), BH-15 (VES-5), BH-16 (VES-4), and BH-17 (VES-3). The other three wells (VES-2A/2B and VES-7) were installed in separate locations.
4. The former septic tank on Harris Property was removed in April 2006. Four sidewall and two bottom samples were collected. Bottom sample ST6 represents the only detection in the 6 samples
5. SCS borings B-1, B-2, and B-3 were completed as 1-inch diameter vapor monitoring probes in 1998. Well construction details are not available.

PES Environmental, Inc.
Engineering & Environmental Services

Well and Boring Location Map
Manhattan Village/Harris Properties
17817, and 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 8

1358.001.01.001	135800101011_Q3Q4_8-10	MVD	3/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



EXPLANATION

- Approximate Property Boundary
- DC-6 Decommissioned or Missing Monitoring Well
- DC-15 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- SVE-1 Soil Vapor Extraction Well
- AS-1 Air Sparge Well
- TW-1 Pilot Test Well (Kane 2006, ERM 2011)
- KB-3 Boring Location by Others (See Identification List)
- SB-24 Soil Boring (PES, 2018)

Boring Identification List

Consultant	Boring IDs	Year
SCS	B1 - B4 / S1 - S13 / BH-1 - BH-26 / T-1 - T-4	1998-2000
ADAPT	HA-1	1999
Farallon	SVS-1 - SVS-9 / GP-1 - GP-12 / TP1 - TP5	2005 - 2008
Kane	KB-1 - KB-5 / KGP-1 - KGP-3 / ST6	2005 - 2007
ERM	B-5 - B-18 / SB-1 - SB-9	2008 - 2012
PES	SB-10 - SB-30	2018

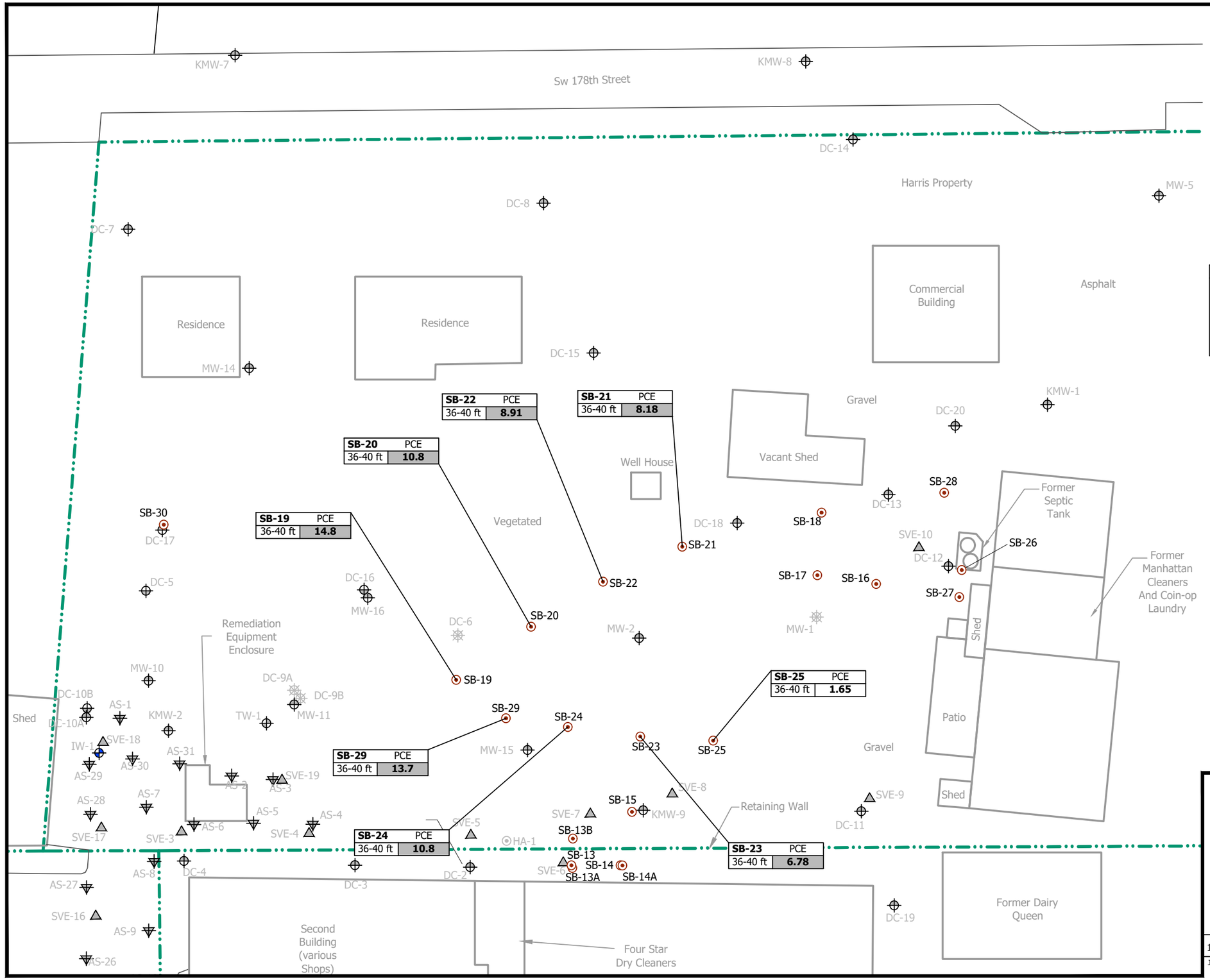
Notes:
Detections are shown in **bold**
U = Not Detected
Detections above CUL are shaded
CUL = MTCA Method A Cleanup Level (0.050 mg/kg)
PCE = Tetrachloroethene (mg/kg)
30 ft = Depth of Sample in Feet Below Ground Surface

PES Environmental, Inc.
Engineering & Environmental Services

Supplemental Investigation - Soil Results April 2018
Manhattan Village/Harris Properties
17817, and 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
9

JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE
1358.001.01.001	135800101011_Q3Q4_8-10	MVD	3/19



EXPLANATION

- Approximate Property Boundary
- DC-6 Decommissioned or Missing Monitoring Well
- DC-15 Shallow Monitoring Well
- DC-16 Deep Monitoring Well
- SVE-1 Soil Vapor Extraction Well
- AS-1 Air Sparge Well
- TW-1 Pilot Test Well (Kane 2006, ERM 2011)
- KB-3 Boring Location by Others (See Identification List)
- SB-24 Soil Boring (PES, 2018)

Boring Identification List

Consultant	Boring IDs	Year
SCS	B1 - B4 / S1 - S13 / BH-1 - BH-26 / T-1 - T-4	1998-2000
ADAPT	HA-1	1999
Farallon	SVS-1 - SVS-9 / GP-1 - GP-12 / TP1 - TP5	2005 - 2008
Kane	KB-1 - KB-5 / KGP-1 - KGP-3 / ST6	2005 - 2007
ERM	B-5 - B-18 / SB-1 - SB-9	2008 - 2012
PES	SB-10 - SB-30	2018

Notes:
Detections are shown in **bold**
U = Not Detected
Detections above CUL are shaded
CUL = MTCA Method A Cleanup Level (5 µg/L)
PCE = Tetrachloroethene (µg/L)
30 ft = Depth of Sample in Feet Below Ground Surface

N

0 40

SCALE IN FEET

Note: The original version of this figure includes color-designated features. A black and white copy of the figure may not accurately represent the information originally presented.

PES Environmental, Inc.
Engineering & Environmental Services

Supplemental Investigation - Groundwater Results April 2018
Manhattan Village/Harris Properties
17817, and 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE 10

1358.001.01.001	135800101011_Q3Q4_8-10	MVD	3/19
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

TABLES

- Table 1 – SVE System Operation and Maintenance Data
- Table 2 – AS System Operation and Maintenance Data
- Table 3 – SVE Leg Monitoring and Analytical Data – December 28, 2017
- Table 4 – SVE Leg Monitoring and Analytical Data – September 27, 2018
- Table 5 – Groundwater Elevations
- Table 6 – Groundwater Field Sampling Parameters
- Table 7 – Tetrachloroethene Concentrations in Groundwater
- Table 8 – Tetrachloroethene in Soil – April 2018 Supplemental Investigation
- Table 9 – Tetrachloroethene in Groundwater – April 2018 Supplemental Investigation

Table 1
SVE System Operation and Maintenance Data
Manhattan Village/Harris Properties
Normandy Park, Washington

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
10/19/16	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	97.5	-	-	per PES previous O&M Data Tables
10/19/16	11:30	0	-	-	51	-	-	85	42	19	1 to 19	2.25	830	-	-	-	-	-	-	SVE system startup, balance wells
10/21/16	-	2	-	-	50	-	-	85	48	25	1 to 19	2.10	800	2.96	-	-	-	-	-	AS system startup, balance wells, noise testing
10/25/16	10:32	6	-	1,274	51	1,285	159	86	42	20	1 to 19	2.15	830	2.39	2,100	0.157	98.5	169	90	Balance SVE and AS wells, stack TO-15 sample
11/2/16	9:00	14	-	-	51	2,859	349	85	45	20	1 to 19	2.3	840	2.51	1,310	0.099	99.6	92	160	Startup monitoring, stack TO-15 sample
11/10/16	10:30	22	-	-	51	4,318	390	80	35	15	1 to 19	2.5	880	1.25	966	0.076	99.7	-	325	Startup monitoring, stack TO-15 sample
11/16/16	10:30	28	-	-	51	5,418	688	80	35	16	1 to 19	2.0	790	2.57	942	0.067	100.6	60	340	Startup monitoring, stack TO-15 sample
11/23/16	9:00	35	-	-	51	6,655	853	75	30	15	1 to 19	-	-	0.86	-	-	-	120	425	Check AS, clean debris from transfer pump
11/30/16	7:00	42	-	-	51	7,914	1,020	75	33	10	1 to 19	2.0	790	-	-	-	-	75	490	Check AS, clean debris from transfer pump
12/12/16	9:00	54	-	3,398	51	10,209	1,312	75	35	10	1 to 19	2.4	860	1.31	288	0.022	101.7	10	580	O&M, stack TO-15 sample, shutdown for GW sampling
12/15/16	-	57	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
12/20/16	8:00	59	-	3,704	51	11,115	1,430	75	34	9	1 to 19	2.0	790	-	-	-	-	90	520	Changed blower and compressor oil, check belts
12/28/16	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	750	Respond to DAT Alarm, reset, system operatiing
1/1/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	System down on power outage alarm
1/3/17	13:35	-	2	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Responded to alarm, system off - frozen equipment
1/9/17	12:15	72	9	4,444	51	13,211	1,723	65	30	8	1 to 19	2.3	850	-	-	-	-	80	825	Test and restart system after power outage
1/10/17	9:45	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	System check after restart
1/18/17	11:00	81	-	4,976	51	14,751	1,936	75	32	6	1 to 19	2.3	845	0.5	359	0.027	102.4	0	5	O&M and TO-15 sample, condensate disposal
1/29/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Reset alarm, system running
2/1/17	6:45	95	-	5,801	51	17,171	2,269	70	32	10	1 to 19	2.2	-	-	-	-	-	85	220	Install check valve, repair transfer pump leak
2/6/17	5:20	-	1	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage. Restarted system.
2/14/17	11:00	107	-	6,558	51	19,370	2,573	75	32	2	1 to 19	2.3	845	1.1	248	0.019	103.0	85	350	O&M, stack TO-15 sample, clean level switches
2/16/17	15:30	-	-	6,685	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	140	365	System check
3/2/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Respond to DAT Alarm, reset, system operatiing
3/10/17	9:00	131	-	8,006	51	23,567	3,146	75	35	26	1 to 19	2.3	845	0.2	275	0.021	103.5	100	565	O&M, stack TO-15 sample,shutdown for GW sampling
3/17/17	-	-	7	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
4/8/17	9:40	152	1	9,229	-	27,115	3,653	75	30	24	1 to 19	2.3	845	-	-	-	-	95	670	Power bump/surge, blower low flow alarm, restarted
4/20/17	12:00	-	-	10,022	51	29,101	3,942	75	32	25	1 to 19	2.4	865	0.3	477 EJ	0.037	104.4	93	670	O&M, stack TO-15 sample
4/22/17	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power bump/surge, blower low flow alarm
4/23/17	15:40	166	1	10,136	51	29,398	3,985	75	30	25	1 to 19	2.3	845	-	-	-	-	92	670	Restarted system
5/29/17	12:00	202	-	12,283	51	35,228	4,845	85	32	32	All except 13A & 14	2.3	835	0.3	137	0.010	105.3	80	680	Closed SVE13A & SVE14, Closed AS10 to AS26
6/16/17	11:00	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge, low flow alarm. Restarted system
6/20/17	8:00	223	-	13,352	51	38,915	5,359	85	34	32	All except 13A & 14	2.3	835	0.4	246	0.018	105.6	68	686	O&M, changed blower and compressor oil, check belts
7/15/17	10:00	248	-	14,596	51	43,192	5,959	94	35	30	All except 13A & 14	2.4	845	0.3	745	0.057	106.6	50	686	O&M , stack TO-15 sample, shut down for GW sampling
7/20/17	14:00	248	5	14,607	51	43,227	5,963	100	40	32	All except 13A & 14	2.3	830	-	-	-	-	48	686	Restarted system after GW sampling, ROI evaluation
8/18/17	9:15	277	-	16,061	51	48,555	6,655	90	38	30	All except 13A & 14	2.3	835	2.4	910	0.068	108.4	20	686	O&M, stack TO-15 sample
9/22/17	10:30	312	-	17,766	51	54,570	7,495	80	40	30	All except 13A & 14	2.4	860	2.0	590	0.046	110.4	10	686	O&M, stack TO-15 sample
10/17/17	8:15	337	-	18,992	51	58,991	8,097	80	40	30	All except 13A & 14	2.3	845	1.3	310	0.024	111.2	0	686	O&M, stack TO-15 sample
10/18/17	-	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge during storm, blower low flow alarm
10/19/17	11:00	339	1	-	51	-	8,127	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Inspect/test system, leave down for GW sampling
10/27/17	10:00	-	8	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Restarted system after GW sampling

Table 1
SVE System Operation and Maintenance Data
Manhattan Village/Harris Properties
Normandy Park, Washington

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	
11/14/17	9:00	-	1	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Power bump/surge, blower low flow alarm, restarted
11/16/17	7:00	357	-	20,098	51	62,657	8,576	75	40	32	All except 13A & 14	2.2	825	0.4	230	0.017	111.7	80	775	O&M, stack TO-15 sample
12/7/17	14:00	378	-	21,269	51	66,675	9,084	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	DAT tank high level alarm, system running upon arrival
12/27/17	12:30	-	-	-	-	-	-	-	-	-	All except 13A & 14	-	-	-	-	-	-	-	-	Measure water levels and DO only
12/28/17	7:00	399	-	22,800	51	70,712	9,585	75	35	30	1 to 19	2.2	810	0.2	160	0.012	112.3	90	1100	O&M, stack & SVE well TO-15 samples, disposal
1/4/18	8:30	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	O&M, changed blower and compressor oil, check belts
1/5/18	6:45	407	-	22,836	53	72,115	9,773	75	35	27	1 to 19	2.2	810	-	-	-	-	80	80	SVE-10 ROI test, repair transfer pump seal
1/17/18	8:00	419	-	23,641	53	74,327	10,057	-	-	-	1 to 19	-	-	-	-	-	-	80	150	Replace bearings on compressor, belts on both units
1/23/18	10:30	425	-	24,040	53	75,464	10,205	75	35	30	1 to 19	2.3	850	0.2	200	0.015	112.6	80	210	O&M, stack TO-15 sample,shutdown for GW sampling
1/29/18	12:20	425	6	-	-	-	10,205	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
2/20/18	-	-	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 2/18, equipment frozen, restarted
2/21/18	6:45	445	-	25,223	53	79,279	10,685	70	36	29	1 to 19	2.4	860	0.2	200	0.015	112.9	80	340	O&M, stack TO-15 sample
3/10/18	-	-	1	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 3/9, blower low flow alarm, restarted
3/27/18	10:15	478	-	27,159	53	85,473	11,479	76	38	30	1 to 19	2.1	810	0.5	130	0.009	113.3	95	340	O&M, stack TO-15 sample
4/16/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Shut down system for GW sampling
4/20/18	-	-	4	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
4/25/18	10:00	502	1	28,566	53	89,903	12,055	80	35	32	1 to 19	2.0	790	0.3	-	-	-	90	340	O&M, stack sample not analyzed - summa faulty.
5/3/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Heat exchanger failure. Shut off air sparging.
5/16/18	-	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Replace heat exchanger motor and transfer pump
5/21/18	8:00	528	1	29,555	53	94,640	12,675	80	35	35	1 to 19	2.1	825	0.3	220	0.016	114.0	82	340	O&M, stack TO-15 sample, raise motor speeds
6/6/18	9:15	-	-	30,403	53	-	-	80	35	26	1 to 19	2.3	845	-	-	-	-	78	340	Respond to heat exchanger alarm, restart
6/7/18	13:35	-	-	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Repond to heat exchanger alarm, rewire, restart
6/18/18	13:35	556	-	31,063	53	99,732	13,344	100	30	26	1 to 19	2.5	865	0.4	240	0.019	114.5	82	340	O&M, stack TO-15 sample, blower & comp service
7/16/18	8:00	584	-	32,742	53	104,750	14,013	100	36	21	1 to 19	2.5	845	0.2	240	0.018	115.0	82	340	O&M, stack TO-15 sample, shutdown for GW sampling
7/23/18	8:00	584	7	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
8/17/18	6:30	609	-	34,231	53	109,213	14,611	80	36	20	1 to 19	2.5	860	0.2	400	0.031	115.6	55	340	O&M, stack TO-15 sample
9/12/18	8:00	-	0.5	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Power outage on 9/11, blower low flow alarm, restarted
9/27/18	8:30	649	-	36,633	53	116,536	15,587	80	36	26	1 to 19	2.5	879	0.8	210	0.017	116.5	55	340	O&M, stack and SVE well TO-15 samples
10/13/18	14:00	666	-	-	-	-	15,973	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Shut down system for GW sampling
10/23/18	17:00	666	8	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after GW sampling
10/31/18	8:30	676	-	38,132	53	121,512	16,225	65	40	25	1 to 19	2.5	892	0.4	250	0.020	117.0	50	350	O&M, stack TO-15 sample
11/9/18	8:00	-	-	38,678	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	440	Reset transfer pump level warning alarm.
11/21/18	6:30	697	-	39,416	53	125,554	16,727	80	42	25	1 to 19	2.4	861	0.4	200	0.015	117.4	90	510	O&M, stack TO-15 sample
11/27/18	7:00	700	3	-	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	-	Restarted system after alarm on 11/24
11/28/18	11:30	700	1	39,584	-	-	-	-	-	-	1 to 19	-	-	-	-	-	-	-	640	Restarted system after power outage on 11/27
12/6/18	15:00	707	1	40,040	53	127,534	16,970				1 to 19	-	-	-	-	-	-	-	-	System down 12/5 - high knockout level. Restart.
12/13/18	16:00	714	-	40,456	-	128,865	17,132	-	-	-	1 to 19	-	-	-	-	-	117.7	-	845	Power out alarm. Leave down for rebound evaluation.

Table 1
SVE System Operation and Maintenance Data
Manhattan Village/Harris Properties
Normandy Park, Washington

Date	Time	Operating Days (days)	System Down Time (days)	Electric Meter (KWH)	Blower				Vacuum		SVE Wells[6]	Stack				PCE Removal Rate[4] (lb/day)	PCE Mass Removed[5] (lbs)	Condensate		Notes
					Speed (hz)	Electric Meter (KWH)	Run Time (hr)	Temp. Out (deg F)	Blower (in. w.c.)	Manifold (in. w.c.)		DP (in. w.c.)	Flow[1] (scfm)	VOC[2] (ppm)	Lab PCE[3] (µg/m^3)			DAT Tank (gal)	Holding Tank (gal)	

Notes:

1. Calculated flow rate based on velocity measurements in feet per minute, converted to cfm based on pipe cross sectional area, and normalized to standard conditions
2. As measured with a photoionization detector (PID) adjusted using 0.57 correction factor for PCE
3. SVE system discharge samples analyzed for VOCs using United States Environmental Protection Agency Method TO-15; see laboratory reports for the complete analytical list.
4. Mass Removal Rate = [flow (scfm) * PCE (µg/m$^{3)}$ * 28.3168 (L/cf) / 1,000 (L/m^3) / 453,592,370 (µg/lb) * 60 (min/hour) * 24 (hour/day)]
5. Cumulative mass removed = average mass removal rates from previous and current O&M visit * period run time.
6. SVE wells operating. The numbers refer to the SVE well number: SVE-1, SVE-2, SVE-3, SVE-4, SVE-5, SVE-6, SVE-7, SVE-8, SVE-9, SVE-10, SVE-11a, SVE-11b, SVE-12a, SVE-12b, SVE-13a, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, and SVE-19.

KWH = Kilowatt Hours
in. w.c. = inches of water column
scfm = standard cubic feet per minute
deg F = degrees Fahrenheit
NM = not measured
PCE = tetrachloroethene
ppm = parts per million
DAT = diffused aeration tank
VOC = Volatile Organic Compounds
µg/m^3 = micrograms per cubic meter
lb/day = pounds per day
Temp. = Temperature
DP = Differential Pressure
EJ = estimated value

Table 2
AS System Operation and Maintenance Data
Manhattan Village/Harris Properties
Normandy Park, Washington

	Air Sparging System							
				Electric	Run	Compressor	Heat Exchanger	
Date	Operating Wells[1]	Flow[2] (scfm)	Speed (hz)	Meter (KWH)	Time (hr)	Temp (deg F)	Temp (deg F)	Pressure (psi)
10/19/16	-	-	-	-	-	-	-	-
10/21/16	1 to 31	286	-	-	-	-	-	-
10/25/16	1 to 31	274	43.2	1,482	110	180	77	6.5
11/2/16	1 to 31	282	43.2	4,210	301	174	68	8.0
11/10/16	1 to 31	285	43.2	7,052	301	175	69	8.0
11/16/16	1 to 31	288	43.2	9,151	639	160	66	8.0
11/23/16	1 to 31	291	43.2	11,552	805	175	66	8.0
11/30/16	1 to 31	288	43.2	13,994	942	170	66	8.0
12/12/16	1 to 31	292	43.2	18,335	1,264	170	62	8.0
12/15/16	1 to 31	-	-	-	-	-	-	-
12/20/16	1 to 31	-	43.2	20,104	1,381	160	64	8.0
12/28/16	1 to 31	-	-	-	-	-	-	-
1/1/17	1 to 31	-	-	-	-	-	-	-
1/3/17	1 to 31	-	-	-	-	-	-	-
1/9/17	1 to 31	287	43.2	24,365	1,674	160	60	9.0
1/10/17	1 to 31	-	-	-	-	-	-	-
1/18/17	1 to 31	276	43.2	27,488	1,887	175	70	9.0
1/29/17	1 to 31	-	-	-	-	-	-	-
2/1/17	1 to 31	298	43.2	32,282	2,219	152	52	8.0
2/6/17	1 to 31		-	-	-	-	-	-
2/14/17	1 to 31	286	43.2	36,737	2,523	170	64	8.0
2/16/17	1 to 31	-	-	-	-	-	-	-
3/2/17	1 to 31	-	-	-	-	-	-	-
3/10/17	1 to 31	286	43.2	45,280	3,096	175	66	8.0
3/17/17	1 to 31	-	-	-	-	-	-	-
4/8/17	1 to 31	-	43.2	53,033	3,603	175	68	8.0
4/20/17	1 to 31	273	43.2	57,418	3,892	180	77	7.0
4/22/17	1 to 31	-	-	-	-	-	-	-
4/23/17	1 to 31	-	43.2	58,074	3,935	180	68	8.5
5/29/17	1 to 9, 27 to 31	200	36.0	71,190	4,794	175	76	6.0
6/20/17	1 to 9, 27 to 31	212	36.0	76,339	5,309	170	80	6.0
7/15/17	1 to 9, 27 to 31	214	36.0	82,992	5,908	170	92	6.0
7/20/17	1 to 9, 27 to 31	199	36.0	82,999	5,909	185	100	8.0
8/18/17	1 to 9, 27 to 31	217	36.0	90,120	6,600	165	105	8.0
9/22/17	1 to 9, 27 to 31	216	36.0	98,643	7,441	155	110	8.0
10/17/17	1 to 9, 27 to 31	224	39.0	104,636	8,042	160	120	8.0
11/16/17	1 to 9, 27 to 31	242	39.0	110,362	8,521	150	104	8.0
12/7/17	1 to 9, 27 to 31	-	39.0	116,351	9,029	-	-	-
12/28/17	1 to 9, 27 to 31	250	39.0	122,314	9,530	145	100	8.0
1/5/18	1 to 31	309	48.0	124,529	9,718	175	140	8.0
1/23/18	1 to 31	336	45.0	131,522	10,150	160	130	8.0
2/21/18	1 to 31	341	43.0	138,401	10,624	140	90	9.0
3/27/18	1 to 31	308	43.0	149,085	11,417	155	126	8.0
4/25/18	1 to 31	283	43.0	156,863	11,994	183	150	6.0
5/21/18	1 to 31	309	47.0	160,776	12,285	180	90	8.0

Table 2
AS System Operation and Maintenance Data
Manhattan Village/Harris Properties
Normandy Park, Washington

	Air Sparging System							
				Electric	Run	Compressor	Heat Exchanger	
Date	Operating Wells[1]	Flow[2] (scfm)	Speed (hz)	Meter (KWH)	Time (hr)	Temp (deg F)	Temp (deg F)	Pressure (psi)
6/18/18	1 to 31	287	47.0	169,009	12,820	200	120	5.0
7/16/18	1 to 31	308	46.0	178,769	13,489	180	110	8.0
8/17/18	1 to 31	319	46.0	187,413	14,087	175	110	10.0
9/27/18	1 to 31	327	46.0	201,296	15,063	170	85	8.0
10/31/18	1 to 31	343	46.0	209,450	15,637	160	80	10.0
11/21/18	1 to 31	328	46.0	216,628	16,140	155	78	9.0
12/13/18	1 to 31	--	--	222,402	16,544	Shut down system for rebound testing		

Notes:

1. The numbers refer to the AS well number
2. Calculated flow rate based on the sum of the individual AS leg meter readings, normalized to standard conditions.

psi = pounds per square inch
KWH = Kilowatt Hours
scfm = standard cubic feet per minute
deg F = degrees Fahrenheit
hz = Hertz
hr = hour
HEX = heat exchange

Table 3
SVE Leg Monitoring and Analytical Data
December 28, 2017
Manhattan Village/Harris Properties
Normandy Park, Washington

SVE Well	Date	Screen Depth (ft bgs)	Velocity (fpm)	Vacuum (in.w.c.)	Temp. (deg F)	Flow[1] (scfm)	PID (ppmv)	Sample ID	Lab PCE[2] (µg/m^3)
SVE-1	12/28/17	10-35	2,650	17	60	44	0.2	SVE-1-122817	120
SVE-2	12/28/17	10-35	2,300	10	60	39	0.2	SVE-2-122817	210
SVE-3	12/28/17	10-30	2,225	7	60	38	0.1	SVE-3-122817	50
SVE-4	12/28/17	10-30	1,500	7	60	26	0.1	SVE-4-122817	59
SVE-5	12/28/17	10-30	1,150	6	60	20	0.2	SVE-5-122817	170
SVE-6	12/28/17	5-10	2,800	14	60	47	0.3	SVE-6-122817	150
SVE-7	12/28/17	10-30	1,900	13	60	32	0.2	SVE-7-122817	350
SVE-8	12/28/17	10-30	1,050	5	60	18	0.1	SVE-8-122817	320
SVE-9	12/28/17	10-30	1,000	3	60	17	0.1	SVE-9-122817	170
SVE-10	12/28/17	10-30	2,500	18	60	42	0.2	SVE-10-122817	290
SVE-11A	12/28/17	5-19.98	2,800	17	60	47	0.2	SVE-11A-122817	68
SVE-11B	12/28/17	20-35	2,200	16	60	37	0.1	SVE-11B-122817	24
SVE-12A	12/28/17	5-19.98	2,000	20	60	33	0.1	SVE-12A-122817	310
SVE-12B	12/28/17	20-35	2,100	14	60	35	0.1	SVE-12B-122817	54
SVE-13A	12/28/17	5-19.98	2,600	16	60	43	0.1	SVE-13A-122817	36
SVE-13B	12/28/17	20-35	2,800	16	60	47	0.2	SVE-13B-122817	180
SVE-14	12/28/17	19.63-34.63	2,300	16	60	38	0.1	SVE-14-122817	120
SVE-15	12/28/17	20.61-34.96	1,800	13	60	30	0.1	SVE-15-122817	190
SVE-16	12/28/17	20.49-34.79	2,600	10	60	44	0.1	SVE-16-122817	310
SVE-17	12/28/17	19.91-29.91	2,150	23	60	35	0.3	SVE-17-122817	5.9
SVE-18	12/28/17	19.79-29.79	2,900	17	60	48	0.2	SVE-18-122817	59
SVE-19	12/28/17	19.99-29.99	2,900	15	60	49	0.3	SVE-19-122817	39
					Total Flow	810		SYS-1217	160

Air Sparging Flow	250	scfm
Ratio of SVE to AS	2.5	
Average SVE flow within AS ZOI	40	scfm
Average SVE flow outside AS ZOI	29	scfm

Notes:

1. Flow calculated for 2" diameter Sch 40 PVC pipe = velocity (fpm) x 0.023 sq.ft. cross section area, then normalized to standard conditions and adjusted for the total SVE flow at the stack.
2. Samples analyzed for VOCs using USEPA Method TO-15; see laboratory reports for the complete analytical list.
3. SVE wells inside AS ZOI: SVE-1, SVE-2, SVE-3, SVE-4, SVE-11A, SVE-11B, SVE-12A, SVE-12B, SVE-13A, SVE-13B, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, and SVE-19.

scfm = standard cubic feet per minute
fpm = feet per minute
in.w.c. = inches of water column
deg F = degrees Fahrenheit
lb/yr = pounds per year
PID = photoionization detector
AS = air sparging
ZOI = zone of influence

Table 4
SVE Leg Monitoring and Analytical Data
Sepember 27, 2018
Manhattan Village/Harris Properties
Normandy Park, Washington

SVE Well	Date	Screen Depth (ft bgs)	Velocity (fpm)	Vacuum (in.w.c.)	Temp. (deg F)	Flow[1] (scfm)	PID (ppmv)	Sample ID	Lab PCE[2] (µg/m^3)
SVE-1	9/27/18	10-35	2,600	10.5	60	48	0.5	SVE-1-092718	160
SVE-2	9/27/18	10-35	2,300	9	60	43	0.5	SVE-2-092718	240
SVE-3	9/27/18	10-30	2,500	5	60	47	0.6	SVE-3-092718	750
SVE-4	9/27/18	10-30	2,200	5	60	41	0.6	SVE-4-092718	130
SVE-5	9/27/18	10-30	2,800	6.5	60	53	0.6	SVE-5-092718	270
SVE-6	9/27/18	5-10	2,100	15	60	39	1.1	SVE-6-092718	950
SVE-7	9/27/18	10-30	1,600	5	60	30	0.6	SVE-7-092718	400
SVE-8	9/27/18	10-30	2,700	6	60	51	0.7	SVE-8-092718	210
SVE-9	9/27/18	10-30	1,200	3.5	60	23	0.9	SVE-9-092718	170
SVE-10	9/27/18	10-30	2,600	14	60	48	0.9	SVE-10-092718	270
SVE-11A	9/27/18	5-19.98	2,500	17	60	46	0.4	SVE-11A-092718	100
SVE-11B	9/27/18	20-35	2,200	14	60	41	0.4	SVE-11B-092718	68
SVE-12A	9/27/18	5-19.98	1,700	17	60	31	0.3	SVE-12A-092718	110
SVE-12B	9/27/18	20-35	2,000	14	60	37	0.4	SVE-12B-092718	160
SVE-13A	9/27/18	5-19.98	2,500	13	60	46	0.5	SVE-13A-092718	94
SVE-13B	9/27/18	20-35	2,200	12	60	41	0.3	SVE-13B-092718	96
SVE-14	9/27/18	19.63-34.63	2,400	14	60	44	0.4	SVE-14-092718	110
SVE-15	9/27/18	20.61-34.96	2,100	8	60	39	0.4	SVE-15-092718	170
SVE-16	9/27/18	20.49-34.79	1,900	5.5	60	36	0.4	SVE-16-092718	330
SVE-17	9/27/18	19.91-29.91	600	19	60	11	0.5	SVE-17-092718	3.3
SVE-18	9/27/18	19.79-29.79	2,200	19	60	40	0.6	SVE-18-092718	110
SVE-19	9/27/18	19.99-29.99	2,400	11	60	45	0.7	SVE-19-092718	71
					Total Flow	879		SYS-092718	210

Air Sparging Flow	327	scfm
Ratio of SVE to AS	1.9	
Average SVE flow within AS ZOI	40	scfm
Average SVE flow outside AS ZOI	40	scfm

Notes:

1. Flow calculated for 2" diameter Sch 40 PVC pipe = velocity (fpm) x 0.023 sq.ft. cross section area, then normalized to standard conditions and adjusted for the total SVE flow at the stack.
2. Samples analyzed for VOCs using USEPA Method TO-15; see laboratory reports for the complete analytical list.
3. SVE wells inside AS ZOI: SVE-1, SVE-2, SVE-3, SVE-4, SVE-11A, SVE-11B, SVE-12A, SVE-12B, SVE-13A, SVE-13B, SVE-14, SVE-15, SVE-16, SVE-17, SVE-18, and SVE-19.

scfm = standard cubic feet per minute
fpm = feet per minute
in.w.c. = inches of water column
deg F = degrees Fahrenheit
lb/yr = pounds per year
PID = photoionization detector
AS = air sparging
ZOI = zone of influence

Table 5

Groundwater Elevations
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)
January 2018 Event						
MW-2	1/24/2018	Flush	308.34	32.22-42.22	35.61	272.73
MW-3	1/24/2018	Flush	311.41	35.67-45.67	37.73	273.68
MW-4	1/24/2018	Flush	310.47	33.45-43.45	37.04	273.43
MW-5	1/24/2018	Flush	310.38	35.6-45.6	38.60	271.78
MW-6	1/24/2018	Flush	304.14	34.46-44.46	36.08	268.06
MW-7	1/24/2018	Flush	302.64	34.47-44.47	37.33	265.31
MW-8	1/24/2018	Flush	280.68	12.71-22.71	10.80	269.88
MW-9	1/24/2018	Flush	284.97	31.6-41.6	30.84	254.13
MW-10	1/24/2018	Flush	306.71	31.52-41.52	33.82	272.89
MW-11	1/24/2018	Flush	307.62	31.56-41.56	34.77	272.85
MW-12	1/24/2018	Flush	312.80	35.7-45.7	39.01	273.79
MW-13	1/24/2018	Flush	308.75	34.58-44.58	35.45	273.30
MW-14	1/24/2018	Flush	303.82	27.6-37.6	31.33	272.49
MW-15	1/24/2018	AG	312.44	37.14-47.14	39.31	273.13
MW-16	1/24/2018	AG	310.37	29.45-44.65	37.53	272.84
DC-1	1/24/2018	Flush	312.82	39.5-44.5	39.02	273.80
DC-2	1/24/2018	Flush	312.92	41.22-46.22	39.76	273.16
DC-3	1/24/2018	Flush	313.11	42.32-47.32	39.98	273.13
DC-4	1/24/2018	Flush	312.35	43.36-48.36	39.21	273.14
DC-7	1/24/2018	Flush	302.61	34.35-39.35	30.69	271.92
DC-8	1/24/2018	Flush	306.23	36.64-41.64	34.21	272.02
DC-10A	1/24/2018	Flush	307.73	32.01-37.01	34.72	273.01
DC-11	1/24/2018	Flush	311.25	31.6-41.6	38.00	273.25
DC-12	1/24/2018	Flush	311.25	31.7-41.7	38.24	273.01
DC-13	1/24/2018	Flush	310.20	31.7-41.7	37.33	272.87
DC-14	1/24/2018	Flush	308.94	34.4-44.4	36.84	272.10
DC-15	1/24/2018	Flush	307.89	30.7-40.7	35.40	272.49
DC-17	1/24/2018	Flush	305.16	29.81-39.81	32.42	272.74
DC-18	1/24/2018	Flush	309.51	31.58-41.58	36.81	272.70
DC-19	1/24/2018	Flush	313.62	36.8-46.8	40.16	273.46
DC-20	1/24/2018	Flush	310.92	33.8-43.8	38.17	272.75
KMW-1	1/24/2018	Flush	311.59	36.8-51.8	38.83	272.76
KMW-2	1/24/2018	Flush	307.04	29.91-39.91	34.11	272.93
KMW-3	1/24/2018	Flush	296.92	24.6-34.6	25.16	271.76
KMW-4	1/24/2018	Flush	299.57	23.79-33.79	26.58	272.99
KMW-5	1/24/2018	Flush	297.22	23.66-33.66	24.95	272.27
KMW-6	1/24/2018	Flush	294.81	25.73-40.73	23.30	271.51
KMW-7	1/24/2018	Flush	301.43	28.78-43.78	28.66	272.77
KMW-8	1/24/2018	Flush	308.15	28.69-43.69	36.41	271.74
KMW-9	1/24/2018	Flush	310.33	33.5-43.5	37.22	273.11

Groundwater Elevations
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)
April 2018 Event						
MW-2	4/17/2018	Flush	308.34	32.22-42.22	34.93	273.41
MW-3	4/17/2018	Flush	311.41	35.67-45.67	37.24	274.17
MW-4	4/17/2018	Flush	310.47	33.45-43.45	36.59	273.88
MW-5	4/17/2018	Flush	310.38	35.6-45.6	37.71	272.67
MW-6	4/17/2018	Flush	304.14	34.46-44.46	35.61	268.53
MW-7	4/17/2018	Flush	302.64	34.47-44.47	36.79	265.85
MW-8	4/17/2018	Flush	280.68	12.71-22.71	10.50	270.18
MW-9	4/17/2018	Flush	284.97	31.6-41.6	30.43	254.54
MW-10	4/17/2018	Flush	306.71	31.52-41.52	33.30	273.41
MW-11	4/17/2018	Flush	307.62	31.56-41.56	34.21	273.41
MW-12	4/17/2018	Flush	312.80	35.7-45.7	38.49	274.31
MW-13	4/17/2018	Flush	308.75	34.58-44.58	34.98	273.77
MW-14	4/17/2018	Flush	303.82	27.6-37.6	30.84	272.98
MW-15	4/17/2018	AG	312.44	37.14-47.14	38.75	273.69
MW-16	4/17/2018	AG	310.37	29.45-44.65	36.99	273.38
DC-1	4/17/2018	Flush	312.82	39.5-44.5	38.43	274.39
DC-2	4/17/2018	Flush	312.92	41.22-46.22	39.20	273.72
DC-3	4/17/2018	Flush	313.11	42.32-47.32	39.47	273.64
DC-4	4/18/2018	Flush	312.35	43.36-48.36	38.61	273.74
DC-7	4/17/2018	Flush	302.61	34.35-39.35	30.19	272.42
DC-8	4/17/2018	Flush	306.23	36.64-41.64	33.64	272.59
DC-10A	4/17/2018	Flush	307.73	32.01-37.01	34.23	273.50
DC-11	4/17/2018	Flush	311.25	31.6-41.6	37.40	273.85
DC-12	4/17/2018	Flush	311.25	31.7-41.7	37.67	273.58
DC-13	4/17/2018	Flush	310.20	31.7-41.7	37.77	272.43
DC-14	4/17/2018	Flush	308.94	34.4-44.4	36.31	272.63
DC-15	4/17/2018	Flush	307.89	30.7-40.7	34.81	273.08
DC-17	4/17/2018	Flush	305.16	29.81-39.81	31.94	273.22
DC-18	4/17/2018	Flush	309.51	31.58-41.58	36.24	273.27
DC-19	4/17/2018	Flush	313.62	36.8-46.8	39.57	274.05
DC-20	4/17/2018	Flush	310.92	33.8-43.8	37.59	273.33
KMW-1	4/17/2018	Flush	311.59	36.8-51.8	38.27	273.32
KMW-2	4/17/2018	Flush	307.04	29.91-39.91	33.56	273.48
KMW-3	4/17/2018	Flush	296.92	24.6-34.6	24.69	272.23
KMW-4	4/17/2018	Flush	299.57	23.79-33.79	26.13	273.44
KMW-5	4/17/2018	Flush	297.22	23.66-33.66	24.50	272.72
KMW-6	4/17/2018	Flush	294.81	25.73-40.73	22.54	272.27
KMW-7	4/17/2018	Flush	301.43	28.78-43.78	29.28	272.15
KMW-8	4/17/2018	Flush	308.15	28.69-43.69	35.87	272.28
KMW-9	4/17/2018	Flush	310.33	33.5-43.5	36.64	273.69

Table 5

Groundwater Elevations
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)
July 2018 Event						
MW-2	7/18/2018	Flush	308.34	32.22-42.22	35.12	273.22
MW-3	7/18/2018	Flush	311.41	35.67-45.67	37.52	273.89
MW-4	7/18/2018	Flush	310.47	33.45-43.45	36.86	273.61
MW-5	7/18/2018	Flush	310.38	35.6-45.6	37.89	272.49
MW-6	7/18/2018	Flush	304.14	34.46-44.46	35.71	268.43
MW-7	7/18/2018	Flush	302.64	34.47-44.47	37.00	265.64
MW-8	7/18/2018	Flush	280.68	12.71-22.71	11.22	269.46
MW-9	7/18/2018	Flush	284.97	31.6-41.6	30.60	254.37
MW-10	7/18/2018	Flush	306.71	31.52-41.52	33.55	273.16
MW-11	7/18/2018	Flush	307.62	31.56-41.56	34.45	273.17
MW-12	7/18/2018	Flush	312.80	35.7-45.7	38.75	274.05
MW-13	7/18/2018	Flush	308.75	34.58-44.58	35.24	273.51
MW-14	7/18/2018	Flush	303.82	27.6-37.6	--	--
MW-15	7/18/2018	AG	312.44	37.14-47.14	38.99	273.45
MW-16	7/18/2018	AG	310.37	29.45-44.65	37.20	273.17
DC-1	7/18/2018	Flush	312.82	39.5-44.5	--	--
DC-2	7/18/2018	Flush	312.92	41.22-46.22	39.42	273.50
DC-3	7/18/2018	Flush	313.11	42.32-47.32	39.67	273.44
DC-4	7/18/2018	Flush	312.35	43.36-48.36	38.95	273.40
DC-7	7/18/2018	Flush	302.61	34.35-39.35	30.48	272.13
DC-8	7/18/2018	Flush	306.23	36.64-41.64	33.92	272.31
DC-10A	7/18/2018	Flush	307.73	32.01-37.01	34.50	273.23
DC-11	7/18/2018	Flush	311.25	31.6-41.6	37.63	273.62
DC-12	7/19/2018	Flush	311.25	31.7-41.7	37.90	273.35
DC-13	7/18/2018	Flush	310.20	31.7-41.7	36.97	273.23
DC-14	7/18/2018	Flush	308.94	34.4-44.4	36.51	272.43
DC-15	7/18/2018	Flush	307.89	30.7-40.7	35.08	272.81
DC-17	7/18/2018	Flush	305.16	29.81-39.81	32.18	272.98
DC-18	7/18/2018	Flush	309.51	31.58-41.58	36.46	273.05
DC-19	7/18/2018	Flush	313.62	36.8-46.8	39.78	273.84
DC-20	7/18/2018	Flush	310.92	33.8-43.8	--	--
KMW-1	7/18/2018	Flush	311.59	36.8-51.8	38.47	273.12
KMW-2	7/18/2018	Flush	307.04	29.91-39.91	33.80	273.24
KMW-3	7/18/2018	Flush	296.92	24.6-34.6	25.04	271.88
KMW-4	7/18/2018	Flush	299.57	23.79-33.79	26.50	273.07
KMW-5	7/18/2018	Flush	297.22	23.66-33.66	24.87	272.35
KMW-6	7/18/2018	Flush	294.81	25.73-40.73	22.98	271.83
KMW-7	7/18/2018	Flush	301.43	28.78-43.78	29.70	271.73
KMW-8	7/18/2018	Flush	308.15	28.69-43.69	36.10	272.05
KMW-9	7/18/2018	Flush	310.33	33.5-43.5	36.87	273.46

Table 5

Groundwater Elevations
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)
October 2018 Event						
MW-2	10/15/2018	Flush	308.34	32.22-42.22	36.26	272.08
MW-3	10/15/2018	Flush	311.41	35.67-45.67	38.68	272.73
MW-4	10/15/2018	Flush	310.47	33.45-43.45	38.01	272.46
MW-5	10/15/2018	Flush	310.38	35.6-45.6	38.92	271.46
MW-6	10/15/2018	Flush	304.14	34.46-44.46	36.58	267.56
MW-7	10/23/2018	Flush	302.64	34.47-44.47	38.15	264.49
MW-8	10/16/2018	Flush	280.68	12.71-22.71	12.09	268.59
MW-9	10/16/2018	Flush	284.97	31.6-41.6	31.40	253.57
MW-10	10/15/2018	Flush	306.71	31.52-41.52	34.66	272.05
MW-11	10/19/2018	Flush	307.62	31.56-41.56	35.61	272.01
MW-12	10/15/2018	Flush	312.80	35.7-45.7	39.94	272.86
MW-13	10/15/2018	Flush	308.75	34.58-44.58	36.40	272.35
MW-14	10/15/2018	Flush	303.82	27.6-37.6	32.14	271.68
MW-15	10/15/2018	AG	312.44	37.14-47.14	40.08	272.36
MW-16	10/15/2018	AG	310.37	29.45-44.65	38.31	272.06
DC-1	10/15/2018	Flush	312.82	39.5-44.5	39.80	273.02
DC-2	10/15/2018	Flush	312.92	41.22-46.22	40.53	272.39
DC-3	10/15/2018	Flush	313.11	42.32-47.32	40.80	272.31
DC-4	10/15/2018	Flush	312.35	43.36-48.36	40.16	272.19
DC-7	10/15/2018	Flush	302.61	34.35-39.35	31.52	271.09
DC-8	10/15/2018	Flush	306.23	36.64-41.64	34.94	271.29
DC-10A	10/15/2018	Flush	307.73	32.01-37.01	35.64	272.09
DC-11	10/15/2018	Flush	311.25	31.6-41.6	38.74	272.51
DC-12	10/15/2018	Flush	311.25	31.7-41.7	38.94	272.31
DC-13	10/15/2018	Flush	310.20	31.7-41.7	38.06	272.14
DC-14	--	Flush	308.94	34.4-44.4	--	--
DC-15	10/15/2018	Flush	307.89	30.7-40.7	36.12	271.77
DC-17	10/15/2018	Flush	305.16	29.81-39.81	33.24	271.92
DC-18	10/15/2018	Flush	309.51	31.58-41.58	37.54	271.97
DC-19	10/15/2018	Flush	313.62	36.8-46.8	40.90	272.72
DC-20	10/15/2018	Flush	310.92	33.8-43.8	38.87	272.05
KMW-1	10/15/2018	Flush	311.59	36.8-51.8	39.55	272.04
KMW-2	10/15/2018	Flush	307.04	29.91-39.91	34.92	272.12
KMW-3	10/15/2018	Flush	296.92	24.6-34.6	26.09	270.83
KMW-4	10/15/2018	Flush	299.57	23.79-33.79	27.60	271.97
KMW-5	10/31/2018	Flush	297.22	23.66-33.66	26.09	271.13
KMW-6	10/15/2018	Flush	294.81	25.73-40.73	23.98	270.83
KMW-7	10/23/2018	Flush	301.43	28.78-43.78	30.79	270.64
KMW-8	10/15/2018	Flush	308.15	28.69-43.69	37.12	271.03
KMW-9	10/15/2018	Flush	310.33	33.5-43.5	37.97	272.36

Table 5

Groundwater Elevations
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Monument Type	Top of Casing Elevation (feet, NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet)	Groundwater Elevation (feet, NAVD88)

NOTES:

1. '-- = not measured or not applicable.
2. Well monument types: flush grade monuments and above ground (AG) monuments.
3. Depth to water is measured from top of well casing.
4. Elevations are reported relative to North American Vertical Datum of 1988 (NAVD 88).
5. Top of casing (TOC) elevations were surveyed by D.R. Strong Consulting Engineers, Inc. in February and May 2013 and by Lanktree Land Surveying, Inc. in July 2015.
6. Screened interval depth is estimated using from surveyed elevations (top of casing elevations, ground surface, and monument rim) and field measurements at the time of drilling.
7. Screened intervals completely submerged are shaded.
8. DC-4, DC-8, and DC-15: Recorded depth to water on day of sampling (4/18/2018).
9. MW-14, DC-1, and DC-20: Wells were not accessible for monitoring in July 2018.
10. MW-7, MW-11, KMW-7: Recorded depth to water on day of sampling in October 2018. KMW-5: water level was not consistent with historical data and was remeasured on 10/31/2018 during routine monthly O&M.
    DC-14: monument was not found in October due to recent utility construction activity nearby.

Table 6

Groundwater Field Sampling Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Depth to Water (feet TOC)	pH (units)	Specific Conductivity (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
January 2018 Event							
MW-7	1/26/2018	37.31	6.32	179	10.2	9.1	455
MW-11	1/25/2018	34.74	6.59	122	10.6	12.3	340
DC-7	1/26/2018	30.64	6.55	136	9.8	13.0	446
DC-8	1/24/2018	34.21	6.43	155	11.5	7.8	25
DC-10A	1/25/2018	34.71	6.20	148	10.8	10.6	344
DC-14	2/2/2018	36.71	5.85	143	12.1	7.1	624
DC-15	1/24/2018	35.41	5.93	158	11.7	8.6	90
DC-17	1/26/2018	32.38	6.70	131	11.3	12.1	466
KMW-3	1/25/2018	25.13	6.21	175	12.0	10.1	386
KMW-8	1/25/2018	36.42	6.14	147	11.4	9.1	313
April 2018 Event							
MW-2	4/19/2018	33.78	6.32	123	14.0	8.1	107
MW-3	4/20/2018	37.02	7.03	73	12.4	13.7	108
MW-4	4/20/2018	36.41	7.30	135	12.3	2.7	118
MW-7	4/20/2018	36.73	6.45	173	12.8	2.2	112
MW-9	4/18/2018	30.38	6.21	149	11.8	2.0	88
MW-10	4/18/2018	33.21	6.86	132	12.5	2.8	73
MW-11	4/19/2018	34.04	6.85	85	13.7	11.8	108
MW-12	4/18/2018	38.38	7.16	198	12.4	2.8	73
MW-13	4/18/2018	34.86	6.56	193	13.5	2.3	72
MW-14	4/20/2018	30.69	6.41	123	12.3	14.2	109
MW-15	4/19/2018	38.61	6.28	93	14.6	7.9	119
MW-16	4/19/2018	36.83	6.76	143	13.3	10.3	120
DC-3	4/19/2018	39.34	7.01	244	12.6	2.6	92
DC-4	4/18/2018	38.61	6.94	124	12.6	2.8	75
DC-7	4/20/2018	30.03	6.49	93	12.4	14.2	107
DC-8	4/18/2018	33.62	6.48	122	11.7	2.1	67
DC-10A	4/20/2018	34.02	6.35	98	13.8	12.1	126
DC-11	4/19/2018	37.30	6.23	158	13.3	1.6	108
DC-12	4/20/2018	37.54	6.26	201	13.6	1.6	122
DC-13	4/20/2018	36.66	6.17	142	12.6	2.3	125
DC-14	4/19/2018	36.24	6.35	131	11.0	2.2	102
DC-15	4/18/2018	34.81	6.60	135	11.7	2.2	69
DC-17	4/20/2018	31.73	6.45	75	12.3	14.1	100
DC-18	4/20/2018	36.06	6.09	120	13.3	9.5	116
DC-20	4/19/2018	37.49	6.46	176	13.5	0.4	100
KMW-2	4/18/2018	33.47	6.89	131	12.4	0.3	65
KMW-3	4/20/2018	24.60	6.42	193	12.2	2.4	114
KMW-7	4/19/2018	29.34	6.53	180	11.9	1.4	94
KMW-8	4/19/2018	35.79	6.37	141	12.2	2.2	98
KMW-9	4/18/2018	36.56	6.33	157	13.1	2.2	84

Table 6

Groundwater Field Sampling Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Depth to Water (feet TOC)	pH (units)	Specific Conductivity (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)
July 2018 Event							
MW-2	7/17/2018	35.17	6.16	182	13.2	8.0	59
MW-7	7/19/2018	37.02	6.14	157	14.4	7.7	118
DC-7	7/20/2018	30.51	6.51	166	12.6	11.0	107
DC-8	7/18/2018	33.92	6.02	110	12.9	9.2	115
DC-10A	7/17/2018	34.52	6.52	141	16.4	8.9	60
DC-14	7/19/2018	36.54	6.00	138	13.4	8.2	92
DC-15	7/18/2018	35.08	5.91	125	12.7	8.8	102
DC-17	7/20/2018	32.20	6.26	130	12.2	10.5	101
KMW-3	7/19/2018	25.08	6.08	201	13.4	8.6	127
KMW-8	7/19/2018	36.13	6.01	138	13.5	8.3	129
October 2018 Event							
MW-2	10/18/2018	36.27	5.80	210	12.9	7.1	149
MW-3	10/16/2018	38.67	7.15	164	13.9	8.5	110
MW-4	10/16/2018	38.02	6.66	165	13.5	9.0	141
MW-7	10/23/2018	38.14	6.16	186	13.4	6.7	161
MW-9	10/17/2018	31.44	6.27	174	12.0	7.2	136
MW-10	10/18/2018	34.69	6.15	158	12.9	9.9	143
MW-11	10/19/2018	35.61	6.29	149	12.7	10.0	175
MW-12	10/16/2018	39.96	6.88	235	14.5	9.2	115
MW-13	10/16/2018	36.40	6.38	205	14.0	9.0	129
MW-14	10/23/2018	32.25	6.14	228	12.4	8.3	162
MW-15	10/18/2018	40.10	6.11	232	13.6	6.7	145
MW-16	10/18/2018	38.32	6.25	269	12.9	8.6	140
DC-3	10/17/2018	40.81	6.67	240	13.5	9.3	124
DC-4	10/17/2018	40.08	6.76	257	15.1	8.9	151
DC-7	10/23/2018	31.61	6.28	192	12.1	9.5	163
DC-8	10/18/2018	34.98	6.01	135	12.1	7.9	145
DC-10A	10/19/2018	35.67	--	--	--	--	--
DC-11	10/18/2018	38.78	5.95	231	13.3	5.9	146
DC-12	10/19/2018	39.03	5.94	250	13.1	4.9	168
DC-13	10/19/2018	38.14	5.82	195	12.6	4.8	164
DC-14	10/15/2018	--	--	--	--	--	--
DC-15	10/18/2018	36.17	5.99	161	12.1	8.0	148
DC-17	10/19/2018	33.33	6.03	206	11.9	10.0	162
DC-18	10/19/2018	37.61	5.91	188	12.8	6.5	165
DC-20	10/19/2018	38.93	6.00	259	13.1	0.4	155
KMW-2	10/16/2018	34.95	7.00	275	13.4	11.3	109
KMW-3	10/23/2018	26.19	6.05	207	12.6	8.0	171
KMW-7	10/23/2018	30.79	6.53	242	12.4	7.3	146
KMW-8	10/23/2018	37.22	6.09	172	12.6	7.2	160
KMW-9	10/18/2018	38.02	5.84	203	13.3	7.4	152

Table 6

Groundwater Field Sampling Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Depth to Water (feet TOC)	pH (units)	Specific Conductivity (µS/cm)	Temp (°C)	DO (mg/L)	ORP (mV)

NOTES:

1. TOC = top of casing.
2. units: pH standard units reported to 0.01.
3. µS/cm = microsiemens per centimeter @ 25 degrees Celsius (°C).
4. Dissolved Oxygen (DO) reported to 0.1 milligrams per liter (mg/L). DO measured on January 24 during water level monitoring.
5. ORP = oxidation-reduction potential.
6. mV = millivolts.
7. '-- = not sampled DC-10A: water level was too low to collect sample with the bladder pump in October.
   DC-14: monument was not found in October, possibly due to recent utility construction activity nearby.

Tetrachloroethene Concentrations in Groundwater
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Screened Interval Depth (feet TOC)	Depth to Water (feet TOC)	Pump Intake Depth (feet TOC)	PCE (µg/l)	
MTCA Method A Ground Water Cleanup Level					**5**	
January 2018 Event						
MW-7	1/26/2018	34.47-44.47	37.31	40	**7.73**	
MW-11	1/25/2018	31.56-41.56	34.74	38	**2.52**	
DC-7	1/26/2018	34.35-39.35	30.64	36	**12.1**	
DC-8	1/24/2018	36.64-41.64	34.21	37	**12.0**	
DC-10A	1/25/2018	32.01-37.01	34.71	36	**3.62**	
DC-14	2/2/2018	34.4-44.4	36.70	40	**7.81**	
DC-15	1/24/2018	30.7-40.7	35.41	38	**8.61**	
DC-17	1/26/2018	29.81-39.81	32.38	36	**7.38**	
KMW-3	1/25/2018	24.6-34.6	25.13	28	**4.95**	
KMW-8	1/25/2018	28.69-43.69	36.42	39	**5.89**	
April 2018 Event						
MW-2	4/19/2018	32.22-42.22	34.78	37	**3.39**	
MW-3	4/20/2018	35.67-45.67	37.02	39	**1.00**	
MW-4	4/20/2018	33.45-43.45	36.41	38.5	0.500	U
MW-7	4/20/2018	34.47-44.47	36.73	38	**7.64**	
MW-9	4/18/2018	31.6-41.6	30.38	32.5	0.500	U
MW-10	4/18/2018	31.52-41.52	33.21	35	**0.716**	
MW-11	4/19/2018	31.56-41.56	34.04	36	**2.97**	
MW-12	4/18/2018	35.7-45.7	38.38	40.5	0.500	U
MW-13	4/18/2018	34.58-44.58	34.86	37	0.500	U
MW-14	4/20/2018	27.6-37.6	30.69	33	**1.27**	
MW-15	4/19/2018	37.14-47.14	38.61	41	**1.13**	
MW-16	4/19/2018	29.45-44.65	36.83	38	**1.33**	
DC-3	4/19/2018	42.32-47.32	39.34	43.5	**1.23**	
DC-4	4/18/2018	43.36-48.36	38.61	41	0.500	U
DC-7	4/20/2018	34.35-39.35	30.03	35.5	**12.8**	
DC-8	4/18/2018	36.64-41.64	33.62	37.5	**13.0**	
DC-10A	4/20/2018	32.01-37.01	34.02	36	**4.67**	
DC-11	4/19/2018	31.6-41.6	37.30	39.5	**1.21**	
DC-12	4/20/2018	31.7-41.7	37.54	39.5	**1.50**	
DC-13	4/20/2018	31.7-41.7	36.66	38.5	**2.87**	
DC-14	4/19/2018	34.4-44.4	36.24	38	**5.14**	
DC-15	4/18/2018	30.7-40.7	34.81	36	**9.88**	
DC-17	4/20/2018	29.81-39.81	31.73	34	**10.1**	
DC-18	4/20/2018	31.58-41.58	36.06	38	**3.31**	
DC-20	4/19/2018	33.8-43.8	37.44	39.5	**1.14**	
KMW-2	4/18/2018	29.91-39.91	33.47	35.5	0.500	U
KMW-3	4/20/2018	24.6-34.6	24.60	26.5	**5.37**	
KMW-7	4/19/2018	28.78-43.78	29.34	35.5	**1.59**	
KMW-8	4/19/2018	28.69-43.69	35.79	37.5	**5.74**	
KMW-9	4/18/2018	33.5-43.5	36.56	38.5	**1.02**	

Tetrachloroethene Concentrations in Groundwater
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Screened Interval Depth (feet TOC)	Depth to Water (feet TOC)	Pump Intake Depth (feet TOC)	PCE (µg/l)	
MTCA Method A Ground Water Cleanup Level					**5**	
July 2018 Event						
MW-2	7/17/2018	32.22-42.22	35.17	37	**1.78**	
MW-7	7/19/2018	34.47-44.47	37.02	38.5	**6.60**	
DC-7	7/20/2018	34.35-39.35	30.51	35.5	**12.3**	
DC-8	7/18/2018	36.64-41.64	33.92	38	**11.7**	
DC-10A	7/17/2018	32.01-37.01	34.52	36	**2.68**	
DC-14	7/19/2018	34.4-44.4	36.54	38.5	**5.40**	
DC-15	7/18/2018	30.7-40.7	35.08	37	**7.82**	
DC-17	7/20/2018	29.81-39.81	32.20	34	**8.62**	
KMW-3	7/19/2018	24.6-34.6	25.08	26.5	**5.18**	
KMW-8	7/19/2018	28.69-43.69	36.13	38	**5.17**	
October 2018 Event						
MW-2	10/18/2018	32.22-42.22	36.27	39	**1.17**	
MW-3	10/16/2018	35.67-45.67	38.67	40.9	0.500	U
MW-4	10/16/2018	33.45-43.45	38.02	40.2	0.500	U
MW-7	10/23/2018	34.47-44.47	38.14	41	**5.79**	
MW-9	10/17/2018	31.6-41.6	31.44	34.0	0.500	U
MW-10	10/18/2018	31.52-41.52	34.69	36.8	0.500	U
MW-11	10/19/2018	31.56-41.56	35.61	38	**2.44**	
MW-12	10/16/2018	35.7-45.7	39.96	41.9	0.500	U
MW-13	10/16/2018	34.58-44.58	36.4	38.2	0.500	U
MW-14	10/23/2018	27.6-37.6	32.25	35	0.500	U
MW-15	10/18/2018	37.14-47.14	40.1	42.5	0.500	U
MW-16	10/18/2018	29.45-44.65	38.32	40	**0.912**	
DC-3	10/17/2018	42.32-47.32	40.81	44.8	0.500	U
DC-4	10/17/2018	43.36-48.36	40.08	44.2	0.500	U
DC-7	10/23/2018	34.35-39.35	31.61	36.5	**11.6**	
DC-8	10/18/2018	36.64-41.64	34.98	38.5	**12.1**	
DC-10A	--	32.01-37.01	35.67	--	--	
DC-11	10/18/2018	31.6-41.6	38.78	40.7	**1.25**	
DC-12	10/19/2018	31.7-41.7	39.03	39.9	**1.66**	
DC-13	10/19/2018	31.7-41.7	38.14	40.3	**2.74**	
DC-14	--	34.4-44.4	--	--	--	
DC-15	10/18/2018	30.7-40.7	36.17	38	**7.65**	
DC-17	10/19/2018	29.81-39.81	33.33	36	**8.24**	
DC-18	10/19/2018	31.58-41.58	37.61	39.6	**2.79**	
DC-20	10/19/2018	33.8-43.8	38.93	40.9	**0.885**	
KMW-2	10/16/2018	29.91-39.91	34.95	36.6	0.500	U
KMW-3	10/23/2018	24.6-34.6	26.19	29.0	**5.41**	
KMW-7	10/23/2018	28.78-43.78	30.79	33.5	**0.711**	
KMW-8	10/23/2018	28.69-43.69	37.22	40.0	**5.26**	
KMW-9	10/18/2018	33.5-43.5	38.02	39.9	0.500	U

Table 7

Tetrachloroethene Concentrations in Groundwater
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	Screened Interval Depth (feet TOC)	Depth to Water (feet TOC)	Pump Intake Depth (feet TOC)	PCE (µg/l)
MTCA Method A Ground Water Cleanup Level					**5**

NOTES:

1. Tetrachloroethene (PCE) concentrations in migrograms per liter (µg/l).
2. Groundwater samples analyzed using USEPA Method 8260C.
3. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. J = the identification of the analyte is acceptable; the reported value is an estimate
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the cleanup level are **bold and shaded**.
7. Screened interval depth is estimated using from surveyed elevations (top of casing elevations, ground surface, and monument rim) and field measurements at the time of drilling.
8. Pump intake depth and depth to water is measured in feet below the top of casing (TOC).
9. Screened intervals completely submerged are shaded.
10. '-- = not sampled DC-10A: water level was too low to collect sample with the bladder pump in October. DC-14: monument was not found in October due to recent utility construction activity nearby.

Table 8

Tetrachloroethene in Soil – April 2018 Supplemental Investigation
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Boring ID	Depth (ft bgs)	Date	PCE (mg/kg)
		MTCA Method A Cleanup Level	0.050
SB-10	6	4/16/2018	**0.193**
SB-10	10	4/16/2018	0.0359 U
SB-11	8	4/16/2018	0.0347 U
SB-11	15	4/16/2018	0.0353 U
SB-12	1	4/16/2018	0.0348 U
SB-12	5	4/16/2018	**0.138**
SB-12	10	4/16/2018	0.0325 U
SB-13	5	4/16/2018	0.0350 U
SB-13	10	4/16/2018	**0.128**
SB-13	20	4/16/2018	**6.03**
SB-13	29	4/16/2018	**0.110**
SB-13b	36	4/25/2018	**0.0829**
SB-13b	40	4/25/2018	**0.128**
SB-14	5	4/16/2018	0.0317 U
SB-14	10	4/16/2018	0.0298 U
SB-14	20	4/16/2018	0.0253 U
SB-14	30	4/16/2018	**0.109**
SB-14a	40	4/25/2018	**0.105**
SB-15	10	4/17/2018	0.0334 U
SB-15	20	4/17/2018	**0.0781**
SB-15	30	4/17/2018	**0.0645**
SB-15	40	4/17/2018	**0.132**
SB-16	20	4/17/2018	0.0366 U
SB-16	30	4/17/2018	**0.0505**
SB-16	40	4/17/2018	**0.0575**
SB-17	20	4/18/2018	**0.0435**
SB-17	30	4/18/2018	0.0281 U
SB-17	40	4/18/2018	**0.0286**
SB-18	30	4/18/2018	**0.0429**
SB-18	40	4/18/2018	**0.0284**

Table 8

Tetrachloroethene in Soil – April 2018 Supplemental Investigation
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Boring ID	Depth (ft bgs)	Date	PCE (mg/kg)
		MTCA Method A Cleanup Level	0.050
SB-26	2	4/24/2018	**0.0960**
SB-26	4	4/24/2018	0.0292 U
SB-26	10	4/24/2018	0.0433 U
SB-26	20	4/24/2018	**0.0763**
SB-26	30	4/24/2018	**0.0647**
SB-26	40	4/24/2018	0.0340 U
SB-27	2	4/24/2018	**0.0800**
SB-27	4	4/24/2018	0.0426 U
SB-27	10	4/24/2018	0.0339 U
SB-27	20	4/24/2018	**0.0942**
SB-27	30	4/24/2018	**0.118**
SB-27	40	4/24/2018	**0.169**
SB-28	20	4/24/2018	0.0323 U
SB-28	30	4/24/2018	**0.0784**
SB-28	40	4/24/2018	0.0325 U
SB-30	30	4/25/2018	0.0395 U
SB-30	35	4/25/2018	**0.142**
SB-30	40	4/25/2018	**0.0665**

NOTES:

1. Depths measured from ground surface.
2. Tetrachloroethene (PCE) concentrations in milligrams per kilogram (mg/kg).
3. Soil samples analyzed using USEPA Method 8260C.
4. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the PCE MTCA Method A cleanup level of 0.050 mg/kg are **bold and shaded**.

Table 9

Tetrachloroethene in Groundwater – April 2018 Supplemental Investigation
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Boring ID	Sample Depth (ft)	Depth to Water (ft)	Date	PCE (µg/L)	Other Detected VOCs (µg/L)
MTCA Method A Cleanup Level				5.0	
SB-19	36-40	35.2	4/19/2018	**14.8**	
SB-20	36-40	36.2	4/19/2018	**10.8**	
SB-21	36-40	35.8	4/19/2018	**8.18**	
SB-22	36-40	36	4/20/2018	**8.91**	
SB-23	36-40	35.8	4/20/2018	**6.78**	
SB-24	36-40	35.8	4/23/2018	**10.8**	
SB-25	36-40	35.4	4/23/2018	**1.65**	m,p-Xylene = 1.64 o-Xylene = 1.24
SB-29	36-40	36	4/24/2018	**13.7**	

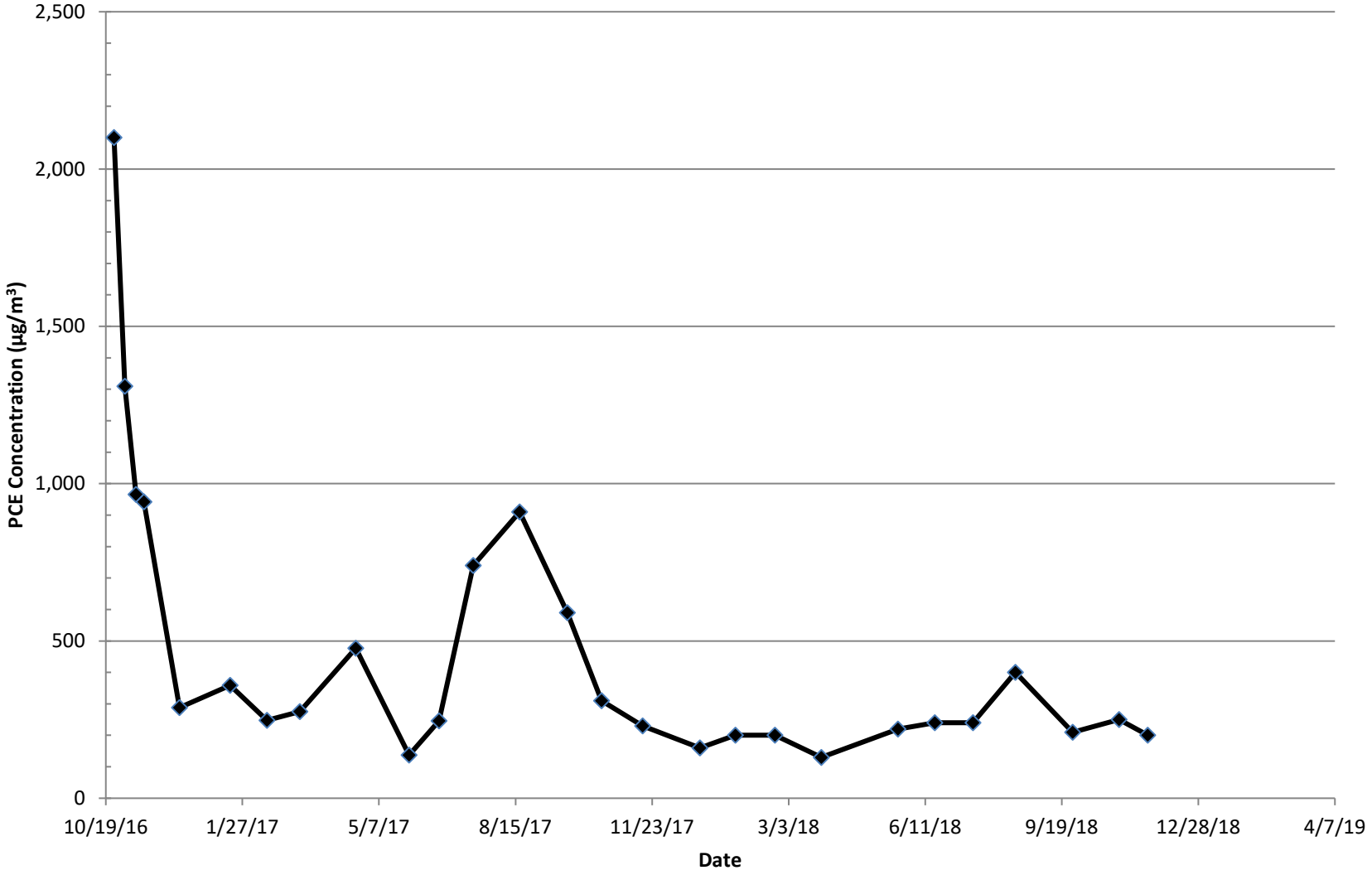
NOTES:

1. Groundwater samples collected from temporary well screen.
2. Depths measured from ground surface.
3. Tetrachloroethene (PCE) concentrations in migrograms per liter (µg/l).
4. Groundwater samples analyzed using USEPA Method 8260C.
5. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
6. J = the identification of the analyte is acceptable; the reported value is an estimate
7. Detected concentrations are shown in **bold.**
8. Concentrations exceeding the cleanup level are **bold and shaded**.
9. Xylenes in SB-25 were the only other detected volatile organic compounds (VOCs) besides PCE. The xylene concentrations in SB-25 are well below the MTCA Method A cleanup level (1,000 µg/L).

ATTACHMENT A
O&M CHARTS AND SUMMARY TABLES

- Chart A1 – SVE Discharge PCE Concentrations
- Chart A2 – Cumulative PCE Removed
- Table A3 – Historical AVE Leg Analytical Results
- Table A4 – Air Sparging Groundwater Monitoring Parameters

Attachment A1
SVE Discharge PCE Concentrations
Manhattan Village/Harris Properties



Attachment A2
Cumulative PCE Removed
Manhattan Village/Harris Properties

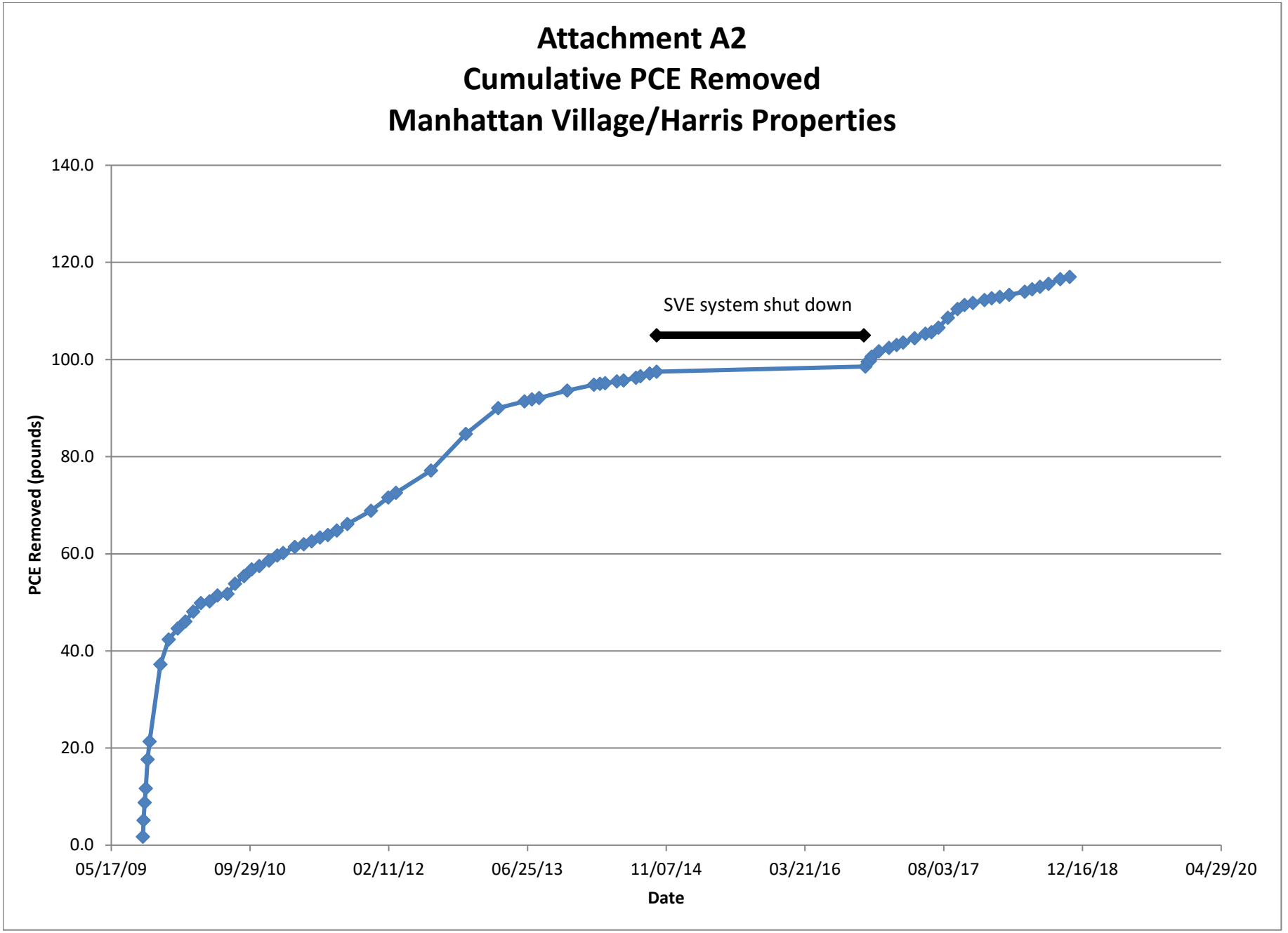


Table A3
Historical SVE Leg Analytical Results
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

SVE Well	Screen Depth (ft bgs)	PCE Concentration						
		06/04/10	01/26/11	12/09/11	11/05/13	12/12/16	12/28/17	09/27/18
SVE-1	10-35	3,900	1,300	1,600	1,010	499	120	160
SVE-2	10-35	740	1,600	1,300	977	374	210	240
SVE-3	10-30	7,100	2,900	2,500	1,920	338	50	750
SVE-4	10-30	330	870	910	412	332	59	130
SVE-5	10-30	5,100	2,500	1,200	499	716	170	270
SVE-6	5-10	17,000	4,400	2,900	827	1,490	150	950
SVE-7	10-30	3,300	1,700	1,400	723	1,130	350	400
SVE-8	10-30	590	800	6	448	703	320	210
SVE-9	10-30	880	740	750	325	379	170	170
SVE-10	10-30	1,300	1,100	1,300	709	398	290	270
SVE-11A	5-19.98	--	--	--	--	136	68	100
SVE-11B	20-35	--	--	--	--	149	24	68
SVE-12A	5-19.98	--	--	--	--	217	310	110
SVE-12B	20-35	--	--	--	--	295	54	160
SVE-13A	5-19.98	--	--	--	--	145	36	94
SVE-13B	20-35	--	--	--	--	241	180	96
SVE-14	19.63-34.63	--	--	--	--	144	120	110
SVE-15	20.61-34.96	--	--	--	--	373	190	170
SVE-16	20.49-34.79	--	--	--	--	587	310	330
SVE-17	19.91-29.91	--	--	--	--	65.1	5.9	3.3
SVE-18	19.79-29.79	--	--	--	--	380	59	110
SVE-19	19.99-29.99	--	--	--	--	147	39	71

Notes:

1. Concentrations in micrograms per cubic meter ($\mu g/m^3$)

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-2	09/21/16	308.34	32.22-42.22	35.65	272.69	--
MW-2	10/22/16	308.34	32.22-42.22	35.95	272.39	9.0
MW-2	10/25/16	308.34	32.22-42.22	35.91	272.43	7.0
MW-2	11/02/16	308.34	32.22-42.22	36.00	272.34	8.6
MW-2	11/10/16	308.34	32.22-42.22	35.99	272.35	7.9
MW-2	11/16/16	308.34	32.22-42.22	36.07	272.27	8.0
MW-2	12/12/16	308.34	32.22-42.22	36.02	272.32	8.1
MW-2	02/14/17	308.34	32.22-42.22	37.01	271.33	7.2
MW-2	03/10/17	308.34	32.22-42.22	35.00	273.34	8.7
MW-2	04/20/17	308.34	32.22-42.22	33.90	274.44	--
MW-2	05/29/17	308.34	32.22-42.22	34.20	274.14	8.9
MW-2	06/20/17	308.34	32.22-42.22	35.31	273.03	7.0
MW-2	07/15/17	308.34	32.22-42.22	33.98	274.36	5.6
MW-2	08/18/17	308.34	32.22-42.22	34.41	273.93	7.4
MW-2	09/22/17	308.34	32.22-42.22	34.99	273.35	8.4
MW-2	10/17/17	308.34	32.22-42.22	35.38	272.96	9.5
MW-2	11/16/17	308.34	32.22-42.22	37.81	270.53	9.7
MW-2	12/27/17	308.34	32.22-42.22	35.72	272.62	8.0
MW-2	01/23/18	308.34	32.22-42.22	35.49	272.85	7.9
MW-2	01/24/18	308.34	32.22-42.22	35.61	272.73	9.2
MW-2	02/21/18	308.34	32.22-42.22	35.01	273.33	8.3
MW-2	03/27/18	308.34	32.22-42.22	34.82	273.52	7.9
MW-2	04/17/18	308.34	32.22-42.22	34.93	273.41	6.4
MW-2	05/21/18	308.34	32.22-42.22	34.71	273.63	9.0
MW-2	06/18/18	308.34	32.22-42.22	34.88	273.46	8.0
MW-2	07/16/18	308.34	32.22-42.22	35.19	273.15	8.6
MW-2	10/15/18	308.34	32.22-42.22	36.26	272.08	8.7
MW-2	10/31/18	308.34	32.22-42.22	36.42	271.92	8.7
MW-2	11/21/18	308.34	32.22-42.22	36.69	271.65	8.6
MW-3	09/21/16	311.41	35.67-45.67	37.91	273.50	--
MW-3	10/22/16	311.41	35.67-45.67	38.22	273.19	9.6
MW-3	10/25/16	311.41	35.67-45.67	38.21	273.20	11.0
MW-3	11/02/16	311.41	35.67-45.67	38.29	273.12	11.2
MW-3	11/10/16	311.41	35.67-45.67	38.25	273.16	10.9
MW-3	11/16/16	311.41	35.67-45.67	38.35	273.06	11.0
MW-3	12/12/16	311.41	35.67-45.67	38.32	273.09	10.8
MW-3	02/14/17	311.41	35.67-45.67	37.91	273.50	8.7
MW-3	03/10/17	311.41	35.67-45.67	37.15	274.26	10.9
MW-3	04/20/17	311.41	35.67-45.67	36.00	275.41	10.9
MW-3	05/29/17	311.41	35.67-45.67	35.55	275.86	11.0
MW-3	06/20/17	311.41	35.67-45.67	35.95	275.46	11.1
MW-3	07/15/17	311.41	35.67-45.67	36.22	275.19	12.8
MW-3	08/18/17	311.41	35.67-45.67	36.66	274.75	11.8
MW-3	09/22/17	311.41	35.67-45.67	37.30	274.11	9.0
MW-3	10/17/17	311.41	35.67-45.67	37.65	273.76	9.8
MW-3	11/16/17	311.41	35.67-45.67	37.92	273.49	9.8

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-3	12/27/17	311.41	35.67-45.67	37.98	273.43	9.7
MW-3	01/23/18	311.41	35.67-45.67	37.55	273.86	11.8
MW-3	01/24/18	311.41	35.67-45.67	37.33	274.08	12.2
MW-3	02/21/18	311.41	35.67-45.67	37.03	274.38	10.4
MW-3	03/27/18	311.41	35.67-45.67	37.15	274.26	12.7
MW-3	04/17/18	311.41	35.67-45.67	37.24	274.17	9.6
MW-3	05/21/18	311.41	35.67-45.67	38.96	272.45	13.1
MW-3	06/18/18	311.41	35.67-45.67	37.01	274.40	12.0
MW-3	07/16/18	311.41	35.67-45.67	37.50	273.91	13.2
MW-3	10/15/18	311.41	35.67-45.67	38.68	272.73	12.1
MW-3	10/31/18	311.41	35.67-45.67	38.81	272.60	12.5
MW-3	11/21/18	311.41	35.67-45.67	39.19	272.22	11.3
MW-4	09/21/16	310.47	33.45-43.45	37.26	273.21	--
MW-4	10/22/16	310.47	33.45-43.45	37.55	272.92	9.9
MW-4	10/25/16	310.47	33.45-43.45	37.40	273.07	11.5
MW-4	11/02/16	310.47	33.45-43.45	37.52	272.95	11.1
MW-4	11/10/16	310.47	33.45-43.45	37.45	273.02	11.1
MW-4	11/16/16	310.47	33.45-43.45	37.59	272.88	10.7
MW-4	12/12/16	310.47	33.45-43.45	37.48	272.99	10.7
MW-4	01/18/17	310.47	33.45-43.45	37.42	273.05	11.4
MW-4	02/14/17	310.47	33.45-43.45	36.90	273.57	9.2
MW-4	03/10/17	310.47	33.45-43.45	35.91	274.56	11.3
MW-4	04/20/17	310.47	33.45-43.45	34.11	276.36	--
MW-4	05/29/17	310.47	33.45-43.45	32.80	277.67	11.1
MW-4	06/20/17	310.47	33.45-43.45	35.35	275.12	10.2
MW-4	07/15/17	310.47	33.45-43.45	35.55	274.92	12.1
MW-4	08/18/17	310.47	33.45-43.45	35.99	274.48	11.0
MW-4	09/22/17	310.47	33.45-43.45	36.61	273.86	10.1
MW-4	10/17/17	310.47	33.45-43.45	37.00	273.47	11.8
MW-4	11/16/17	310.47	33.45-43.45	37.22	273.25	10.8
MW-4	12/27/17	310.47	33.45-43.45	37.28	273.19	10.2
MW-4	01/23/18	310.47	33.45-43.45	36.55	273.92	11.8
MW-4	01/24/18	310.47	33.45-43.45	37.04	273.43	12.5
MW-4	02/21/18	310.47	33.45-43.45	36.11	274.36	10.4
MW-4	03/27/18	310.47	33.45-43.45	35.91	274.56	12.2
MW-4	04/17/18	310.47	33.45-43.45	36.59	273.88	8.5
MW-4	05/21/18	310.47	33.45-43.45	35.11	275.36	12.8
MW-4	06/18/18	310.47	33.45-43.45	36.64	273.83	12.3
MW-4	07/16/18	310.47	33.45-43.45	35.85	274.62	12.7
MW-4	10/15/18	310.47	33.45-43.45	38.01	272.46	12.3
MW-4	10/31/18	310.47	33.45-43.45	37.94	272.53	11.7
MW-4	11/21/18	310.47	33.45-43.45	38.80	271.67	11.5

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-5	01/24/18	310.84	35.6-45.6	38.60	272.24	8.7
MW-5	04/17/18	310.84	35.6-45.6	37.71	273.13	6.0
MW-5	07/18/18	310.84	35.6-45.6	37.89	272.95	8.8
MW-5	10/15/18	310.84	35.6-45.6	38.92	271.92	8.5
MW-6	01/24/18	304.14	34.46-44.46	36.08	268.06	5.6
MW-6	04/17/18	304.14	34.46-44.46	35.61	268.53	3.4
MW-6	07/18/18	304.14	34.46-44.46	35.71	268.43	5.2
MW-6	10/15/18	304.14	34.46-44.46	36.58	267.56	5.7
MW-7	01/24/18	302.64	34.47-44.47	37.33	265.31	9.1
MW-7	04/17/18	302.64	34.47-44.47	36.79	265.85	6.8
MW-7	07/18/18	302.64	34.47-44.47	37.00	265.64	9.5
MW-7	10/23/18	302.64	34.47-44.47	38.15	264.49	6.6
MW-8	01/24/18	280.68	12.71-22.71	10.80	269.88	8.0
MW-8	04/17/18	280.68	12.71-22.71	10.50	270.18	5.6
MW-8	07/18/18	280.68	12.71-22.71	11.22	269.46	6.6
MW-8	10/16/18	280.68	12.71-22.71	12.09	268.59	7.3
MW-9	01/24/18	284.97	31.6-41.6	30.84	254.13	8.8
MW-9	04/17/18	284.97	31.6-41.6	30.43	254.54	6.1
MW-9	07/18/18	284.97	31.6-41.6	30.60	254.37	0.3
MW-9	10/16/18	284.97	31.6-41.6	31.40	253.57	4.2
MW-10	09/21/16	306.71	31.52-41.52	33.89	272.82	--
MW-10	10/22/16	306.71	31.52-41.52	34.25	272.46	11.0
MW-10	10/25/16	306.71	31.52-41.52	34.25	272.46	10.0
MW-10	11/02/16	306.71	31.52-41.52	34.33	272.38	11.7
MW-10	11/10/16	306.71	31.52-41.52	34.31	272.40	11.3
MW-10	11/16/16	306.71	31.52-41.52	34.41	272.30	11.9
MW-10	12/12/16	306.71	31.52-41.52	34.31	272.40	11.8
MW-10	01/18/17	306.71	31.52-41.52	34.25	272.46	8.2
MW-10	02/14/17	306.71	31.52-41.52	33.98	272.73	10.1
MW-10	03/10/17	306.71	31.52-41.52	33.21	273.50	11.4
MW-10	04/20/17	306.71	31.52-41.52	32.11	274.60	--
MW-10	05/29/17	306.71	31.52-41.52	32.27	274.44	11.1
MW-10	06/20/17	306.71	31.52-41.52	32.75	273.96	8.5
MW-10	07/15/17	306.71	31.52-41.52	32.35	274.36	13.4
MW-10	08/18/17	306.71	31.52-41.52	32.82	273.89	13.6
MW-10	09/22/17	306.71	31.52-41.52	33.41	273.30	12.8
MW-10	10/17/17	306.71	31.52-41.52	33.80	272.91	12.6
MW-10	11/16/17	306.71	31.52-41.52	35.01	271.70	9.2
MW-10	12/27/17	306.71	31.52-41.52	34.17	272.54	11.3
MW-10	01/23/18	306.71	31.52-41.52	33.78	272.93	12.0
MW-10	01/24/18	306.71	31.52-41.52	33.82	272.89	12.7
MW-10	02/21/18	306.71	31.52-41.52	34.20	272.51	10.6

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-10	03/27/18	306.71	31.52-41.52	33.29	273.42	11.3
MW-10	04/17/18	306.71	31.52-41.52	33.30	273.41	9.4
MW-10	05/21/18	306.71	31.52-41.52	34.07	272.64	11.6
MW-10	06/18/18	306.71	31.52-41.52	32.98	273.73	11.0
MW-10	07/16/18	306.71	31.52-41.52	33.61	273.10	12.4
MW-10	10/15/18	306.71	31.52-41.52	34.66	272.05	12.9
MW-10	10/31/18	306.71	31.52-41.52	34.83	271.88	10.4
MW-10	11/21/18	306.71	31.52-41.52	35.16	271.55	10.9
MW-11	09/21/16	307.62	31.56-41.56	34.82	272.80	--
MW-11	10/22/16	307.62	31.56-41.56	35.31	272.31	9.7
MW-11	10/25/16	307.62	31.56-41.56	35.21	272.41	9.3
MW-11	11/02/16	307.62	31.56-41.56	35.24	272.38	10.5
MW-11	11/10/16	307.62	31.56-41.56	35.19	272.43	10.4
MW-11	11/16/16	307.62	31.56-41.56	35.32	272.30	9.7
MW-11	12/12/16	307.62	31.56-41.56	35.28	272.34	9.6
MW-11	01/18/17	307.62	31.56-41.56	35.30	272.32	10.1
MW-11	02/14/17	307.62	31.56-41.56	34.96	272.66	9.2
MW-11	03/10/17	307.62	31.56-41.56	34.20	273.42	9.8
MW-11	04/20/17	307.62	31.56-41.56	33.10	274.52	--
MW-11	05/29/17	307.62	31.56-41.56	33.97	273.65	9.7
MW-11	06/20/17	307.62	31.56-41.56	32.97	274.65	8.5
MW-11	07/15/17	307.62	31.56-41.56	33.25	274.37	11.5
MW-11	08/18/17	307.62	31.56-41.56	33.71	273.91	11.8
MW-11	09/22/17	307.62	31.56-41.56	34.30	273.32	11.3
MW-11	10/17/17	307.62	31.56-41.56	34.84	272.78	10.7
MW-11	11/16/17	307.62	31.56-41.56	34.06	273.56	12.8
MW-11	12/27/17	307.62	31.56-41.56	35.05	272.57	11.2
MW-11	01/23/18	307.62	31.56-41.56	35.73	271.89	10.9
MW-11	01/24/18	307.62	31.56-41.56	34.77	272.85	12.3
MW-11	02/21/18	307.62	31.56-41.56	33.21	274.41	11.1
MW-11	03/27/18	307.62	31.56-41.56	34.18	273.44	10.5
MW-11	04/17/18	307.62	31.56-41.56	34.21	273.41	8.8
MW-11	05/21/18	307.62	31.56-41.56	33.11	274.51	13.4
MW-11	06/18/18	307.62	31.56-41.56	31.99	275.63	11.0
MW-11	07/16/18	307.62	31.56-41.56	34.56	273.06	12.1
MW-11	10/19/18	307.62	31.56-41.56	35.61	272.01	12.8
MW-11	10/31/18	307.62	31.56-41.56	35.92	271.70	11.4
MW-11	11/21/18	307.62	31.56-41.56	37.04	270.58	10.9
MW-12	09/21/16	312.80	35.7-45.7	39.19	273.61	--
MW-12	10/22/16	312.80	35.7-45.7	39.55	273.25	9.3
MW-12	10/25/16	312.80	35.7-45.7	--	--	--
MW-12	11/02/16	312.80	35.7-45.7	39.58	273.22	11.1
MW-12	11/10/16	312.80	35.7-45.7	39.52	273.28	11.3
MW-12	11/16/16	312.80	35.7-45.7	39.65	273.15	11.2
MW-12	12/12/16	312.80	35.7-45.7	39.80	273.00	11.1

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-12	01/18/17	312.80	35.7-45.7	39.21	273.59	12.6
MW-12	02/14/17	312.80	35.7-45.7	39.21	273.59	8.8
MW-12	03/10/17	312.80	35.7-45.7	38.47	274.33	11.2
MW-12	04/20/17	312.80	35.7-45.7	37.20	275.60	--
MW-12	05/29/17	312.80	35.7-45.7	36.92	275.88	11.0
MW-12	06/20/17	312.80	35.7-45.7	37.20	275.60	10.3
MW-12	07/15/17	312.80	35.7-45.7	37.42	275.38	10.1
MW-12	08/18/17	312.80	35.7-45.7	38.00	274.80	9.6
MW-12	09/22/17	312.80	35.7-45.7	38.52	274.28	8.9
MW-12	10/17/17	312.80	35.7-45.7	38.90	273.90	9.6
MW-12	11/16/17	312.80	35.7-45.7	39.36	273.44	9.1
MW-12	12/27/17	312.80	35.7-45.7	39.25	273.55	8.8
MW-12	01/23/18	312.80	35.7-45.7	38.89	273.91	11.7
MW-12	01/24/18	312.80	35.7-45.7	39.01	273.79	13.2
MW-12	02/21/18	312.80	35.7-45.7	38.21	274.59	9.9
MW-12	03/27/18	312.80	35.7-45.7	38.50	274.30	12.0
MW-12	04/17/18	312.80	35.7-45.7	38.49	274.31	9.5
MW-12	05/21/18	312.80	35.7-45.7	38.23	274.57	13.0
MW-12	06/18/18	312.80	35.7-45.7	38.59	274.21	12.1
MW-12	07/16/18	312.80	35.7-45.7	38.80	274.00	12.5
MW-12	10/15/18	312.80	35.7-45.7	39.94	272.86	13.1
MW-12	10/31/18	312.80	35.7-45.7	40.03	272.77	11.9
MW-12	11/21/18	312.80	35.7-45.7	40.45	272.35	11.7
MW-13	09/21/16	308.75	34.58-44.58	35.66	273.09	--
MW-13	10/22/16	308.75	34.58-44.58	36.00	272.75	10.6
MW-13	10/25/16	308.75	34.58-44.58	35.95	272.80	10.4
MW-13	11/02/16	308.75	34.58-44.58	36.03	272.72	10.1
MW-13	11/10/16	308.75	34.58-44.58	36.00	272.75	9.6
MW-13	11/16/16	308.75	34.58-44.58	36.06	272.69	9.7
MW-13	12/12/16	308.75	34.58-44.58	36.00	272.75	9.6
MW-13	01/18/17	308.75	34.58-44.58	36.15	272.60	10.3
MW-13	02/14/17	308.75	34.58-44.58	35.60	273.15	7.0
MW-13	03/10/17	308.75	34.58-44.58	34.85	273.90	9.8
MW-13	04/20/17	308.75	34.58-44.58	33.80	274.95	--
MW-13	05/29/17	308.75	34.58-44.58	33.44	275.31	10.0
MW-13	06/20/17	308.75	34.58-44.58	33.85	274.90	9.4
MW-13	07/15/17	308.75	34.58-44.58	34.02	274.73	12.1
MW-13	08/18/17	308.75	34.58-44.58	34.48	274.27	8.8
MW-13	09/22/17	308.75	34.58-44.58	35.11	273.64	10.2
MW-13	10/17/17	308.75	34.58-44.58	35.50	273.25	9.3
MW-13	11/16/17	308.75	34.58-44.58	36.40	272.35	10.3
MW-13	12/27/17	308.75	34.58-44.58	35.72	273.03	9.8
MW-13	01/23/18	308.75	34.58-44.58	35.38	273.37	9.4
MW-13	01/24/18	308.75	34.58-44.58	35.45	273.30	10.1
MW-13	02/21/18	308.75	34.58-44.58	35.11	273.64	8.3
MW-13	03/27/18	308.75	34.58-44.58	34.56	274.19	8.8

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-13	04/17/18	308.75	34.58-44.58	34.98	273.77	6.1
MW-13	05/21/18	308.75	34.58-44.58	34.69	274.06	11.2
MW-13	06/18/18	308.75	34.58-44.58	35.10	273.65	9.8
MW-13	07/16/18	308.75	34.58-44.58	35.28	273.47	10.8
MW-13	10/15/18	308.75	34.58-44.58	36.40	272.35	11.6
MW-13	10/31/18	308.75	34.58-44.58	38.56	270.19	11.9
MW-13	11/21/18	308.75	34.58-44.58	36.89	271.86	11.4
MW-14	01/24/18	303.82	27.6-37.6	31.33	272.49	11.4
MW-14	04/17/18	303.82	27.6-37.6	30.84	272.98	8.4
MW-14	07/18/18	303.82	27.6-37.6	--	--	--
MW-14	10/15/18	303.82	27.6-37.6	32.14	271.68	11.3
MW-15	09/21/16	312.44	37.14-47.14	39.38	273.06	--
MW-15	10/22/16	312.44	37.14-47.14	39.75	272.69	9.2
MW-15	10/25/16	312.44	37.14-47.14	39.72	272.72	8.0
MW-15	11/02/16	312.44	37.14-47.14	39.81	272.63	8.9
MW-15	11/10/16	312.44	37.14-47.14	39.77	272.67	8.8
MW-15	11/16/16	312.44	37.14-47.14	39.90	272.54	9.0
MW-15	12/12/16	312.44	37.14-47.14	39.85	272.59	8.9
MW-15	01/18/17	312.44	37.14-47.14	39.85	272.59	9.5
MW-15	02/14/17	312.44	37.14-47.14	40.55	271.89	7.0
MW-15	03/10/17	312.44	37.14-47.14	38.79	273.65	9.0
MW-15	04/20/17	312.44	37.14-47.14	37.71	274.73	--
MW-15	05/29/17	312.44	37.14-47.14	38.22	274.22	9.1
MW-15	06/20/17	312.44	37.14-47.14	37.61	274.83	7.7
MW-15	07/15/17	312.44	37.14-47.14	37.77	274.67	8.4
MW-15	08/18/17	312.44	37.14-47.14	38.25	274.19	8.5
MW-15	09/22/17	312.44	37.14-47.14	38.78	273.66	7.9
MW-15	10/17/17	312.44	37.14-47.14	39.14	273.30	8.0
MW-15	11/16/17	312.44	37.14-47.14	39.49	272.95	7.8
MW-15	12/27/17	312.44	37.14-47.14	39.55	272.89	8.5
MW-15	01/23/18	312.44	37.14-47.14	39.29	273.15	8.3
MW-15	01/24/18	312.44	37.14-47.14	39.31	273.13	9.2
MW-15	02/21/18	312.44	37.14-47.14	39.82	272.62	7.4
MW-15	03/27/18	312.44	37.14-47.14	38.69	273.75	7.1
MW-15	04/17/18	312.44	37.14-47.14	38.75	273.69	5.6
MW-15	05/21/18	312.44	37.14-47.14	38.53	273.91	8.4
MW-15	06/18/18	312.44	37.14-47.14	38.81	273.63	8.1
MW-15	07/16/18	312.44	37.14-47.14	39.06	273.38	8.2
MW-15	10/15/18	312.44	37.14-47.14	40.08	272.36	8.5
MW-15	10/31/18	312.44	37.14-47.14	40.24	272.20	8.8
MW-15	11/21/18	312.44	37.14-47.14	40.51	271.93	11.2

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
MW-16	09/21/16	310.37	29.45-44.65	37.50	272.87	--
MW-16	10/22/16	310.37	29.45-44.65	38.00	272.37	9.2
MW-16	10/25/16	310.37	29.45-44.65	37.95	272.42	7.7
MW-16	11/02/16	310.37	29.45-44.65	38.03	272.34	8.6
MW-16	11/10/16	310.37	29.45-44.65	38.01	272.36	8.3
MW-16	11/16/16	310.37	29.45-44.65	38.10	272.27	8.8
MW-16	12/12/16	310.37	29.45-44.65	38.19	272.18	8.8
MW-16	01/18/17	310.37	29.45-44.65	37.91	272.46	12.0
MW-16	02/14/17	310.37	29.45-44.65	37.72	272.65	8.0
MW-16	03/10/17	310.37	29.45-44.65	37.01	273.36	9.0
MW-16	04/20/17	310.37	29.45-44.65	35.90	274.47	--
MW-16	05/29/17	310.37	29.45-44.65	36.41	273.96	9.3
MW-16	06/20/17	310.37	29.45-44.65	35.78	274.59	8.1
MW-16	07/15/17	310.37	29.45-44.65	36.05	274.32	13.0
MW-16	08/18/17	310.37	29.45-44.65	36.48	273.89	13.2
MW-16	09/22/17	310.37	29.45-44.65	37.03	273.34	12.4
MW-16	10/17/17	310.37	29.45-44.65	37.40	272.97	12.0
MW-16	11/16/17	310.37	29.45-44.65	37.72	272.65	12.2
MW-16	12/27/17	310.37	29.45-44.65	37.77	272.60	12.3
MW-16	01/23/18	310.37	29.45-44.65	37.30	273.07	11.3
MW-16	01/24/18	310.37	29.45-44.65	37.53	272.84	12.7
MW-16	02/21/18	310.37	29.45-44.65	37.03	273.34	10.4
MW-16	03/27/18	310.37	29.45-44.65	36.91	273.46	10.4
MW-16	04/17/18	310.37	29.45-44.65	36.99	273.38	8.9
MW-16	05/21/18	310.37	29.45-44.65	36.79	273.58	11.1
MW-16	06/18/18	310.37	29.45-44.65	36.61	273.76	11.1
MW-16	07/16/18	310.37	29.45-44.65	37.28	273.09	10.6
MW-16	10/15/18	310.37	29.45-44.65	38.31	272.06	10.9
MW-16	10/31/18	310.37	29.45-44.65	38.48	271.89	10.9
MW-16	11/21/18	310.37	29.45-44.65	38.59	271.78	10.4
DC-1	09/21/16	312.82	39.5-44.5	39.10	273.72	--
DC-1	10/22/16	312.82	39.5-44.5	39.45	273.37	9.5
DC-1	10/25/16	312.82	39.5-44.5	39.49	273.33	6.5
DC-1	11/02/16	312.82	39.5-44.5	39.49	273.33	9.4
DC-1	11/10/16	312.82	39.5-44.5	39.49	273.33	9.0
DC-1	11/16/16	312.82	39.5-44.5	39.60	273.22	9.0
DC-1	12/12/16	312.82	39.5-44.5	39.59	273.23	9.0
DC-1	01/18/17	312.82	39.5-44.5	39.59	273.23	6.0
DC-1	02/14/17	312.82	39.5-44.5	39.30	273.52	8.0
DC-1	03/10/17	312.82	39.5-44.5	38.59	274.23	7.0
DC-1	04/20/17	312.82	39.5-44.5	37.41	275.41	--
DC-1	05/29/17	312.82	39.5-44.5	36.94	275.88	7.1
DC-1	06/20/17	312.82	39.5-44.5	37.20	275.62	7.3
DC-1	07/15/17	312.82	39.5-44.5	37.40	275.42	7.0
DC-1	08/18/17	312.82	39.5-44.5	37.07	275.75	6.2
DC-1	09/22/17	312.82	39.5-44.5	38.49	274.33	8.8

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-1	10/17/17	312.82	39.5-44.5	38.85	273.97	8.1
DC-1	11/16/17	312.82	39.5-44.5	39.43	273.39	8.0
DC-1	12/27/17	312.82	39.5-44.5	39.30	273.52	9.0
DC-1	01/23/18	312.82	39.5-44.5	39.03	273.79	8.7
DC-1	01/24/18	312.82	39.5-44.5	39.02	273.80	9.0
DC-1	02/21/18	312.82	39.5-44.5	38.51	274.31	7.7
DC-1	03/27/18	312.82	39.5-44.5	38.38	274.44	8.2
DC-1	04/17/18	312.82	39.5-44.5	38.43	274.39	6.6
DC-1	05/21/18	312.82	39.5-44.5	38.81	274.01	8.0
DC-1	06/18/18	312.82	39.5-44.5	38.51	274.31	7.1
DC-1	07/16/18	312.82	39.5-44.5	38.72	274.10	9.1
DC-1	10/15/18	312.82	39.5-44.5	39.80	273.02	9.2
DC-1	10/31/18	312.82	39.5-44.5	39.97	272.85	9.2
DC-1	11/21/18	312.82	39.5-44.5	40.21	272.61	9.2
DC-2	09/21/16	312.92	41.22-46.22	39.82	273.10	--
DC-2	10/22/16	312.92	41.22-46.22	40.20	272.72	9.0
DC-2	10/25/16	312.92	41.22-46.22	40.19	272.73	7.7
DC-2	11/02/16	312.92	41.22-46.22	40.24	272.68	8.4
DC-2	11/10/16	312.92	41.22-46.22	40.21	272.71	8.2
DC-2	11/16/16	312.92	41.22-46.22	40.32	272.60	8.3
DC-2	12/12/16	312.92	41.22-46.22	40.31	272.61	8.4
DC-2	01/18/17	312.92	41.22-46.22	40.35	272.57	9.1
DC-2	02/14/17	312.92	41.22-46.22	40.00	272.92	7.1
DC-2	03/10/17	312.92	41.22-46.22	39.30	273.62	8.5
DC-2	04/20/17	312.92	41.22-46.22	38.22	274.70	--
DC-2	05/29/17	312.92	41.22-46.22	38.78	274.14	8.2
DC-2	06/20/17	312.92	41.22-46.22	38.08	274.84	9.1
DC-2	07/15/17	312.92	41.22-46.22	38.19	274.73	8.6
DC-2	08/18/17	312.92	41.22-46.22	38.67	274.25	7.7
DC-2	09/22/17	312.92	41.22-46.22	39.25	273.67	10.6
DC-2	10/17/17	312.92	41.22-46.22	39.62	273.30	8.0
DC-2	11/16/17	312.92	41.22-46.22	39.94	272.98	8.6
DC-2	12/27/17	312.92	41.22-46.22	40.01	272.91	8.3
DC-2	01/23/18	312.92	41.22-46.22	37.75	275.17	10.4
DC-2	01/24/18	312.92	41.22-46.22	39.76	273.16	8.8
DC-2	02/21/18	312.92	41.22-46.22	38.51	274.41	7.9
DC-2	03/27/18	312.92	41.22-46.22	39.19	273.73	8.1
DC-2	04/17/18	312.92	41.22-46.22	39.20	273.72	7.0
DC-2	05/21/18	312.92	41.22-46.22	39.00	273.92	9.2
DC-2	06/18/18	312.92	41.22-46.22	39.51	273.41	7.1
DC-2	07/16/18	312.92	41.22-46.22	39.51	273.41	8.0
DC-2	10/15/18	312.92	41.22-46.22	40.53	272.39	8.9
DC-2	10/31/18	312.92	41.22-46.22	40.71	272.21	9.1
DC-2	11/21/18	312.92	41.22-46.22	41.10	271.82	10.1

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-3	09/21/16	313.11	42.32-47.32	40.11	273.00	--
DC-3	10/22/16	313.11	42.32-47.32	40.48	272.63	10.1
DC-3	10/25/16	313.11	42.32-47.32	40.50	272.61	9.4
DC-3	11/02/16	313.11	42.32-47.32	--	--	--
DC-3	11/10/16	313.11	42.32-47.32	40.48	272.63	11.4
DC-3	11/16/16	313.11	42.32-47.32	40.60	272.51	11.3
DC-3	12/12/16	313.11	42.32-47.32	40.79	272.32	11.4
DC-3	01/18/17	313.11	42.32-47.32	40.55	272.56	11.9
DC-3	02/14/17	313.11	42.32-47.32	40.22	272.89	7.8
DC-3	03/10/17	313.11	42.32-47.32	39.44	273.67	11.5
DC-3	04/20/17	313.11	42.32-47.32	38.34	274.77	--
DC-3	05/29/17	313.11	42.32-47.32	38.33	274.78	11.4
DC-3	06/20/17	313.11	42.32-47.32	38.54	274.57	10.2
DC-3	07/15/17	313.11	42.32-47.32	38.49	274.62	11.7
DC-3	08/18/17	313.11	42.32-47.32	38.88	274.23	8.9
DC-3	09/22/17	313.11	42.32-47.32	39.49	273.62	11.8
DC-3	10/17/17	313.11	42.32-47.32	39.90	273.21	11.8
DC-3	11/16/17	313.11	42.32-47.32	40.12	272.99	11.7
DC-3	12/27/17	313.11	42.32-47.32	40.19	272.92	11.7
DC-3	01/23/18	313.11	42.32-47.32	40.20	272.91	11.7
DC-3	01/24/18	313.11	42.32-47.32	39.98	273.13	12.3
DC-3	02/21/18	313.11	42.32-47.32	39.40	273.71	8.2
DC-3	03/27/18	313.11	42.32-47.32	39.39	273.72	10.2
DC-3	04/17/18	313.11	42.32-47.32	39.47	273.64	8.9
DC-3	05/21/18	313.11	42.32-47.32	39.17	273.94	10.2
DC-3	06/18/18	313.11	42.32-47.32	39.25	273.86	9.0
DC-3	07/16/18	313.11	42.32-47.32	39.73	273.38	12.2
DC-3	10/15/18	313.11	42.32-47.32	40.80	272.31	11.0
DC-3	10/31/18	313.11	42.32-47.32	40.95	272.16	12.0
DC-3	11/21/18	313.11	42.32-47.32	41.30	271.81	11.4
DC-4	09/21/16	312.35	43.36-48.36	39.31	273.04	--
DC-4	10/22/16	312.35	43.36-48.36	42.03	270.32	10.5
DC-4	10/25/16	312.35	43.36-48.36	39.65	272.70	10.8
DC-4	11/02/16	312.35	43.36-48.36	39.69	272.66	11.2
DC-4	11/10/16	312.35	43.36-48.36	39.61	272.74	11.3
DC-4	11/16/16	312.35	43.36-48.36	39.79	272.56	11.1
DC-4	12/12/16	312.35	43.36-48.36	39.71	272.64	11.0
DC-4	01/18/17	312.35	43.36-48.36	39.79	272.56	12.1
DC-4	02/14/17	312.35	43.36-48.36	39.41	272.94	8.7
DC-4	03/10/17	312.35	43.36-48.36	38.61	273.74	11.1
DC-4	04/20/17	312.35	43.36-48.36	37.51	274.84	--
DC-4	05/29/17	312.35	43.36-48.36	37.62	274.73	11.1
DC-4	06/20/17	312.35	43.36-48.36	38.11	274.24	11.1
DC-4	07/15/17	312.35	43.36-48.36	37.95	274.40	12.7
DC-4	08/18/17	312.35	43.36-48.36	38.86	273.49	11.6
DC-4	09/22/17	312.35	43.36-48.36	38.69	273.66	13.1

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-4	10/17/17	312.35	43.36-48.36	39.10	273.25	10.6
DC-4	11/16/17	312.35	43.36-48.36	39.33	273.02	11.5
DC-4	12/27/17	312.35	43.36-48.36	39.42	272.93	11.6
DC-4	01/23/18	312.35	43.36-48.36	39.22	273.13	11.7
DC-4	01/24/18	312.35	43.36-48.36	39.21	273.14	12.9
DC-4	02/21/18	312.35	43.36-48.36	39.25	273.10	10.1
DC-4	03/27/18	312.35	43.36-48.36	38.51	273.84	11.0
DC-4	04/17/18	312.35	43.36-48.36	38.61	273.74	9.2
DC-4	05/21/18	312.35	43.36-48.36	37.67	274.68	13.2
DC-4	06/18/18	312.35	43.36-48.36	38.79	273.56	12.1
DC-4	07/16/18	312.35	43.36-48.36	38.89	273.46	13.4
DC-4	10/15/18	312.35	43.36-48.36	40.16	272.19	13.1
DC-4	10/31/18	312.35	43.36-48.36	39.99	272.36	12.3
DC-4	11/21/18	312.35	43.36-48.36	40.45	271.90	12.2
DC-5	09/21/16	306.25	40.79-45.79	33.40	272.85	--
DC-5	10/22/16	306.25	40.79-45.79	33.77	272.48	12.3
DC-5	10/15/18			34.15	-34.15	13.7
DC-7	01/24/18	302.61	34.35-39.35	30.69	271.92	13.0
DC-7	04/17/18	302.61	34.35-39.35	30.19	272.42	8.1
DC-7	07/18/18	302.61	34.35-39.35	30.48	272.13	12.7
DC-7	10/15/18	302.61	34.35-39.35	31.52	271.09	12.5
DC-8	01/24/18	306.23	36.64-41.64	34.21	272.02	7.8
DC-8	04/17/18	306.23	36.64-41.64	33.64	272.59	6.8
DC-8	07/18/18	306.23	36.64-41.64	33.92	272.31	6.4
DC-8	10/15/18	306.23	36.64-41.64	34.94	271.29	9.9
DC-10A	09/21/16	307.73	32.01-37.01	34.88	272.85	--
DC-10A	10/22/16	307.73	32.01-37.01	35.17	272.56	10.0
DC-10A	10/25/16	307.73	32.01-37.01	35.15	272.58	7.5
DC-10A	11/02/16	307.73	32.01-37.01	35.24	272.49	9.8
DC-10A	11/10/16	307.73	32.01-37.01	35.22	272.51	10.0
DC-10A	11/16/16	307.73	32.01-37.01	35.31	272.42	10.3
DC-10A	12/12/16	307.73	32.01-37.01	35.21	272.52	10.2
DC-10A	01/18/17	307.73	32.01-37.01	35.15	272.58	9.7
DC-10A	02/14/17	307.73	32.01-37.01	34.84	272.89	10.2
DC-10A	03/10/17	307.73	32.01-37.01	34.12	273.61	10.3
DC-10A	04/20/17	307.73	32.01-37.01	33.00	274.73	--
DC-10A	05/29/17	307.73	32.01-37.01	34.03	273.70	10.1
DC-10A	06/20/17	307.73	32.01-37.01	34.05	273.68	10.3
DC-10A	07/15/17	307.73	32.01-37.01	33.28	274.45	10.9
DC-10A	08/18/17	307.73	32.01-37.01	33.74	273.99	11.5
DC-10A	09/22/17	307.73	32.01-37.01	34.39	273.34	10.8
DC-10A	10/17/17	307.73	32.01-37.01	34.71	273.02	10.6
DC-10A	11/16/17	307.73	32.01-37.01	35.02	272.71	10.2

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-10A	12/27/17	307.73	32.01-37.01	35.05	272.68	11.6
DC-10A	01/23/18	307.73	32.01-37.01	35.69	272.04	10.5
DC-10A	01/24/18	307.73	32.01-37.01	34.72	273.01	10.6
DC-10A	02/21/18	307.73	32.01-37.01	34.08	273.65	10.7
DC-10A	03/27/18	307.73	32.01-37.01	34.21	273.52	10.8
DC-10A	04/17/18	307.73	32.01-37.01	34.23	273.50	9.9
DC-10A	05/21/18	307.73	32.01-37.01	34.01	273.72	10.7
DC-10A	06/18/18	307.73	32.01-37.01	33.91	273.82	11.3
DC-10A	07/16/18	307.73	32.01-37.01	34.86	272.87	11.3
DC-10A	10/15/18	307.73	32.01-37.01	35.64	272.09	10.3
DC-10A	10/31/18	307.73	32.01-37.01	35.81	271.92	11.4
DC-10A	11/21/18	307.73	32.01-37.01	36.01	271.72	10.7
DC-10B	09/21/16	307.89	44.91-49.91	34.90	272.99	--
DC-10B	10/22/16	307.89	44.91-49.91	35.25	272.64	9.8
DC-10B	10/15/18	307.89	44.91-49.91	35.70	272.19	9.4
DC-11	09/21/16	311.25	31.6-41.6	38.01	273.24	--
DC-11	10/22/16	311.25	31.6-41.6	38.41	272.84	9.8
DC-11	10/25/16	311.25	31.6-41.6	38.40	272.85	9.9
DC-11	11/02/16	311.25	31.6-41.6	38.48	272.77	8.6
DC-11	11/10/16	311.25	31.6-41.6	38.45	272.80	7.3
DC-11	11/16/16	311.25	31.6-41.6	38.55	272.70	8.6
DC-11	12/12/16	311.25	31.6-41.6	38.53	272.72	8.9
DC-11	01/18/17	311.25	31.6-41.6	38.51	272.74	9.0
DC-11	02/14/17	311.25	31.6-41.6	38.24	273.01	6.7
DC-11	03/10/17	311.25	31.6-41.6	37.53	273.72	8.9
DC-11	04/20/17	311.25	31.6-41.6	36.40	274.85	--
DC-11	05/29/17	311.25	31.6-41.6	36.22	275.03	8.9
DC-11	06/20/17	311.25	31.6-41.6	36.15	275.10	6.6
DC-11	07/15/17	311.25	31.6-41.6	34.32	276.93	7.6
DC-11	08/18/17	311.25	31.6-41.6	36.09	275.16	7.1
DC-11	09/22/17	311.25	31.6-41.6	37.52	273.73	5.3
DC-11	10/17/17	311.25	31.6-41.6	37.82	273.43	7.5
DC-11	11/16/17	311.25	31.6-41.6	38.17	273.08	7.4
DC-11	12/27/17	311.25	31.6-41.6	38.23	273.02	6.2
DC-11	01/23/18	311.25	31.6-41.6	38.00	273.25	6.2
DC-11	01/24/18	311.25	31.6-41.6	38.00	273.25	6.3
DC-11	02/21/18	311.25	31.6-41.6	38.55	272.70	4.2
DC-11	03/27/18	311.25	31.6-41.6	38.40	272.85	4.0
DC-11	04/17/18	311.25	31.6-41.6	37.40	273.85	4.2
DC-11	05/21/18	311.25	31.6-41.6	37.21	274.04	5.0
DC-11	06/18/18	311.25	31.6-41.6	36.13	275.12	4.2
DC-11	07/16/18	311.25	31.6-41.6	37.71	273.54	4.0
DC-11	10/15/18	311.25	31.6-41.6	38.74	272.51	8.3
DC-11	10/31/18	311.25	31.6-41.6	38.90	272.35	9.3
DC-11	11/21/18	311.25	31.6-41.6	39.21	272.04	8.6

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-12	01/24/18	311.25	31.7-41.7	38.24	273.01	5.0
DC-12	04/17/18	311.25	31.7-41.7	37.67	273.58	3.6
DC-12	07/18/18	311.25	31.7-41.7	37.90	273.35	6.1
DC-12	10/15/18	311.25	31.7-41.7	38.94	272.31	5.7
DC-13	01/24/18	310.20	31.7-41.7	37.33	272.87	8.6
DC-13	04/17/18	310.20	31.7-41.7	36.77	273.43	6.8
DC-13	07/18/18	310.20	31.7-41.7	36.97	273.23	8.7
DC-13	10/15/18	310.20	31.7-41.7	38.06	272.14	6.4
DC-14	01/24/18	308.94	34.4-44.4	36.84	272.10	7.1
DC-14	04/17/18	308.94	34.4-44.4	36.31	272.63	6.7
DC-14	07/18/18	308.94	34.4-44.4	36.51	272.43	9.2
DC-14	10/16/18	308.94	34.4-44.4	--	--	--
DC-15	01/24/18	307.89	30.7-40.7	35.40	272.49	8.6
DC-15	04/17/18	307.89	30.7-40.7	34.81	273.08	7.1
DC-15	07/18/18	307.89	30.7-40.7	35.08	272.81	7.7
DC-15	10/15/18	307.89	30.7-40.7	36.12	271.77	4.9
DC-16	09/21/16	307.12	49.3-59.3	34.67	272.45	--
DC-16	10/22/16	307.12	49.3-59.3	35.05	272.07	9.5
DC-16	10/15/18	307.12	49.3-59.3	35.37	271.75	9.7
DC-17	04/17/18	305.16	29.81-39.81	31.94	273.22	8.9
DC-17	01/24/18	305.16	29.81-39.81	32.42	272.74	12.1
DC-17	07/18/18	305.16	29.81-39.81	32.18	272.98	11.3
DC-17	10/15/18	305.16	29.81-39.81	33.24	271.92	13.0
DC-18	09/21/16	309.51	31.58-41.58	36.85	272.66	--
DC-18	10/22/16	309.51	31.58-41.58	37.25	272.26	9.3
DC-18	10/25/16	309.51	31.58-41.58	37.23	272.28	8.9
DC-18	11/02/16	309.51	31.58-41.58	37.29	272.22	9.3
DC-18	11/10/16	309.51	31.58-41.58	37.25	272.26	8.3
DC-18	11/16/16	309.51	31.58-41.58	37.37	272.14	9.4
DC-18	12/12/16	309.51	31.58-41.58	37.33	272.18	10.0
DC-18	01/18/17	309.51	31.58-41.58	37.35	272.16	7.7
DC-18	02/14/17	309.51	31.58-41.58	37.05	272.46	7.1
DC-18	03/10/17	309.51	31.58-41.58	36.34	273.17	10.3
DC-18	04/20/17	309.51	31.58-41.58	35.25	274.26	--
DC-18	05/29/17	309.51	31.58-41.58	35.11	274.40	10.4
DC-18	06/20/17	309.51	31.58-41.58	35.07	274.44	6.5
DC-18	07/15/17	309.51	31.58-41.58	35.30	274.21	8.9
DC-18	08/18/17	309.51	31.58-41.58	35.72	273.79	8.9
DC-18	09/22/17	309.51	31.58-41.58	36.11	273.40	8.1
DC-18	10/17/17	309.51	31.58-41.58	36.65	272.86	8.5
DC-18	11/16/17	309.51	31.58-41.58	37.00	272.51	7.2

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-18	12/27/17	309.51	31.58-41.58	37.08	272.43	7.9
DC-18	01/23/18	309.51	31.58-41.58	36.81	272.70	9.2
DC-18	01/24/18	309.51	31.58-41.58	36.81	272.70	9.3
DC-18	02/21/18	309.51	31.58-41.58	36.22	273.29	10.0
DC-18	03/27/18	309.51	31.58-41.58	36.19	273.32	9.0
DC-18	04/17/18	309.51	31.58-41.58	36.24	273.27	5.8
DC-18	05/21/18	309.51	31.58-41.58	36.06	273.45	9.0
DC-18	06/18/18	309.51	31.58-41.58	36.24	273.27	8.3
DC-18	07/16/18	309.51	31.58-41.58	36.59	272.92	9.3
DC-18	10/15/18	309.51	31.58-41.58	37.54	271.97	8.5
DC-18	10/31/18	309.51	31.58-41.58	37.72	271.79	11.1
DC-18	11/21/18	309.51	31.58-41.58	38.02	271.49	8.6
DC-19	09/21/16	313.62	36.8-46.8	40.19	273.43	--
DC-19	10/22/16	313.62	36.8-46.8	40.49	273.13	5.3
DC-19	10/25/16	313.62	36.8-46.8	39.70	273.92	6.0
DC-19	11/02/16	313.62	36.8-46.8	40.63	272.99	5.2
DC-19	11/10/16	313.62	36.8-46.8	40.62	273.00	4.9
DC-19	11/16/16	313.62	36.8-46.8	40.70	272.92	5.2
DC-19	12/12/16	313.62	36.8-46.8	40.68	272.94	6.0
DC-19	01/18/17	313.62	36.8-46.8	40.70	272.92	5.0
DC-19	02/14/17	313.62	36.8-46.8	40.42	273.20	7.2
DC-19	03/10/17	313.62	36.8-46.8	39.70	273.92	5.8
DC-19	04/20/17	313.62	36.8-46.8	38.85	274.77	--
DC-19	05/29/17	313.62	36.8-46.8	38.14	275.48	6.0
DC-19	06/20/17	313.62	36.8-46.8	38.31	275.31	6.5
DC-19	07/15/17	313.62	36.8-46.8	38.60	275.02	7.0
DC-19	08/18/17	313.62	36.8-46.8	39.05	274.57	2.1
DC-19	09/22/17	313.62	36.8-46.8	40.63	272.99	3.2
DC-19	10/17/17	313.62	36.8-46.8	40.00	273.62	4.1
DC-19	11/16/17	313.62	36.8-46.8	40.33	273.29	4.7
DC-19	12/27/17	313.62	36.8-46.8	40.39	273.23	2.9
DC-19	01/23/18	313.62	36.8-46.8	40.19	273.43	3.6
DC-19	01/24/18	313.62	36.8-46.8	40.16	273.46	1.8
DC-19	02/21/18	313.62	36.8-46.8	39.68	273.94	1.7
DC-19	03/27/18	313.62	36.8-46.8	39.51	274.11	1.0
DC-19	04/17/18	313.62	36.8-46.8	39.57	274.05	1.6
DC-19	05/21/18	313.62	36.8-46.8	39.39	274.23	4.8
DC-19	06/18/18	313.62	36.8-46.8	39.63	273.99	4.3
DC-19	07/16/18	313.62	36.8-46.8	39.86	273.76	3.8
DC-19	10/15/18	313.62	36.8-46.8	40.90	272.72	8.0
DC-19	10/31/18	313.62	36.8-46.8	41.09	272.53	8.6
DC-19	11/21/18	313.62	36.8-46.8	41.39	272.23	8.5

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
DC-20	10/27/17	310.92	33.8-43.8	38.12	272.80	0.4
DC-20	11/16/17	310.92	33.8-43.8	38.33	272.59	1.6
DC-20	01/24/18	310.92	33.8-43.8	38.17	272.59	1.2
DC-20	04/17/18	310.92	33.8-43.8	37.59	272.59	0.4
DC-20	07/18/18	310.92	33.8-43.8	--	--	--
DC-20	10/15/18	310.92	33.8-43.8	38.87	272.59	0.9
KMW-1	01/24/18	311.59	36.8-51.8	38.83	272.76	8.2
KMW-1	04/17/18	311.59	36.8-51.8	38.27	273.32	6.0
KMW-1	07/18/18	311.59	36.8-51.8	38.47	273.12	8.2
KMW-1	10/15/18	311.59	36.8-51.8	39.55	272.04	8.1
KMW-2	09/21/16	307.04	29.91-39.91	34.19	272.85	--
KMW-2	10/22/16	307.04	29.91-39.91	34.50	272.54	10.7
KMW-2	10/25/16	307.04	29.91-39.91	34.54	272.50	9.8
KMW-2	11/02/16	307.04	29.91-39.91	34.60	272.44	8.3
KMW-2	11/10/16	307.04	29.91-39.91	34.57	272.47	10.8
KMW-2	11/16/16	307.04	29.91-39.91	34.68	272.36	10.4
KMW-2	12/12/16	307.04	29.91-39.91	34.59	272.45	10.3
KMW-2	01/18/17	307.04	29.91-39.91	34.79	272.25	9.9
KMW-2	02/14/17	307.04	29.91-39.91	34.24	272.80	11.1
KMW-2	03/10/17	307.04	29.91-39.91	33.49	273.55	10.0
KMW-2	04/20/17	307.04	29.91-39.91	32.41	274.63	--
KMW-2	05/29/17	307.04	29.91-39.91	32.77	274.27	9.8
KMW-2	06/20/17	307.04	29.91-39.91	34.19	272.85	10.7
KMW-2	07/15/17	307.04	29.91-39.91	32.59	274.45	12.1
KMW-2	08/18/17	307.04	29.91-39.91	33.11	273.93	12.6
KMW-2	09/22/17	307.04	29.91-39.91	33.69	273.35	12.1
KMW-2	10/17/17	307.04	29.91-39.91	34.01	273.03	11.8
KMW-2	11/16/17	307.04	29.91-39.91	34.35	272.69	12.0
KMW-2	12/27/17	307.04	29.91-39.91	34.39	272.65	12.0
KMW-2	01/23/18	307.04	29.91-39.91	35.42	271.62	11.8
KMW-2	01/24/18	307.04	29.91-39.91	34.11	272.93	11.8
KMW-2	02/21/18	307.04	29.91-39.91	33.43	273.61	11.0
KMW-2	03/27/18	307.04	29.91-39.91	36.19	270.85	11.1
KMW-2	04/17/18	307.04	29.91-39.91	33.56	273.48	8.2
KMW-2	05/21/18	307.04	29.91-39.91	33.32	273.72	13.1
KMW-2	06/18/18	307.04	29.91-39.91	33.18	273.86	12.1
KMW-2	07/16/18	307.04	29.91-39.91	33.89	273.15	12.4
KMW-2	10/15/18	307.04	29.91-39.91	34.92	272.12	12.4
KMW-2	10/31/18	307.04	29.91-39.91	35.06	271.98	10.6
KMW-2	11/21/18	307.04	29.91-39.91	35.41	271.63	11.1

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
KMW-3	09/21/16	296.92	24.6-34.6	25.34	271.58	--
KMW-3	10/22/16	296.92	24.6-34.6	25.71	271.21	10.3
KMW-3	01/24/18	296.92	24.6-34.6	25.16	271.76	10.1
KMW-3	04/17/18	296.92	24.6-34.6	24.69	272.23	7.0
KMW-3	07/18/18	296.92	24.6-34.6	25.04	271.88	9.6
KMW-3	10/15/18	296.92	24.6-34.6	26.09	270.83	10.7
KMW-4	04/17/18	299.57	23.79-33.79	26.13	273.44	6.8
KMW-4	01/24/18	299.57	23.79-33.79	26.58	272.99	8.8
KMW-4	07/18/18	299.57	23.79-33.79	26.50	273.07	10.1
KMW-4	10/15/18	299.57	23.79-33.79	27.60	271.97	10.4
KMW-5	01/24/18	297.22	23.66-33.66	24.95	272.27	9.3
KMW-5	04/17/18	297.22	23.66-33.66	24.50	272.72	7.0
KMW-5	07/18/18	297.22	23.66-33.66	24.87	272.35	9.9
KMW-5	10/31/18	297.22	23.66-33.66	26.09	271.13	9.7
KMW-5D	10/15/18	296.94	40.72-45.72	25.79	271.15	6.6
KMW-6	01/24/18	294.81	25.73-40.73	23.30	271.51	9.2
KMW-6	04/17/18	294.81	25.73-40.73	22.54	272.27	7.1
KMW-6	07/18/18	294.81	25.73-40.73	22.98	271.83	10.0
KMW-6	10/15/18	294.81	25.73-40.73	23.98	270.83	9.4
KMW-7	01/24/18	301.43	28.78-43.78	28.66	272.77	9.7
KMW-7	04/17/18	301.43	28.78-43.78	29.28	272.15	0.7
KMW-7	07/18/18	301.43	28.78-43.78	29.70	271.73	10.9
KMW-7	10/23/18	301.43	28.78-43.78	30.79	270.64	8.7
KMW-8	01/24/18	308.15	28.69-43.69	36.41	271.74	9.1
KMW-8	04/17/18	308.15	28.69-43.69	35.87	272.28	6.9
KMW-8	07/18/18	308.15	28.69-43.69	36.10	272.05	9.2
KMW-8	10/15/18	308.15	28.69-43.69	37.12	271.03	9.2
KMW-9	09/21/16	310.33	33.5-43.5	37.28	273.05	--
KMW-9	10/22/16	310.33	33.5-43.5	37.65	272.68	8.6
KMW-9	10/25/16	310.33	33.5-43.5	37.60	272.73	8.6
KMW-9	11/02/16	310.33	33.5-43.5	37.70	272.63	8.6
KMW-9	11/10/16	310.33	33.5-43.5	37.67	272.66	8.4
KMW-9	11/16/16	310.33	33.5-43.5	37.77	272.56	8.5
KMW-9	12/12/16	310.33	33.5-43.5	37.72	272.61	8.7
KMW-9	01/18/17	310.33	33.5-43.5	37.75	272.58	10.8
KMW-9	02/14/17	310.33	33.5-43.5	37.45	272.88	6.0
KMW-9	03/10/17	310.33	33.5-43.5	36.70	273.63	10.6
KMW-9	04/20/17	310.33	33.5-43.5	35.52	274.81	--
KMW-9	05/29/17	310.33	33.5-43.5	36.01	274.32	10.2
KMW-9	06/20/17	310.33	33.5-43.5	35.40	274.93	7.7

Table A4
Air Sparging Groundwater Monitoring Parameters
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Screened Interval Depth (feet)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)	Dissolved Oxygen (mg/L)
KMW-9	07/15/17	310.33	33.5-43.5	35.64	274.69	8.2
KMW-9	08/18/17	310.33	33.5-43.5	36.10	274.23	7.8
KMW-9	09/22/17	310.33	33.5-43.5	36.66	273.67	7.7
KMW-9	10/17/17	310.33	33.5-43.5	37.02	273.31	8.6
KMW-9	11/16/17	310.33	33.5-43.5	37.33	273.00	7.7
KMW-9	12/27/17	310.33	33.5-43.5	37.44	272.89	7.9
KMW-9	01/23/18	310.33	33.5-43.5	37.21	273.12	8.0
KMW-9	01/24/18	310.33	33.5-43.5	37.22	273.11	8.8
KMW-9	02/21/18	310.33	33.5-43.5	36.71	273.62	6.0
KMW-9	03/27/18	310.33	33.5-43.5	36.55	273.78	5.9
KMW-9	04/17/18	310.33	33.5-43.5	36.64	273.69	6.4
KMW-9	05/21/18	310.33	33.5-43.5	36.41	273.92	8.5
KMW-9	06/18/18	310.33	33.5-43.5	36.51	273.82	7.0
KMW-9	07/16/18	310.33	33.5-43.5	36.81	273.52	9.0
KMW-9	10/15/18	310.33	33.5-43.5	37.97	272.36	9.1
KMW-9	10/31/18	310.33	33.5-43.5	38.13	272.20	8.7
KMW-9	11/21/18	310.33	33.5-43.5	38.50	271.83	8.4

Notes:

1. -- = not measured or not applicable.
2. Well monument types: flush grade monuments and above ground (AG) monuments.
3. Depth to water is measured from top of well casing on the North side.
4. Elevations are reported relative to North American Vertical Datum of 1988 (NAVD 88).
5. Top of casing (TOC) elevations were surveyed by D.R. Strong Consulting Engineers, Inc. in February and May 2013 and by Lanktree Land Surveying, Inc. in July 2015.
6. Screened interval depth is estimated using from surveyed elevations (top of casing elevations, ground surface, and monument rim) and field measurements at the time of drilling.
7. Dissolved Oxygen (DO) reported to 0.1 milligrams per liter (mg/L).
8. On 10/16/18 wells DC-5, DC-10B, DC-16, and KMW-5D were also sampled
9. On 10/16/18 DC-14 monument was not located.

ATTACHMENT B
LABORATORY REPORTS AND DATA VALIDATION MEMORANDA

ANALYTICAL REPORT

February 05, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L966085
Samples Received:	01/27/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	MVSC
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By:

Jason Romer
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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MW-11-012518 L966085-07 16

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DC-15-012418 L966085-01 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/24/18 10:30 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 12:23	01/28/18 12:23	BMB

DC-8-012418 L966085-02 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/24/18 11:30 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 12:43	01/28/18 12:43	BMB

DC-10A-012518 L966085-03 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/25/18 14:10 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 13:03	01/28/18 13:03	BMB

KMW-3-012518 L966085-04 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/25/18 15:40 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 13:22	01/28/18 13:22	BMB

KMW-8-012518 L966085-06 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/25/18 10:50 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 14:02	01/28/18 14:02	BMB

MW-11-012518 L966085-07 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/25/18 12:48 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 14:22	01/28/18 14:22	BMB

DC-7-012618 L966085-08 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/26/18 09:15 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 14:42	01/28/18 14:42	BMB

MW-7-012618 L966085-09 GW

Collected by: Rachel McLaughlin | Collected date/time: 01/26/18 10:35 | Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 15:02	01/28/18 15:02	BMB

MW-101-012618 L966085-10 GW

Collected by: Rachel McLaughlin
Collected date/time: 01/26/18 12:45
Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067406	1	01/28/18 15:22	01/28/18 15:22	BMB

DC-17-012618 L966085-11 GW

Collected by: Rachel McLaughlin
Collected date/time: 01/26/18 12:00
Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067627	1	01/29/18 16:16	01/29/18 16:16	DWR

EQUIPMENT BLANK L966085-12 GW

Collected by: Rachel McLaughlin
Collected date/time: 01/26/18 12:30
Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067627	1	01/29/18 13:18	01/29/18 13:18	DWR

TRIP BLANK L966085-13 GW

Collected by: Rachel McLaughlin
Collected date/time: 09/20/17 00:00
Received date/time: 01/27/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1067627	1	01/29/18 12:58	01/29/18 12:58	DWR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jason Romer
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 12:23	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 12:23	WG1067406
Benzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Bromoform	ND		0.500	1	01/28/2018 12:23	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 12:23	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 12:23	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 12:23	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 12:23	WG1067406
Chloroform	ND		0.500	1	01/28/2018 12:23	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 12:23	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 12:23	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 12:23	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 12:23	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 12:23	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 12:23	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 12:23	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 12:23	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 12:23	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 12:23	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 12:23	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 12:23	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 12:23	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 12:23	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 12:23	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 12:23	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 12:23	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 12:23	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 12:23	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 12:23	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 12:23	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 12:23	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Styrene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Tetrachloroethene	8.61		0.500	1	01/28/2018 12:23	WG1067406
Toluene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 12:23	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 12:23	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 12:23	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 12:23	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 12:23	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 12:23	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 12:23	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 12:23	WG1067406
(S) Toluene-d8	*107*		*80.0-120*		*01/28/2018 12:23*	WG1067406
(S) Dibromofluoromethane	*94.9*		*76.0-123*		*01/28/2018 12:23*	WG1067406
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*01/28/2018 12:23*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 12:43	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 12:43	WG1067406
Benzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Bromoform	ND		0.500	1	01/28/2018 12:43	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 12:43	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 12:43	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 12:43	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 12:43	WG1067406
Chloroform	ND		0.500	1	01/28/2018 12:43	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 12:43	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 12:43	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 12:43	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 12:43	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 12:43	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 12:43	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 12:43	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 12:43	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 12:43	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 12:43	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 12:43	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 12:43	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 12:43	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 12:43	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 12:43	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 12:43	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 12:43	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 12:43	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 12:43	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 12:43	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 12:43	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 12:43	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Styrene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Tetrachloroethene	12.0		0.500	1	01/28/2018 12:43	WG1067406
Toluene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 12:43	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 12:43	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 12:43	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 12:43	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 12:43	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 12:43	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 12:43	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 12:43	WG1067406
(S) Toluene-d8	*105*		*80.0-120*		*01/28/2018 12:43*	WG1067406
(S) Dibromofluoromethane	*87.1*		*76.0-123*		*01/28/2018 12:43*	WG1067406
(S) 4-Bromofluorobenzene	*107*		*80.0-120*		*01/28/2018 12:43*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 13:03	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 13:03	WG1067406
Benzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Bromoform	ND		0.500	1	01/28/2018 13:03	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 13:03	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 13:03	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 13:03	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 13:03	WG1067406
Chloroform	ND		0.500	1	01/28/2018 13:03	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 13:03	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 13:03	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 13:03	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 13:03	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 13:03	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 13:03	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 13:03	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 13:03	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 13:03	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 13:03	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 13:03	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 13:03	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 13:03	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 13:03	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 13:03	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 13:03	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 13:03	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 13:03	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 13:03	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 13:03	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 13:03	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 13:03	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Styrene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Tetrachloroethene	3.62		0.500	1	01/28/2018 13:03	WG1067406
Toluene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 13:03	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 13:03	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 13:03	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 13:03	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 13:03	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 13:03	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 13:03	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 13:03	WG1067406
(S) Toluene-d8	*105*		*80.0-120*		*01/28/2018 13:03*	WG1067406
(S) Dibromofluoromethane	*89.5*		*76.0-123*		*01/28/2018 13:03*	WG1067406
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*01/28/2018 13:03*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 13:22	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 13:22	WG1067406
Benzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Bromoform	ND		0.500	1	01/28/2018 13:22	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 13:22	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 13:22	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 13:22	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 13:22	WG1067406
Chloroform	ND		0.500	1	01/28/2018 13:22	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 13:22	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 13:22	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 13:22	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 13:22	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 13:22	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 13:22	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 13:22	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 13:22	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 13:22	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 13:22	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 13:22	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 13:22	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 13:22	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 13:22	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 13:22	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 13:22	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 13:22	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 13:22	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 13:22	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 13:22	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 13:22	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 13:22	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Styrene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Tetrachloroethene	4.95		0.500	1	01/28/2018 13:22	WG1067406
Toluene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 13:22	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 13:22	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 13:22	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 13:22	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 13:22	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 13:22	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 13:22	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 13:22	WG1067406
(S) Toluene-d8	*102*		*80.0-120*		*01/28/2018 13:22*	WG1067406
(S) Dibromofluoromethane	*89.4*		*76.0-123*		*01/28/2018 13:22*	WG1067406
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*01/28/2018 13:22*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 14:02	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 14:02	WG1067406
Benzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Bromoform	ND		0.500	1	01/28/2018 14:02	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 14:02	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 14:02	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 14:02	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 14:02	WG1067406
Chloroform	2.01		0.500	1	01/28/2018 14:02	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 14:02	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 14:02	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 14:02	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 14:02	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 14:02	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:02	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 14:02	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:02	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:02	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 14:02	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 14:02	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 14:02	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 14:02	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 14:02	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 14:02	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 14:02	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 14:02	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 14:02	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 14:02	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 14:02	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 14:02	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 14:02	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Styrene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Tetrachloroethene	5.89		0.500	1	01/28/2018 14:02	WG1067406
Toluene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 14:02	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 14:02	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 14:02	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 14:02	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 14:02	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 14:02	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 14:02	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 14:02	WG1067406
(S) Toluene-d8	*104*		*80.0-120*		*01/28/2018 14:02*	WG1067406
(S) Dibromofluoromethane	*93.7*		*76.0-123*		*01/28/2018 14:02*	WG1067406
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*01/28/2018 14:02*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 14:22	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 14:22	WG1067406
Benzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Bromoform	ND		0.500	1	01/28/2018 14:22	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 14:22	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 14:22	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 14:22	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 14:22	WG1067406
Chloroform	ND		0.500	1	01/28/2018 14:22	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 14:22	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 14:22	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 14:22	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 14:22	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 14:22	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:22	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 14:22	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:22	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:22	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 14:22	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 14:22	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 14:22	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 14:22	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 14:22	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 14:22	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 14:22	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 14:22	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 14:22	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 14:22	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 14:22	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 14:22	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 14:22	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Styrene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Tetrachloroethene	2.52		0.500	1	01/28/2018 14:22	WG1067406
Toluene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 14:22	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 14:22	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 14:22	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 14:22	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 14:22	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 14:22	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 14:22	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 14:22	WG1067406
(S) Toluene-d8	*108*		*80.0-120*		*01/28/2018 14:22*	WG1067406
(S) Dibromofluoromethane	*91.1*		*76.0-123*		*01/28/2018 14:22*	WG1067406
(S) 4-Bromofluorobenzene	*98.3*		*80.0-120*		*01/28/2018 14:22*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 14:42	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 14:42	WG1067406
Benzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Bromoform	ND		0.500	1	01/28/2018 14:42	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 14:42	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 14:42	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 14:42	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 14:42	WG1067406
Chloroform	ND		0.500	1	01/28/2018 14:42	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 14:42	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 14:42	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 14:42	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 14:42	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 14:42	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:42	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 14:42	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:42	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 14:42	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 14:42	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 14:42	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 14:42	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 14:42	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 14:42	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 14:42	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 14:42	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 14:42	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 14:42	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 14:42	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 14:42	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 14:42	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 14:42	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Styrene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Tetrachloroethene	12.1		0.500	1	01/28/2018 14:42	WG1067406
Toluene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 14:42	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 14:42	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 14:42	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 14:42	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 14:42	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 14:42	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 14:42	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 14:42	WG1067406
(S) Toluene-d8	*102*		*80.0-120*		*01/28/2018 14:42*	WG1067406
(S) Dibromofluoromethane	*89.9*		*76.0-123*		*01/28/2018 14:42*	WG1067406
(S) 4-Bromofluorobenzene	*103*		*80.0-120*		*01/28/2018 14:42*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 15:02	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 15:02	WG1067406
Benzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Bromoform	ND		0.500	1	01/28/2018 15:02	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 15:02	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 15:02	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 15:02	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 15:02	WG1067406
Chloroform	ND		0.500	1	01/28/2018 15:02	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 15:02	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 15:02	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 15:02	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 15:02	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 15:02	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 15:02	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 15:02	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 15:02	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 15:02	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 15:02	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 15:02	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 15:02	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 15:02	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 15:02	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 15:02	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 15:02	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 15:02	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 15:02	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 15:02	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 15:02	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 15:02	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 15:02	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Styrene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Tetrachloroethene	7.73		0.500	1	01/28/2018 15:02	WG1067406
Toluene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 15:02	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 15:02	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 15:02	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 15:02	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 15:02	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 15:02	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 15:02	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 15:02	WG1067406
(S) Toluene-d8	*103*		*80.0-120*		*01/28/2018 15:02*	WG1067406
(S) Dibromofluoromethane	*92.7*		*76.0-123*		*01/28/2018 15:02*	WG1067406
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*01/28/2018 15:02*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/28/2018 15:22	WG1067406
Acrylonitrile	ND		5.00	1	01/28/2018 15:22	WG1067406
Benzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Bromobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Bromodichloromethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Bromochloromethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Bromoform	ND		0.500	1	01/28/2018 15:22	WG1067406
Bromomethane	ND		2.50	1	01/28/2018 15:22	WG1067406
n-Butylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
sec-Butylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
tert-Butylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Carbon disulfide	ND		0.500	1	01/28/2018 15:22	WG1067406
Carbon tetrachloride	ND		0.500	1	01/28/2018 15:22	WG1067406
Chlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Chlorodibromomethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Chloroethane	ND		2.50	1	01/28/2018 15:22	WG1067406
Chloroform	ND		0.500	1	01/28/2018 15:22	WG1067406
Chloromethane	ND		1.25	1	01/28/2018 15:22	WG1067406
2-Chlorotoluene	ND		0.500	1	01/28/2018 15:22	WG1067406
4-Chlorotoluene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/28/2018 15:22	WG1067406
1,2-Dibromoethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Dibromomethane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2-Dichlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,3-Dichlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,4-Dichlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Dichlorodifluoromethane	ND		2.50	1	01/28/2018 15:22	WG1067406
1,1-Dichloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2-Dichloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1-Dichloroethene	ND		0.500	1	01/28/2018 15:22	WG1067406
cis-1,2-Dichloroethene	ND		0.500	1	01/28/2018 15:22	WG1067406
trans-1,2-Dichloroethene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2-Dichloropropane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1-Dichloropropene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,3-Dichloropropane	ND		1.00	1	01/28/2018 15:22	WG1067406
cis-1,3-Dichloropropene	ND		0.500	1	01/28/2018 15:22	WG1067406
trans-1,3-Dichloropropene	ND		0.500	1	01/28/2018 15:22	WG1067406
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/28/2018 15:22	WG1067406
2,2-Dichloropropane	ND		0.500	1	01/28/2018 15:22	WG1067406
Di-isopropyl ether	ND		0.500	1	01/28/2018 15:22	WG1067406
Ethylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Hexachloro-1,3-butadiene	ND		1.00	1	01/28/2018 15:22	WG1067406
2-Hexanone	ND		5.00	1	01/28/2018 15:22	WG1067406
n-Hexane	ND		5.00	1	01/28/2018 15:22	WG1067406
Iodomethane	ND		10.0	1	01/28/2018 15:22	WG1067406
Isopropylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
p-Isopropyltoluene	ND		0.500	1	01/28/2018 15:22	WG1067406
2-Butanone (MEK)	ND		5.00	1	01/28/2018 15:22	WG1067406
Methylene Chloride	ND		2.50	1	01/28/2018 15:22	WG1067406
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/28/2018 15:22	WG1067406
Methyl tert-butyl ether	ND		0.500	1	01/28/2018 15:22	WG1067406
Naphthalene	ND		2.50	1	01/28/2018 15:22	WG1067406
n-Propylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Styrene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Tetrachloroethene	7.88		0.500	1	01/28/2018 15:22	WG1067406
Toluene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2,3-Trichlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2,4-Trichlorobenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1,1-Trichloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
1,1,2-Trichloroethane	ND		0.500	1	01/28/2018 15:22	WG1067406
Trichloroethene	ND		0.500	1	01/28/2018 15:22	WG1067406
Trichlorofluoromethane	ND		2.50	1	01/28/2018 15:22	WG1067406
1,2,3-Trichloropropane	ND		2.50	1	01/28/2018 15:22	WG1067406
1,2,4-Trimethylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,2,3-Trimethylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
1,3,5-Trimethylbenzene	ND		0.500	1	01/28/2018 15:22	WG1067406
Vinyl acetate	ND		5.00	1	01/28/2018 15:22	WG1067406
Vinyl chloride	ND		0.500	1	01/28/2018 15:22	WG1067406
Xylenes, Total	ND		1.50	1	01/28/2018 15:22	WG1067406
(S) Toluene-d8	*104*		*80.0-120*		*01/28/2018 15:22*	WG1067406
(S) Dibromofluoromethane	*90.2*		*76.0-123*		*01/28/2018 15:22*	WG1067406
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*01/28/2018 15:22*	WG1067406

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/29/2018 16:16	WG1067627
Acrylonitrile	ND		5.00	1	01/29/2018 16:16	WG1067627
Benzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromodichloromethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromochloromethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromoform	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromomethane	ND		2.50	1	01/29/2018 16:16	WG1067627
n-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
sec-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
tert-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Carbon disulfide	ND		0.500	1	01/29/2018 16:16	WG1067627
Carbon tetrachloride	ND		0.500	1	01/29/2018 16:16	WG1067627
Chlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Chlorodibromomethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Chloroethane	ND	J4	2.50	1	01/29/2018 16:16	WG1067627
Chloroform	ND		0.500	1	01/29/2018 16:16	WG1067627
Chloromethane	ND		1.25	1	01/29/2018 16:16	WG1067627
2-Chlorotoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
4-Chlorotoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2-Dibromoethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Dibromomethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,4-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Dichlorodifluoromethane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,1-Dichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
cis-1,2-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,2-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichloropropane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3-Dichloropropane	ND		1.00	1	01/29/2018 16:16	WG1067627
cis-1,3-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,3-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/29/2018 16:16	WG1067627
2,2-Dichloropropane	ND		0.500	1	01/29/2018 16:16	WG1067627
Di-isopropyl ether	ND		0.500	1	01/29/2018 16:16	WG1067627
Ethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Hexachloro-1,3-butadiene	ND		1.00	1	01/29/2018 16:16	WG1067627
2-Hexanone	ND		5.00	1	01/29/2018 16:16	WG1067627
n-Hexane	ND		5.00	1	01/29/2018 16:16	WG1067627
Iodomethane	ND		10.0	1	01/29/2018 16:16	WG1067627
Isopropylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
p-Isopropyltoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
2-Butanone (MEK)	ND		5.00	1	01/29/2018 16:16	WG1067627
Methylene Chloride	ND		2.50	1	01/29/2018 16:16	WG1067627
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/29/2018 16:16	WG1067627
Methyl tert-butyl ether	ND		0.500	1	01/29/2018 16:16	WG1067627
Naphthalene	ND		2.50	1	01/29/2018 16:16	WG1067627
n-Propylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Styrene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Tetrachloroethene	7.38		0.500	1	01/29/2018 16:16	WG1067627
Toluene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,3-Trichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,4-Trichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,1-Trichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,2-Trichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Trichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
Trichlorofluoromethane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2,3-Trichloropropane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2,4-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,3-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3,5-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Vinyl acetate	ND		5.00	1	01/29/2018 16:16	WG1067627
Vinyl chloride	ND		0.500	1	01/29/2018 16:16	WG1067627
Xylenes, Total	ND		1.50	1	01/29/2018 16:16	WG1067627
(S) Toluene-d8	*105*		*80.0-120*		*01/29/2018 16:16*	WG1067627
(S) Dibromofluoromethane	*91.6*		*76.0-123*		*01/29/2018 16:16*	WG1067627
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*01/29/2018 16:16*	WG1067627

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/29/2018 13:18	WG1067627
Acrylonitrile	ND		5.00	1	01/29/2018 13:18	WG1067627
Benzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Bromobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Bromodichloromethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Bromochloromethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Bromoform	ND		0.500	1	01/29/2018 13:18	WG1067627
Bromomethane	ND		2.50	1	01/29/2018 13:18	WG1067627
n-Butylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
sec-Butylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
tert-Butylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Carbon disulfide	ND		0.500	1	01/29/2018 13:18	WG1067627
Carbon tetrachloride	ND		0.500	1	01/29/2018 13:18	WG1067627
Chlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Chlorodibromomethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Chloroethane	ND	J4	2.50	1	01/29/2018 13:18	WG1067627
Chloroform	ND		0.500	1	01/29/2018 13:18	WG1067627
Chloromethane	ND		1.25	1	01/29/2018 13:18	WG1067627
2-Chlorotoluene	ND		0.500	1	01/29/2018 13:18	WG1067627
4-Chlorotoluene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/29/2018 13:18	WG1067627
1,2-Dibromoethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Dibromomethane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2-Dichlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,3-Dichlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,4-Dichlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Dichlorodifluoromethane	ND		2.50	1	01/29/2018 13:18	WG1067627
1,1-Dichloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2-Dichloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1-Dichloroethene	ND		0.500	1	01/29/2018 13:18	WG1067627
cis-1,2-Dichloroethene	ND		0.500	1	01/29/2018 13:18	WG1067627
trans-1,2-Dichloroethene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2-Dichloropropane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1-Dichloropropene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,3-Dichloropropane	ND		1.00	1	01/29/2018 13:18	WG1067627
cis-1,3-Dichloropropene	ND		0.500	1	01/29/2018 13:18	WG1067627
trans-1,3-Dichloropropene	ND		0.500	1	01/29/2018 13:18	WG1067627
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/29/2018 13:18	WG1067627
2,2-Dichloropropane	ND		0.500	1	01/29/2018 13:18	WG1067627
Di-isopropyl ether	ND		0.500	1	01/29/2018 13:18	WG1067627
Ethylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Hexachloro-1,3-butadiene	ND		1.00	1	01/29/2018 13:18	WG1067627
2-Hexanone	ND		5.00	1	01/29/2018 13:18	WG1067627
n-Hexane	ND		5.00	1	01/29/2018 13:18	WG1067627
Iodomethane	ND		10.0	1	01/29/2018 13:18	WG1067627
Isopropylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
p-Isopropyltoluene	ND		0.500	1	01/29/2018 13:18	WG1067627
2-Butanone (MEK)	ND		5.00	1	01/29/2018 13:18	WG1067627
Methylene Chloride	ND		2.50	1	01/29/2018 13:18	WG1067627
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/29/2018 13:18	WG1067627
Methyl tert-butyl ether	ND		0.500	1	01/29/2018 13:18	WG1067627
Naphthalene	ND		2.50	1	01/29/2018 13:18	WG1067627
n-Propylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Styrene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Tetrachloroethene	ND		0.500	1	01/29/2018 13:18	WG1067627
Toluene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2,3-Trichlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2,4-Trichlorobenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1,1-Trichloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
1,1,2-Trichloroethane	ND		0.500	1	01/29/2018 13:18	WG1067627
Trichloroethene	ND		0.500	1	01/29/2018 13:18	WG1067627
Trichlorofluoromethane	ND		2.50	1	01/29/2018 13:18	WG1067627
1,2,3-Trichloropropane	ND		2.50	1	01/29/2018 13:18	WG1067627
1,2,4-Trimethylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,2,3-Trimethylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
1,3,5-Trimethylbenzene	ND		0.500	1	01/29/2018 13:18	WG1067627
Vinyl acetate	ND		5.00	1	01/29/2018 13:18	WG1067627
Vinyl chloride	ND		0.500	1	01/29/2018 13:18	WG1067627
Xylenes, Total	ND		1.50	1	01/29/2018 13:18	WG1067627
(S) Toluene-d8	*103*		*80.0-120*		*01/29/2018 13:18*	WG1067627
(S) Dibromofluoromethane	*90.2*		*76.0-123*		*01/29/2018 13:18*	WG1067627
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*01/29/2018 13:18*	WG1067627

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/29/2018 12:58	WG1067627
Acrylonitrile	ND		5.00	1	01/29/2018 12:58	WG1067627
Benzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Bromobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Bromodichloromethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Bromochloromethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Bromoform	ND		0.500	1	01/29/2018 12:58	WG1067627
Bromomethane	ND		2.50	1	01/29/2018 12:58	WG1067627
n-Butylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
sec-Butylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
tert-Butylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Carbon disulfide	ND		0.500	1	01/29/2018 12:58	WG1067627
Carbon tetrachloride	ND		0.500	1	01/29/2018 12:58	WG1067627
Chlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Chlorodibromomethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Chloroethane	ND	J4	2.50	1	01/29/2018 12:58	WG1067627
Chloroform	ND		0.500	1	01/29/2018 12:58	WG1067627
Chloromethane	ND		1.25	1	01/29/2018 12:58	WG1067627
2-Chlorotoluene	ND		0.500	1	01/29/2018 12:58	WG1067627
4-Chlorotoluene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/29/2018 12:58	WG1067627
1,2-Dibromoethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Dibromomethane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2-Dichlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,3-Dichlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,4-Dichlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Dichlorodifluoromethane	ND		2.50	1	01/29/2018 12:58	WG1067627
1,1-Dichloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2-Dichloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1-Dichloroethene	ND		0.500	1	01/29/2018 12:58	WG1067627
cis-1,2-Dichloroethene	ND		0.500	1	01/29/2018 12:58	WG1067627
trans-1,2-Dichloroethene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2-Dichloropropane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1-Dichloropropene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,3-Dichloropropane	ND		1.00	1	01/29/2018 12:58	WG1067627
cis-1,3-Dichloropropene	ND		0.500	1	01/29/2018 12:58	WG1067627
trans-1,3-Dichloropropene	ND		0.500	1	01/29/2018 12:58	WG1067627
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/29/2018 12:58	WG1067627
2,2-Dichloropropane	ND		0.500	1	01/29/2018 12:58	WG1067627
Di-isopropyl ether	ND		0.500	1	01/29/2018 12:58	WG1067627
Ethylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Hexachloro-1,3-butadiene	ND		1.00	1	01/29/2018 12:58	WG1067627
2-Hexanone	ND		5.00	1	01/29/2018 12:58	WG1067627
n-Hexane	ND		5.00	1	01/29/2018 12:58	WG1067627
Iodomethane	ND		10.0	1	01/29/2018 12:58	WG1067627
Isopropylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
p-Isopropyltoluene	ND		0.500	1	01/29/2018 12:58	WG1067627
2-Butanone (MEK)	ND		5.00	1	01/29/2018 12:58	WG1067627
Methylene Chloride	ND		2.50	1	01/29/2018 12:58	WG1067627
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/29/2018 12:58	WG1067627
Methyl tert-butyl ether	ND		0.500	1	01/29/2018 12:58	WG1067627
Naphthalene	ND		2.50	1	01/29/2018 12:58	WG1067627
n-Propylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Styrene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Tetrachloroethene	ND		0.500	1	01/29/2018 12:58	WG1067627
Toluene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2,3-Trichlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2,4-Trichlorobenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1,1-Trichloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
1,1,2-Trichloroethane	ND		0.500	1	01/29/2018 12:58	WG1067627
Trichloroethene	ND		0.500	1	01/29/2018 12:58	WG1067627
Trichlorofluoromethane	ND		2.50	1	01/29/2018 12:58	WG1067627
1,2,3-Trichloropropane	ND		2.50	1	01/29/2018 12:58	WG1067627
1,2,4-Trimethylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,2,3-Trimethylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
1,3,5-Trimethylbenzene	ND		0.500	1	01/29/2018 12:58	WG1067627
Vinyl acetate	ND		5.00	1	01/29/2018 12:58	WG1067627
Vinyl chloride	ND		0.500	1	01/29/2018 12:58	WG1067627
Xylenes, Total	ND		1.50	1	01/29/2018 12:58	WG1067627
(S) Toluene-d8	*105*		*80.0-120*		*01/29/2018 12:58*	WG1067627
(S) Dibromofluoromethane	*93.7*		*76.0-123*		*01/29/2018 12:58*	WG1067627
(S) 4-Bromofluorobenzene	*102*		*80.0-120*		*01/29/2018 12:58*	WG1067627

Method Blank (MB)

(MB) R3283839-2 01/28/18 11:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
Carbon disulfide	U		0.101	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

Method Blank (MB)

(MB) R3283839-2 01/28/18 11:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
n-Hexane	U		0.305	5.00
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*90.6*			*76.0-123*
(S) 4-Bromofluorobenzene	*103*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3283839-1 01/28/18 10:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromochloromethane	25.0	25.9	104	76.0-122	
Carbon disulfide	25.0	22.8	91.4	55.0-127	
Acetone	125	108	86.7	10.0-160	
Acrylonitrile	125	112	89.8	60.0-142	
Benzene	25.0	22.4	89.6	69.0-123	
trans-1,4-Dichloro-2-butene	25.0	23.9	95.6	55.0-134	
Bromobenzene	25.0	24.2	96.7	79.0-120	
Bromodichloromethane	25.0	23.8	95.3	76.0-120	
Bromoform	25.0	25.6	102	67.0-132	
2-Hexanone	125	127	102	58.0-147	
Bromomethane	25.0	22.3	89.1	18.0-160	
n-Hexane	25.0	22.8	91.0	56.0-124	
Iodomethane	125	135	108	57.0-140	
n-Butylbenzene	25.0	24.9	99.4	72.0-126	
sec-Butylbenzene	25.0	26.2	105	74.0-121	
tert-Butylbenzene	25.0	25.3	101	75.0-122	
Carbon tetrachloride	25.0	22.1	88.3	63.0-122	
Chlorobenzene	25.0	26.3	105	79.0-121	
Chlorodibromomethane	25.0	26.6	106	75.0-125	
Chloroethane	25.0	25.7	103	47.0-152	
Chloroform	25.0	23.5	94.0	72.0-121	
Chloromethane	25.0	24.3	97.4	48.0-139	
2-Chlorotoluene	25.0	24.2	96.7	74.0-122	
4-Chlorotoluene	25.0	25.2	101	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	22.9	91.7	64.0-127	
1,2-Dibromoethane	25.0	25.9	104	77.0-123	
Dibromomethane	25.0	24.4	97.7	78.0-120	
1,2-Dichlorobenzene	25.0	24.8	99.2	80.0-120	
1,3-Dichlorobenzene	25.0	24.8	99.2	72.0-123	
1,4-Dichlorobenzene	25.0	24.3	97.4	77.0-120	
Dichlorodifluoromethane	25.0	34.3	137	49.0-155	
1,1-Dichloroethane	25.0	22.6	90.2	70.0-126	
1,2-Dichloroethane	25.0	23.8	95.2	67.0-126	
1,1-Dichloroethene	25.0	23.3	93.1	64.0-129	
cis-1,2-Dichloroethene	25.0	23.0	91.9	73.0-120	
Vinyl acetate	125	126	101	46.0-160	
trans-1,2-Dichloroethene	25.0	23.4	93.7	71.0-121	
1,2-Dichloropropane	25.0	24.9	99.7	75.0-125	
1,1-Dichloropropene	25.0	24.1	96.5	71.0-129	
1,3-Dichloropropane	25.0	25.9	104	80.0-121	

Laboratory Control Sample (LCS)

(LCS) R3283839-1 01/28/18 10:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
cis-1,3-Dichloropropene	25.0	25.6	103	79.0-123	
trans-1,3-Dichloropropene	25.0	26.5	106	74.0-127	
2,2-Dichloropropane	25.0	22.7	90.9	60.0-125	
Di-isopropyl ether	25.0	22.3	89.2	59.0-133	
Ethylbenzene	25.0	25.5	102	77.0-120	
Hexachloro-1,3-butadiene	25.0	24.4	97.5	64.0-131	
Isopropylbenzene	25.0	25.8	103	75.0-120	
p-Isopropyltoluene	25.0	25.8	103	74.0-126	
2-Butanone (MEK)	125	111	88.5	37.0-158	
Methylene Chloride	25.0	21.3	85.1	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	131	104	59.0-143	
Methyl tert-butyl ether	25.0	22.5	90.1	64.0-123	
Naphthalene	25.0	22.7	90.6	62.0-128	
n-Propylbenzene	25.0	24.6	98.3	79.0-120	
Styrene	25.0	25.4	102	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	25.1	100	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	25.2	101	71.0-122	
Tetrachloroethene	25.0	27.2	109	70.0-127	
Toluene	25.0	25.0	99.9	77.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	25.1	100	61.0-136	
1,2,3-Trichlorobenzene	25.0	24.4	97.5	61.0-133	
1,2,4-Trichlorobenzene	25.0	24.0	95.9	69.0-129	
1,1,1-Trichloroethane	25.0	23.8	95.2	68.0-122	
1,1,2-Trichloroethane	25.0	26.2	105	78.0-120	
Trichloroethene	25.0	24.5	98.1	78.0-120	
Trichlorofluoromethane	25.0	26.6	106	56.0-137	
1,2,3-Trichloropropane	25.0	24.7	98.9	72.0-124	
1,2,3-Trimethylbenzene	25.0	25.0	99.8	75.0-120	
1,2,4-Trimethylbenzene	25.0	25.2	101	75.0-120	
1,3,5-Trimethylbenzene	25.0	25.4	101	75.0-120	
Vinyl chloride	25.0	28.2	113	64.0-133	
Xylenes, Total	75.0	77.4	103	77.0-120	
(S) Toluene-d8			*106*	*80.0-120*	
(S) Dibromofluoromethane			*93.0*	*76.0-123*	
(S) 4-Bromofluorobenzene			*101*	*80.0-120*	

Method Blank (MB)

(MB) R3282511-3 01/29/18 10:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
2-Chlorotoluene	U		0.111	0.500
Chloroform	U		0.0860	0.500
4-Chlorotoluene	U		0.0972	0.500
Chloromethane	U		0.153	1.25
Dibromomethane	U		0.117	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,1-Dichloropropene	U		0.128	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500
cis-1,3-Dichloropropene	U		0.0976	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00

Method Blank (MB)

(MB) R3282511-3 01/29/18 10:59

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
trans-1,3-Dichloropropene	U		0.222	0.500
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
2-Hexanone	U		0.757	5.00
Isopropylbenzene	U		0.126	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
1,2,3-Trichloropropane	U		0.247	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*88.0*			*76.0-123*
(S) 4-Bromofluorobenzene	*104*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3282511-1 01/29/18 10:00 • (LCSD) R3282511-2 01/29/18 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acrylonitrile	125	126	115	100	91.8	60.0-142			9.00	20
Bromobenzene	25.0	27.3	24.4	109	97.5	79.0-120			11.5	20
2-Chlorotoluene	25.0	26.5	24.5	106	97.9	74.0-122			8.02	20
4-Chlorotoluene	25.0	27.7	25.0	111	100	79.0-120			10.3	20
Dibromomethane	25.0	27.7	25.0	111	100	78.0-120			10.2	20
1,1-Dichloropropene	25.0	26.4	23.3	106	93.1	71.0-129			12.5	20
1,3-Dichloropropane	25.0	28.7	25.5	115	102	80.0-121			11.7	20
Acetone	125	142	137	113	110	10.0-160			3.24	23
Benzene	25.0	25.0	23.1	100	92.4	69.0-123			8.01	20
trans-1,4-Dichloro-2-butene	25.0	26.4	23.8	106	95.4	55.0-134			10.1	20
2,2-Dichloropropane	25.0	26.3	23.4	105	93.8	60.0-125			11.5	20
Bromodichloromethane	25.0	26.3	24.9	105	99.5	76.0-120			5.48	20
Di-isopropyl ether	25.0	25.3	22.6	101	90.3	59.0-133			11.3	20
Bromochloromethane	25.0	28.2	24.4	113	97.6	76.0-122			14.3	20
Bromoform	25.0	26.7	25.0	107	99.8	67.0-132			6.77	20
Hexachloro-1,3-butadiene	25.0	26.8	25.2	107	101	64.0-131			6.17	20
Bromomethane	25.0	20.3	19.7	81.3	79.0	18.0-160			2.95	20
n-Hexane	25.0	24.6	21.8	98.3	87.0	56.0-124			12.2	20
Iodomethane	125	118	121	94.2	96.6	57.0-140			2.61	20
n-Butylbenzene	25.0	27.8	25.8	111	103	72.0-126			7.25	20
sec-Butylbenzene	25.0	27.6	25.4	110	102	74.0-121			8.34	20
tert-Butylbenzene	25.0	26.9	25.3	108	101	75.0-122			6.36	20
Carbon disulfide	25.0	23.7	21.6	94.6	86.6	55.0-127			8.86	20
Carbon tetrachloride	25.0	24.9	22.4	99.8	89.7	63.0-122			10.6	20
Chlorobenzene	25.0	28.1	25.9	112	104	79.0-121			8.26	20
Chlorodibromomethane	25.0	28.0	25.4	112	102	75.0-125			9.51	20
Chloroethane	25.0	10.7	9.40	42.9	37.6	47.0-152	J4	J4	13.1	20
Chloroform	25.0	26.8	24.2	107	96.9	72.0-121			9.91	20
1,1,1,2-Tetrachloroethane	25.0	27.8	24.5	111	98.1	75.0-122			12.5	20
Chloromethane	25.0	25.0	22.9	99.9	91.4	48.0-139			8.92	20
1,2-Dibromo-3-Chloropropane	25.0	25.2	23.4	101	93.5	64.0-127			7.39	20
1,2-Dibromoethane	25.0	28.4	25.4	114	102	77.0-123			11.0	20
1,2-Dichlorobenzene	25.0	26.8	24.5	107	97.8	80.0-120			9.16	20
1,3-Dichlorobenzene	25.0	26.8	24.5	107	98.0	72.0-123			8.94	20
1,4-Dichlorobenzene	25.0	25.8	23.2	103	92.8	77.0-120			10.8	20
Dichlorodifluoromethane	25.0	30.7	28.7	123	115	49.0-155			6.73	20
1,2,3-Trichloropropane	25.0	27.6	24.7	110	98.8	72.0-124			11.1	20
1,1-Dichloroethane	25.0	25.5	23.3	102	93.1	70.0-126			9.03	20
1,2,3-Trimethylbenzene	25.0	26.8	24.6	107	98.3	75.0-120			8.75	20
1,2-Dichloroethane	25.0	26.4	23.4	106	93.7	67.0-126			11.9	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3282511-1 01/29/18 10:00 • (LCSD) R3282511-2 01/29/18 10:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethene	25.0	24.3	22.7	97.3	91.0	64.0-129			6.70	20
cis-1,2-Dichloroethene	25.0	25.1	23.2	100	92.8	73.0-120			7.71	20
Vinyl acetate	125	138	122	111	97.8	46.0-160			12.4	20
trans-1,2-Dichloroethene	25.0	26.0	23.4	104	93.5	71.0-121			10.5	20
1,2-Dichloropropane	25.0	27.3	25.2	109	101	75.0-125			8.06	20
cis-1,3-Dichloropropene	25.0	28.0	25.2	112	101	79.0-123			10.3	20
trans-1,3-Dichloropropene	25.0	28.4	26.3	113	105	74.0-127			7.72	20
Ethylbenzene	25.0	28.3	25.5	113	102	77.0-120			10.4	20
2-Hexanone	125	150	139	120	111	58.0-147			7.43	20
Isopropylbenzene	25.0	27.1	25.6	109	102	75.0-120			6.01	20
p-Isopropyltoluene	25.0	28.3	26.3	113	105	74.0-126			7.27	20
2-Butanone (MEK)	125	146	135	117	108	37.0-158			7.49	20
Methylene Chloride	25.0	24.3	21.5	97.2	85.9	66.0-121			12.4	20
4-Methyl-2-pentanone (MIBK)	125	142	130	114	104	59.0-143			9.26	20
Methyl tert-butyl ether	25.0	25.3	22.9	101	91.5	64.0-123			10.1	20
Naphthalene	25.0	25.2	24.6	101	98.4	62.0-128			2.57	20
n-Propylbenzene	25.0	27.1	24.9	108	99.7	79.0-120			8.37	20
Styrene	25.0	27.4	25.1	110	100	78.0-124			8.82	20
1,1,2,2-Tetrachloroethane	25.0	27.7	25.6	111	102	71.0-122			7.88	20
Tetrachloroethene	25.0	28.7	26.0	115	104	70.0-127			10.0	20
Toluene	25.0	27.3	24.9	109	99.7	77.0-120			9.07	20
1,1,2-Trichlorotrifluoroethane	25.0	25.2	23.0	101	92.1	61.0-136			8.99	20
1,2,3-Trichlorobenzene	25.0	26.0	24.2	104	97.0	61.0-133			6.85	20
1,2,4-Trichlorobenzene	25.0	25.7	24.7	103	98.6	69.0-129			4.35	20
1,1,1-Trichloroethane	25.0	26.0	24.1	104	96.2	68.0-122			7.73	20
1,1,2-Trichloroethane	25.0	28.9	25.2	115	101	78.0-120			13.4	20
Trichloroethene	25.0	27.9	26.1	112	104	78.0-120			6.75	20
Trichlorofluoromethane	25.0	20.6	18.6	82.4	74.6	56.0-137			10.0	20
1,2,4-Trimethylbenzene	25.0	28.0	25.4	112	102	75.0-120			9.73	20
1,3,5-Trimethylbenzene	25.0	26.5	25.5	106	102	75.0-120			3.90	20
Vinyl chloride	25.0	28.9	27.3	116	109	64.0-133			5.90	20
Xylenes, Total	75.0	84.6	78.0	113	104	77.0-120			8.12	20
(S) Toluene-d8				*103*	*99.7*	*80.0-120*				
(S) Dibromofluoromethane				*92.8*	*91.8*	*76.0-123*				
(S) 4-Bromofluorobenzene				*101*	*101*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

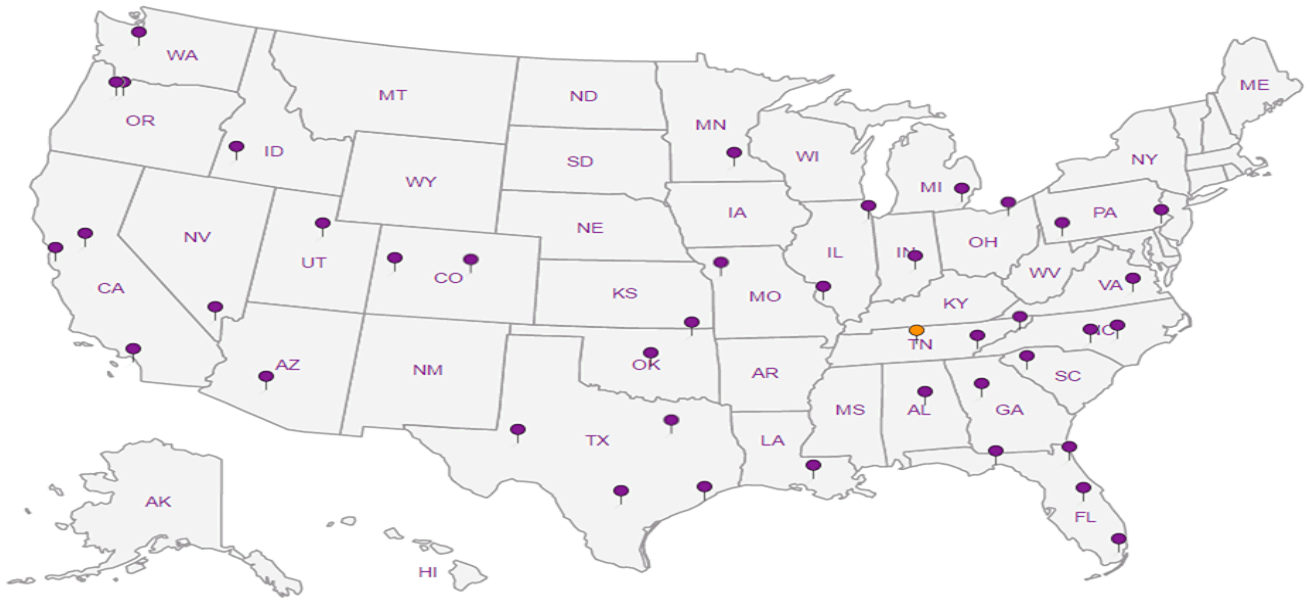
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: NORMANDY WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Rachel McLaughlin

Site/Facility ID # MVSC

P.O. # 1358.001.01.003

Collected by (signature): RMcLaughlin

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260LLC VOCs 40mlAmb-HCl										Remarks	Sample # (lab only)
DC-15-012418	GRAB	GW	38	01/24/18	10:30	3	X											-01
DC-8-012418		GW	36.5	01/24/18	11:30	3	X											-02
DC-10A-012518		GW	36	01/25/18	14:10	3	X											-03
KMW-3-012518		GW	28	01/25/18	15:40	3	X											-04
DC-11-012518		GW	40	01/25/18	9:15	3	X											-05
KMW-8-012518		GW	40	01/25/18	10:50	3	X											-06
MW-11-012518		GW	38	01/25/18	12:48	3	X											-07
DC-7-012618		GW	35.5	01/26/18	09:15	3	X											-08
MW-7-012618		GW	40	01/26/18	10:35	3	X											-09
MW-101-012618		GW	40	01/26/18	12:45	3	X											-10

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 966085

Tab C119

Acctnum: PESENVSWA

Template: T131700

Prelogin: P635423

TSR: 110 - Brian Ford

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 7466 1466 8268

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Rachel McLaughlin	01/26/18	13:40			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3 °C Bottles Received: 36	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Ian M 875	Date: 1/27/18 Time: 0844	Hold: Condition: NCF / OK

PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: NORMANDY, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Rachel McLaughlin

Site/Facility ID # MVSC

P.O. # 1358.001.01.003

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative: V8260LLC VOCs 40mlAmb-HCl	Remarks	Sample # (lab only)
DC-17-012618	Grab	GW	35.5	1/26/18	12:00	3	X		-11
EQUIPMENT BLANK	GRAB	GW	—	1/26/18	12:30	3	X		-12
TRIP BLANK		GW	—	9/20/17	—	1	X		-13
		GW							
		GW							

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
a subsidiary of Accutest

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 966085

Table #

Acctnum: PESENVSWA

Template: T131700

Prelogin: P635423

TSR: 110 - Brian Ford

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR	If preservation required by Login: Date/Time
Rachel McLaughlin	01/26/17	13:40		1	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3 °C	Bottles Received: 36
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 1/27/18	Time: 0848

Hold: | Condition: NCF / OK

Brian Ford

From: Matt Dahl <mdahl@pesenv.com>
Sent: Monday, January 29, 2018 1:40 PM
To: Brian Ford
Cc: Karsten Springstead
Subject: RE: ESC Lab Sciences Login for 1358.001.01.003 MVSC L966085
Attachments: COCL966085_revised_2018_0129.pdf

Hi Brian,
We inadvertently collected a sample from DC-11 and we should have sampled DC-14. Could you please cancel sample ID L966085-05 (DC-11) and send a cooler with 1 set of sample bottles and spare set to our office? I have attached a revised copy of the chain of custody.

I have someone available to resample this week, so would it be possible to get the cooler by EOB Wed 1/31?

Thanks!
-Matt

Matt Dahl, P.E.
PES Environmental , Inc.
ph: (206) 529-3980 ext. 103
cell: (425) 922-0872
fax: (206) 529-3985

-----Original Message-----
From: Brian Ford [mailto:bford@esclabsciences.com]
Sent: Saturday, January 27, 2018 11:28 AM
To: Matt Dahl <mdahl@pesenv.com>; Karsten Springstead <KSpringstead@pesenv.com>
Subject: ESC Lab Sciences Login for 1358.001.01.003 MVSC L966085

Thank you for choosing ESC Lab Sciences! Please find enclosed PDF files containing your laboratory login confirmation and chain of custody.

ESC is leading the laboratory industry with our On-line Data Management tools. Please contact your Technical Service Representative to learn how to create historical Excel tables or access data in real time using powerful and intuitive software that is only available at http://www.esclabsciences.com.

Visit ESC's secure data management web site - myESC - for all your reporting and data management needs at https://linkprotect.cudasvc.com/url?a=http://www.esclabsciences.com/login&c=E,1,cvWaymlw9yVvdI_EJFUEkeEWw4dk34atvUEJZwMBkOz6bQkzmy89WOPeoWNqk92i3JY9HdNYdyUjC0tShi6bKHnnBHCmdLU2vx2tymMuCbHr2_j7E3uvKP7q_pzZ&typo=1

ESC ... "Your Lab of Choice"

Brian Ford
Technical Service Representative
615-773-9772

ESC Lab Sciences
12065 Lebanon Rd.
Mt. Juliet, TN 37122

Notice: This communication and any attached files may contain privileged or other confidential information. If you have received this in error, please contact the sender immediately via reply email and immediately delete the message and any attachments without copying or disclosing the contents. Thank you.

MEMORANDUM

TO: Project File **DATE:** February 13, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: **1358.001.01.003**

TASK: January 24-26, 2018 Groundwater Samples

LAB: ECS Lab Sciences Request No. L966085

Eleven (11) groundwater samples (including a field duplicate), one equipment blank, and a trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on January 24-26, 2018. Samples associated with SDG L946305 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by ESC Lab Sciences (ESC) of Mt. Juliet, Tennessee.

The monitoring event occurred between January 24 and 26, 2018. The quality assurance review of the laboratory data for SDG L966085 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

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

- PES inadvertently sampled the wrong monitoring well and on January 29, 2018 cancelled a request for analysis on sample DC-11-012518. The correct monitoring well was sampled on February 2, 2018 and the result for this sample (sample DC-14) is reported with ESC SDG L967542.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 3.3 degrees Centigrade (°C). The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Hard copies of the calibration data for this project are not required in the data deliverable and are typically not reported. The laboratory is required to discuss discrepancies in calibration results associated with the project analyses if they occur. No calibration issues were reported; therefore no data qualifications were warranted.

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

Trip blank was prepared by ESC on September 20, 2017 and analyzed on January 29, 2018. The target analytes (VOCs) were not detected in the trip blank at concentrations at or above the RDLs.

Equipment Blank Results

An equipment blank sample was collected on January 26, 2017. The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs**.**

Field Duplicate Analyses

Field duplicate samples (MW-7-012618 and MW-101-012618) were collected and analyzed for VOCs. Results are comparable with relative percent difference (RPDs) of less than 20%.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's for analytical batch (WG1067406) are within the laboratory control limits. Refer to the field duplicate data for precision information. Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) % Rs and RPDs for analytical batch (WG1067627) are within laboratory control limit criteria with one exception:

- LCS/LCSD % Rs for chloroethane are low and below laboratory acceptance criteria. **Associated sample DC-17-012618 chloroethane result is estimated and qualified (UJ) due to low LCS recoveries.**

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifier is assigned and laboratory report pages with qualifiers are attached. All data, including qualified data, are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	01/29/2018 16:16	WG1067627
Acrylonitrile	ND		5.00	1	01/29/2018 16:16	WG1067627
Benzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromodichloromethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromochloromethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromoform	ND		0.500	1	01/29/2018 16:16	WG1067627
Bromomethane	ND		2.50	1	01/29/2018 16:16	WG1067627
n-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
sec-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
tert-Butylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Carbon disulfide	ND		0.500	1	01/29/2018 16:16	WG1067627
Carbon tetrachloride	ND		0.500	1	01/29/2018 16:16	WG1067627
Chlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Chlorodibromomethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Chloroethane	ND	UJ J4	2.50	1	01/29/2018 16:16	WG1067627
Chloroform	ND		0.500	1	01/29/2018 16:16	WG1067627
Chloromethane	ND		1.25	1	01/29/2018 16:16	WG1067627
2-Chlorotoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
4-Chlorotoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dibromo-3-Chloropropane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2-Dibromoethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Dibromomethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,4-Dichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Dichlorodifluoromethane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,1-Dichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
cis-1,2-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,2-Dichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2-Dichloropropane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3-Dichloropropane	ND		1.00	1	01/29/2018 16:16	WG1067627
cis-1,3-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,3-Dichloropropene	ND		0.500	1	01/29/2018 16:16	WG1067627
trans-1,4-Dichloro-2-butene	ND		5.00	1	01/29/2018 16:16	WG1067627
2,2-Dichloropropane	ND		0.500	1	01/29/2018 16:16	WG1067627
Di-isopropyl ether	ND		0.500	1	01/29/2018 16:16	WG1067627
Ethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Hexachloro-1,3-butadiene	ND		1.00	1	01/29/2018 16:16	WG1067627
2-Hexanone	ND		5.00	1	01/29/2018 16:16	WG1067627
n-Hexane	ND		5.00	1	01/29/2018 16:16	WG1067627
Iodomethane	ND		10.0	1	01/29/2018 16:16	WG1067627
Isopropylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
p-Isopropyltoluene	ND		0.500	1	01/29/2018 16:16	WG1067627
2-Butanone (MEK)	ND		5.00	1	01/29/2018 16:16	WG1067627
Methylene Chloride	ND		2.50	1	01/29/2018 16:16	WG1067627
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	01/29/2018 16:16	WG1067627
Methyl tert-butyl ether	ND		0.500	1	01/29/2018 16:16	WG1067627
Naphthalene	ND		2.50	1	01/29/2018 16:16	WG1067627
n-Propylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Styrene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,1,2-Tetrachloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,2,2-Tetrachloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627

JC 2/13/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Tetrachloroethene	7.38		0.500	1	01/29/2018 16:16	WG1067627
Toluene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,3-Trichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,4-Trichlorobenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,1-Trichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
1,1,2-Trichloroethane	ND		0.500	1	01/29/2018 16:16	WG1067627
Trichloroethene	ND		0.500	1	01/29/2018 16:16	WG1067627
Trichlorofluoromethane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2,3-Trichloropropane	ND		2.50	1	01/29/2018 16:16	WG1067627
1,2,4-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,2,3-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
1,3,5-Trimethylbenzene	ND		0.500	1	01/29/2018 16:16	WG1067627
Vinyl acetate	ND		5.00	1	01/29/2018 16:16	WG1067627
Vinyl chloride	ND		0.500	1	01/29/2018 16:16	WG1067627
Xylenes, Total	ND		1.50	1	01/29/2018 16:16	WG1067627
(S) Toluene-d8	*105*		*80.0-120*		*01/29/2018 16:16*	WG1067627
(S) Dibromofluoromethane	*91.6*		*76.0-123*		*01/29/2018 16:16*	WG1067627
(S) 4-Bromofluorobenzene	*109*		*80.0-120*		*01/29/2018 16:16*	WG1067627

JC 2/13/18

ANALYTICAL REPORT

February 07, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L967542
Samples Received:	02/03/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	MVSC
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By:

Brian Ford

Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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Gl: Glossary of Terms 13

Al: Accreditations & Locations 14

Sc: Sample Chain of Custody 15

DC-14-020218 L967542-01 GW

Collected by	Collected date/time	Received date/time
Rachel McLaughlin	02/02/18 09:10	02/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1070440	1	02/06/18 15:35	02/06/18 15:35	BMB

TRIP BLANK L967542-02 GW

Collected by	Collected date/time	Received date/time
Rachel McLaughlin	09/11/17 00:00	02/03/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1070440	1	02/06/18 14:55	02/06/18 14:55	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	02/06/2018 15:35	WG1070440
Acrylonitrile	ND		5.00	1	02/06/2018 15:35	WG1070440
Benzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Bromobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Bromodichloromethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Bromochloromethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Bromoform	ND		0.500	1	02/06/2018 15:35	WG1070440
Bromomethane	ND		2.50	1	02/06/2018 15:35	WG1070440
n-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
sec-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
tert-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Carbon disulfide	ND		0.500	1	02/06/2018 15:35	WG1070440
Carbon tetrachloride	ND		0.500	1	02/06/2018 15:35	WG1070440
Chlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Chlorodibromomethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Chloroethane	ND		2.50	1	02/06/2018 15:35	WG1070440
Chloroform	2.97		0.500	1	02/06/2018 15:35	WG1070440
Chloromethane	ND		1.25	1	02/06/2018 15:35	WG1070440
2-Chlorotoluene	ND		0.500	1	02/06/2018 15:35	WG1070440
4-Chlorotoluene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2-Dibromo-3-Chloropropane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,2-Dibromoethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Dibromomethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,3-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,4-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Dichlorodifluoromethane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,1-Dichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2-Dichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440
cis-1,2-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440
trans-1,2-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2-Dichloropropane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,3-Dichloropropane	ND		1.00	1	02/06/2018 15:35	WG1070440
cis-1,3-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440
trans-1,3-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440
trans-1,4-Dichloro-2-butene	ND		5.00	1	02/06/2018 15:35	WG1070440
2,2-Dichloropropane	ND		0.500	1	02/06/2018 15:35	WG1070440
Di-isopropyl ether	ND		0.500	1	02/06/2018 15:35	WG1070440
Ethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Hexachloro-1,3-butadiene	ND		1.00	1	02/06/2018 15:35	WG1070440
2-Hexanone	ND		5.00	1	02/06/2018 15:35	WG1070440
n-Hexane	ND		5.00	1	02/06/2018 15:35	WG1070440
Iodomethane	ND		10.0	1	02/06/2018 15:35	WG1070440
Isopropylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
p-Isopropyltoluene	ND		0.500	1	02/06/2018 15:35	WG1070440
2-Butanone (MEK)	ND		5.00	1	02/06/2018 15:35	WG1070440
Methylene Chloride	ND	J0	2.50	1	02/06/2018 15:35	WG1070440
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	02/06/2018 15:35	WG1070440
Methyl tert-butyl ether	ND		0.500	1	02/06/2018 15:35	WG1070440
Naphthalene	ND		2.50	1	02/06/2018 15:35	WG1070440
n-Propylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Styrene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,1,2-Tetrachloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,2,2-Tetrachloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Tetrachloroethene	7.81		0.500	1	02/06/2018 15:35	WG1070440
Toluene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,3-Trichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,4-Trichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,1-Trichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,2-Trichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Trichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440
Trichlorofluoromethane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,2,3-Trichloropropane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,2,4-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,3-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,3,5-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Vinyl acetate	ND		5.00	1	02/06/2018 15:35	WG1070440
Vinyl chloride	ND		0.500	1	02/06/2018 15:35	WG1070440
Xylenes, Total	ND		1.50	1	02/06/2018 15:35	WG1070440
(S) Toluene-d8	*110*		*80.0-120*		*02/06/2018 15:35*	WG1070440
(S) Dibromofluoromethane	*101*		*76.0-123*		*02/06/2018 15:35*	WG1070440
(S) 4-Bromofluorobenzene	*99.4*		*80.0-120*		*02/06/2018 15:35*	WG1070440

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	02/06/2018 14:55	WG1070440
Acrylonitrile	ND		5.00	1	02/06/2018 14:55	WG1070440
Benzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Bromobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Bromodichloromethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Bromochloromethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Bromoform	ND		0.500	1	02/06/2018 14:55	WG1070440
Bromomethane	ND		2.50	1	02/06/2018 14:55	WG1070440
n-Butylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
sec-Butylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
tert-Butylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Carbon disulfide	ND		0.500	1	02/06/2018 14:55	WG1070440
Carbon tetrachloride	ND		0.500	1	02/06/2018 14:55	WG1070440
Chlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Chlorodibromomethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Chloroethane	ND		2.50	1	02/06/2018 14:55	WG1070440
Chloroform	ND		0.500	1	02/06/2018 14:55	WG1070440
Chloromethane	ND		1.25	1	02/06/2018 14:55	WG1070440
2-Chlorotoluene	ND		0.500	1	02/06/2018 14:55	WG1070440
4-Chlorotoluene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2-Dibromo-3-Chloropropane	ND		2.50	1	02/06/2018 14:55	WG1070440
1,2-Dibromoethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Dibromomethane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2-Dichlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,3-Dichlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,4-Dichlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Dichlorodifluoromethane	ND		2.50	1	02/06/2018 14:55	WG1070440
1,1-Dichloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2-Dichloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1-Dichloroethene	ND		0.500	1	02/06/2018 14:55	WG1070440
cis-1,2-Dichloroethene	ND		0.500	1	02/06/2018 14:55	WG1070440
trans-1,2-Dichloroethene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2-Dichloropropane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1-Dichloropropene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,3-Dichloropropane	ND		1.00	1	02/06/2018 14:55	WG1070440
cis-1,3-Dichloropropene	ND		0.500	1	02/06/2018 14:55	WG1070440
trans-1,3-Dichloropropene	ND		0.500	1	02/06/2018 14:55	WG1070440
trans-1,4-Dichloro-2-butene	ND		5.00	1	02/06/2018 14:55	WG1070440
2,2-Dichloropropane	ND		0.500	1	02/06/2018 14:55	WG1070440
Di-isopropyl ether	ND		0.500	1	02/06/2018 14:55	WG1070440
Ethylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Hexachloro-1,3-butadiene	ND		1.00	1	02/06/2018 14:55	WG1070440
2-Hexanone	ND		5.00	1	02/06/2018 14:55	WG1070440
n-Hexane	ND		5.00	1	02/06/2018 14:55	WG1070440
Iodomethane	ND		10.0	1	02/06/2018 14:55	WG1070440
Isopropylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
p-Isopropyltoluene	ND		0.500	1	02/06/2018 14:55	WG1070440
2-Butanone (MEK)	ND		5.00	1	02/06/2018 14:55	WG1070440
Methylene Chloride	ND	J0	2.50	1	02/06/2018 14:55	WG1070440
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	02/06/2018 14:55	WG1070440
Methyl tert-butyl ether	ND		0.500	1	02/06/2018 14:55	WG1070440
Naphthalene	ND		2.50	1	02/06/2018 14:55	WG1070440
n-Propylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Styrene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1,1,2-Tetrachloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1,2,2-Tetrachloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Tetrachloroethene	ND		0.500	1	02/06/2018 14:55	WG1070440
Toluene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2,3-Trichlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2,4-Trichlorobenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1,1-Trichloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
1,1,2-Trichloroethane	ND		0.500	1	02/06/2018 14:55	WG1070440
Trichloroethene	ND		0.500	1	02/06/2018 14:55	WG1070440
Trichlorofluoromethane	ND		2.50	1	02/06/2018 14:55	WG1070440
1,2,3-Trichloropropane	ND		2.50	1	02/06/2018 14:55	WG1070440
1,2,4-Trimethylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,2,3-Trimethylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
1,3,5-Trimethylbenzene	ND		0.500	1	02/06/2018 14:55	WG1070440
Vinyl acetate	ND		5.00	1	02/06/2018 14:55	WG1070440
Vinyl chloride	ND		0.500	1	02/06/2018 14:55	WG1070440
Xylenes, Total	ND		1.50	1	02/06/2018 14:55	WG1070440
(S) Toluene-d8	*110*		*80.0-120*		*02/06/2018 14:55*	WG1070440
(S) Dibromofluoromethane	*101*		*76.0-123*		*02/06/2018 14:55*	WG1070440
(S) 4-Bromofluorobenzene	*97.9*		*80.0-120*		*02/06/2018 14:55*	WG1070440

Method Blank (MB)

(MB) R3284457-3 02/06/18 12:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
Carbon disulfide	U		0.101	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

Method Blank (MB)

(MB) R3284457-3 02/06/18 12:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
n-Hexane	U		0.305	5.00
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Vinyl acetate	U		0.645	5.00
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*114*			*80.0-120*
(S) Dibromofluoromethane	*98.5*			*76.0-123*
(S) 4-Bromofluorobenzene	*112*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3284457-1 02/06/18 11:22 • (LCSD) R3284457-2 02/06/18 11:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	25.0	23.8	23.9	95.4	95.6	76.0-122			0.243	20
Carbon disulfide	25.0	23.1	23.8	92.3	95.4	55.0-127			3.24	20
Acetone	125	147	162	118	129	10.0-160			9.59	23
Acrylonitrile	125	106	109	84.7	87.4	60.0-142			3.16	20
Benzene	25.0	21.0	20.5	83.9	82.2	69.0-123			2.11	20
trans-1,4-Dichloro-2-butene	25.0	22.1	22.2	88.3	88.7	55.0-134			0.387	20
Bromobenzene	25.0	22.1	22.3	88.5	89.4	79.0-120			0.962	20
Bromodichloromethane	25.0	25.6	25.2	102	101	76.0-120			1.59	20
Bromoform	25.0	26.5	27.1	106	108	67.0-132			2.28	20
2-Hexanone	125	135	136	108	109	58.0-147			0.804	20
Bromomethane	25.0	25.6	26.0	102	104	18.0-160			1.75	20
n-Hexane	25.0	22.1	24.7	88.2	98.8	56.0-124			11.3	20
Iodomethane	125	126	130	100	104	57.0-140			3.83	20
n-Butylbenzene	25.0	26.1	25.8	104	103	72.0-126			0.990	20
sec-Butylbenzene	25.0	26.1	25.8	104	103	74.0-121			1.06	20
tert-Butylbenzene	25.0	26.7	26.2	107	105	75.0-122			1.83	20
Carbon tetrachloride	25.0	28.0	27.4	112	110	63.0-122			2.16	20
Chlorobenzene	25.0	28.1	27.1	112	108	79.0-121			3.70	20
Chlorodibromomethane	25.0	29.9	29.3	120	117	75.0-125			2.29	20
Chloroethane	25.0	22.2	21.9	88.9	87.7	47.0-152			1.28	20
Chloroform	25.0	24.3	23.4	97.3	93.8	72.0-121			3.67	20
Chloromethane	25.0	26.5	24.4	106	97.8	48.0-139			8.12	20
2-Chlorotoluene	25.0	25.1	24.9	100	99.6	74.0-122			0.813	20
4-Chlorotoluene	25.0	24.6	24.2	98.2	96.8	79.0-120			1.41	20
1,2-Dibromo-3-Chloropropane	25.0	23.9	25.0	95.5	99.9	64.0-127			4.50	20
1,2-Dibromoethane	25.0	26.8	26.7	107	107	77.0-123			0.462	20
Dibromomethane	25.0	24.7	24.6	98.8	98.5	78.0-120			0.350	20
1,2-Dichlorobenzene	25.0	24.7	25.1	98.8	101	80.0-120			1.75	20
1,3-Dichlorobenzene	25.0	24.6	25.0	98.4	99.9	72.0-123			1.51	20
1,4-Dichlorobenzene	25.0	24.2	24.6	96.8	98.3	77.0-120			1.46	20
Dichlorodifluoromethane	25.0	30.6	28.9	122	116	49.0-155			5.56	20
1,1-Dichloroethane	25.0	21.2	21.3	84.9	85.2	70.0-126			0.370	20
1,2-Dichloroethane	25.0	25.0	25.2	100	101	67.0-126			0.911	20
1,1-Dichloroethene	25.0	24.9	25.6	99.8	102	64.0-129			2.55	20
cis-1,2-Dichloroethene	25.0	22.7	21.9	90.7	87.8	73.0-120			3.30	20
Vinyl acetate	125	134	133	107	106	46.0-160			0.746	20
trans-1,2-Dichloroethene	25.0	22.4	25.2	89.7	101	71.0-121			11.7	20
1,2-Dichloropropane	25.0	21.8	21.7	87.1	86.8	75.0-125			0.421	20
1,1-Dichloropropene	25.0	23.9	23.1	95.4	92.4	71.0-129			3.17	20
1,3-Dichloropropane	25.0	25.4	25.1	102	100	80.0-121			1.40	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3284457-1 02/06/18 11:22 • (LCSD) R3284457-2 02/06/18 11:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,3-Dichloropropene	25.0	26.0	25.3	104	101	79.0-123			2.40	20
trans-1,3-Dichloropropene	25.0	29.5	28.7	118	115	74.0-127			2.78	20
2,2-Dichloropropane	25.0	30.6	28.9	122	116	60.0-125			5.65	20
Di-isopropyl ether	25.0	22.9	24.3	91.6	97.4	59.0-133			6.14	20
Ethylbenzene	25.0	28.0	27.5	112	110	77.0-120			1.74	20
Hexachloro-1,3-butadiene	25.0	25.6	27.2	102	109	64.0-131			6.07	20
Isopropylbenzene	25.0	26.1	25.7	104	103	75.0-120			1.62	20
p-Isopropyltoluene	25.0	27.2	27.2	109	109	74.0-126			0.132	20
2-Butanone (MEK)	125	112	112	89.8	89.5	37.0-158			0.363	20
Methylene Chloride	25.0	19.8	23.1	79.3	92.3	66.0-121			15.2	20
4-Methyl-2-pentanone (MIBK)	125	141	141	113	113	59.0-143			0.336	20
Methyl tert-butyl ether	25.0	22.2	24.1	88.7	96.5	64.0-123			8.40	20
Naphthalene	25.0	22.9	24.9	91.6	99.4	62.0-128			8.13	20
n-Propylbenzene	25.0	24.2	24.2	96.9	96.8	79.0-120			0.0915	20
Styrene	25.0	22.1	22.2	88.5	88.9	78.0-124			0.505	20
1,1,1,2-Tetrachloroethane	25.0	29.3	28.2	117	113	75.0-122			3.49	20
1,1,2,2-Tetrachloroethane	25.0	20.8	21.1	83.2	84.4	71.0-122			1.50	20
Tetrachloroethene	25.0	29.9	28.6	120	114	70.0-127			4.38	20
Toluene	25.0	25.9	24.8	104	99.2	77.0-120			4.24	20
1,1,2-Trichlorotrifluoroethane	25.0	21.6	21.7	86.2	86.9	61.0-136			0.745	20
1,2,3-Trichlorobenzene	25.0	24.9	26.1	99.7	104	61.0-133			4.53	20
1,2,4-Trichlorobenzene	25.0	26.7	27.4	107	110	69.0-129			2.63	20
1,1,1-Trichloroethane	25.0	26.8	27.0	107	108	68.0-122			0.513	20
1,1,2-Trichloroethane	25.0	26.1	25.4	104	102	78.0-120			2.55	20
Trichloroethene	25.0	26.5	25.6	106	102	78.0-120			3.69	20
Trichlorofluoromethane	25.0	31.6	31.4	126	126	56.0-137			0.575	20
1,2,3-Trichloropropane	25.0	24.5	24.7	98.0	98.6	72.0-124			0.659	20
1,2,3-Trimethylbenzene	25.0	25.1	25.2	100	101	75.0-120			0.597	20
1,2,4-Trimethylbenzene	25.0	26.3	25.9	105	104	75.0-120			1.44	20
1,3,5-Trimethylbenzene	25.0	26.1	26.2	104	105	75.0-120			0.200	20
Vinyl chloride	25.0	25.0	25.6	100	102	64.0-133			2.19	20
Xylenes, Total	75.0	87.3	84.0	116	112	77.0-120			3.85	20
(S) Toluene-d8				*110*	*109*	*80.0-120*				
(S) Dibromofluoromethane				*98.9*	*98.4*	*76.0-123*				
(S) 4-Bromofluorobenzene				*97.2*	*99.5*	*80.0-120*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

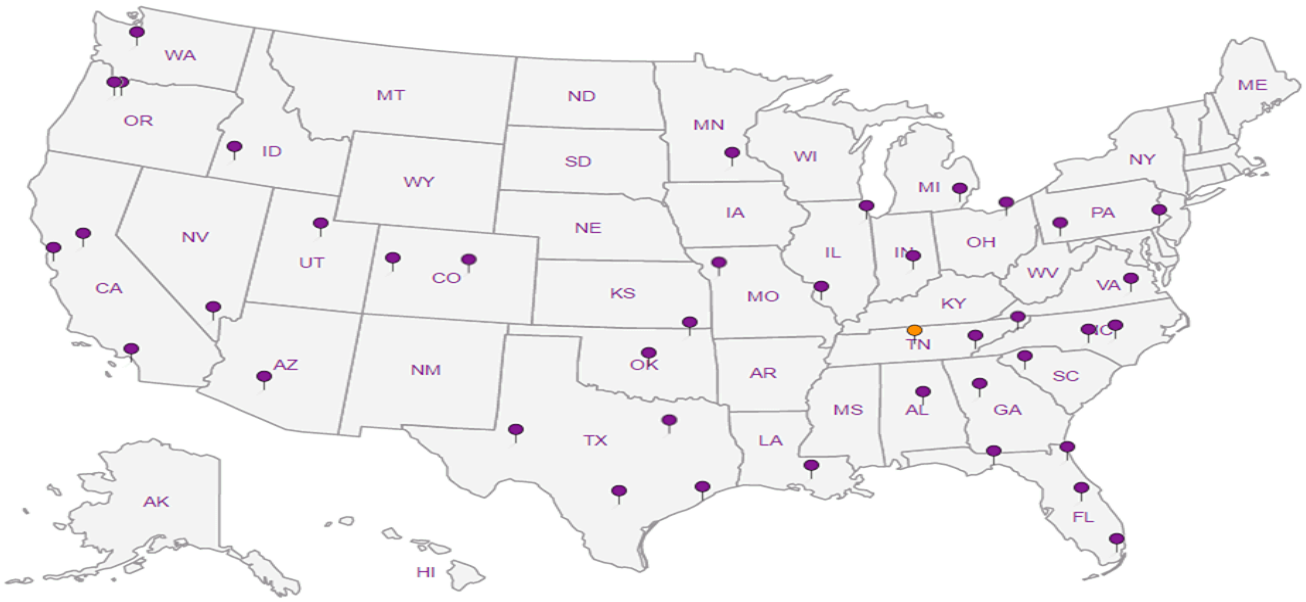
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Burien, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Rachel McLaughlin

Site/Facility ID # MVSC

P.O. #

Collected by (signature): Rachel McLaughlin

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	Analysis / Container / Preservative: V8260LLC VOCs 40mlAmb-HCl
DC-14-020218	GRAB	GW	40ft	2/2/18	0910	3		X
TRIP BLANK	—	GW	—	9/11/17	—	1		X

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 7466 1466 7493

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Rachel McLaughlin	2/2/18	10:05	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: (Yes) / No
HCl / MeoH
TBR

Temp: 4.5 °C corr 5.0 Bottles Received: 3

Date: 2/3/18 Time: 08:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
a subsidiary of Accelerate

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L967542

D093

Acctnum: PESENVSWA
Template: T131700
Prelogin: P637010
TSR: 110 - Brian Ford
PB:
Shipped Via:

Remarks	Sample # (lab only)
	-01
	-02

TO

MEMORANDUM

TO: Project File **DATE:** February 13, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: 1358.001.01.003

TASK: February 2, 2018 Groundwater Sample

LAB: ECS Lab Sciences Request No. L967542

One (1) groundwater sample and a trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on February 2, 2018. The sample associated with SDG L967542 was analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by ESC Lab Sciences (ESC) of Mt. Juliet, Tennessee.

The quality assurance review of the laboratory data for SDG L967542 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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report with the following discussion:

- The main sampling event occurred between January 24 and 26, of 2018 and analysis results are reported in ESC SDG 966085. On January 29, 2018 PES cancelled the analysis request for one sample (DC-11-012518) since it was collected from the wrong monitoring well. The correct monitoring well was sampled on February 2, 2018 and submitted for analysis. Result for sample DC-14-020218 and associated trip blank are reported in this SDG.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 0.5 degrees Centigrade (°C). The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

USEPA Method 8260C: Continuing calibration verification (CCV) issue is noted by ESC for methylene chloride associated with analytical batch WG1070440 (analyzed on February 6, 2018). This result is qualified by the laboratory "J0" to indicate that percent difference CCVs is outside of laboratory acceptance criteria. **The associated sample result for the compounds is laboratory qualified J0, is estimated, and qualified (UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

Trip blank was prepared by ESC on September 11, 2017 and analyzed on February 6, 2018. The target analytes (VOCs) were not detected in the trip blank at concentrations at or above the RDLs.

Equipment Blank Results

Equipment blank was not collected**.** Refer to SDG L966085 for equipment blank results.

Field Duplicate Analyses

Field duplicate samples were not collected. Refer to laboratory control sample results or SDG L966085 for field duplicate results.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to laboratory control sample results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the sample, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) %Rs and relative percent differences (RPDs) are within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS/LCSD results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifier is assigned and laboratory report pages with qualifier are attached. All data, including qualified data, are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	02/06/2018 15:35	WG1070440	
Acrylonitrile	ND		5.00	1	02/06/2018 15:35	WG1070440	
Benzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Bromobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Bromodichloromethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
Bromochloromethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
Bromoform	ND		0.500	1	02/06/2018 15:35	WG1070440	
Bromomethane	ND		2.50	1	02/06/2018 15:35	WG1070440	
n-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
sec-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
tert-Butylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Carbon disulfide	ND		0.500	1	02/06/2018 15:35	WG1070440	
Carbon tetrachloride	ND		0.500	1	02/06/2018 15:35	WG1070440	
Chlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Chlorodibromomethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
Chloroethane	ND		2.50	1	02/06/2018 15:35	WG1070440	
Chloroform	2.97		0.500	1	02/06/2018 15:35	WG1070440	
Chloromethane	ND		1.25	1	02/06/2018 15:35	WG1070440	
2-Chlorotoluene	ND		0.500	1	02/06/2018 15:35	WG1070440	
4-Chlorotoluene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	02/06/2018 15:35	WG1070440	
1,2-Dibromoethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
Dibromomethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,2-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,3-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,4-Dichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Dichlorodifluoromethane	ND		2.50	1	02/06/2018 15:35	WG1070440	
1,1-Dichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,2-Dichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,1-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440	
cis-1,2-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440	
trans-1,2-Dichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,2-Dichloropropane	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,1-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,3-Dichloropropane	ND		1.00	1	02/06/2018 15:35	WG1070440	
cis-1,3-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440	
trans-1,3-Dichloropropene	ND		0.500	1	02/06/2018 15:35	WG1070440	
trans-1,4-Dichloro-2-butene	ND		5.00	1	02/06/2018 15:35	WG1070440	
2,2-Dichloropropane	ND		0.500	1	02/06/2018 15:35	WG1070440	
Di-isopropyl ether	ND		0.500	1	02/06/2018 15:35	WG1070440	
Ethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Hexachloro-1,3-butadiene	ND		1.00	1	02/06/2018 15:35	WG1070440	
2-Hexanone	ND		5.00	1	02/06/2018 15:35	WG1070440	
n-Hexane	ND		5.00	1	02/06/2018 15:35	WG1070440	
Iodomethane	ND		10.0	1	02/06/2018 15:35	WG1070440	
Isopropylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
p-Isopropyltoluene	ND		0.500	1	02/06/2018 15:35	WG1070440	
2-Butanone (MEK)	ND		5.00	1	02/06/2018 15:35	WG1070440	
Methylene Chloride	ND	UJ J0	2.50	1	02/06/2018 15:35	WG1070440	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	02/06/2018 15:35	WG1070440	
Methyl tert-butyl ether	ND		0.500	1	02/06/2018 15:35	WG1070440	
Naphthalene	ND		2.50	1	02/06/2018 15:35	WG1070440	
n-Propylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440	
Styrene	ND		0.500	1	02/06/2018 15:35	WG1070440	
1,1,1,2-Tetrachloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440	JC 2/13/18
1,1,2,2-Tetrachloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Tetrachloroethene	7.81		0.500	1	02/06/2018 15:35	WG1070440
Toluene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,3-Trichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,4-Trichlorobenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,1-Trichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
1,1,2-Trichloroethane	ND		0.500	1	02/06/2018 15:35	WG1070440
Trichloroethene	ND		0.500	1	02/06/2018 15:35	WG1070440
Trichlorofluoromethane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,2,3-Trichloropropane	ND		2.50	1	02/06/2018 15:35	WG1070440
1,2,4-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,2,3-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
1,3,5-Trimethylbenzene	ND		0.500	1	02/06/2018 15:35	WG1070440
Vinyl acetate	ND		5.00	1	02/06/2018 15:35	WG1070440
Vinyl chloride	ND		0.500	1	02/06/2018 15:35	WG1070440
Xylenes, Total	ND		1.50	1	02/06/2018 15:35	WG1070440
(S) Toluene-d8	*110*		*80.0-120*		*02/06/2018 15:35*	WG1070440
(S) Dibromofluoromethane	*101*		*76.0-123*		*02/06/2018 15:35*	WG1070440
(S) 4-Bromofluorobenzene	*99.4*		*80.0-120*		*02/06/2018 15:35*	WG1070440

JC 2/13/18

ANALYTICAL REPORT

April 24, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L987257
Samples Received:	04/19/2018
Project Number:	1358.001.01.003
Description:	MVSC

Report To: Karsten Springstead
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Entire Report Reviewed By: Brian Ford

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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DC-15-041818 L987257-01 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 09:20 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 16:28	04/20/18 16:28	ACG

DC-8-041818 L987257-02 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 10:10 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 16:47	04/20/18 16:47	ACG

DC-4-041818 L987257-03 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 11:15 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 17:07	04/20/18 17:07	ACG

MW-13-041818 L987257-04 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 12:27 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 17:26	04/20/18 17:26	ACG

KMW-2-041818 L987257-05 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 13:24 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 17:46	04/20/18 17:46	ACG

MW-10-041818 L987257-06 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 14:01 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 18:05	04/20/18 18:05	ACG

MW-9-041818 L987257-07 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 14:53 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1100931	1	04/20/18 18:25	04/20/18 18:25	ACG

MW-12-041818 L987257-08 GW

Collected by: Jeff Dobbins | Collected date/time: 04/18/18 16:09 | Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101352	1	04/21/18 14:49	04/21/18 14:49	BMB

KMW-9-041818 L987257-09 GW

Collected by: Jeff Dobbins
Collected date/time: 04/18/18 17:00
Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101352	1	04/21/18 15:07	04/21/18 15:07	BMB

TRIP BLANK L987257-10 GW

Collected by: Jeff Dobbins
Collected date/time: 04/18/18 00:00
Received date/time: 04/19/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101352	1	04/21/18 13:34	04/21/18 13:34	BMB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 16:28	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 16:28	WG1100931
Benzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Bromoform	ND		0.500	1	04/20/2018 16:28	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 16:28	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 16:28	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 16:28	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 16:28	WG1100931
Chloroform	ND		0.500	1	04/20/2018 16:28	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 16:28	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 16:28	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 16:28	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 16:28	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 16:28	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 16:28	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 16:28	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 16:28	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 16:28	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 16:28	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 16:28	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 16:28	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 16:28	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 16:28	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 16:28	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 16:28	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 16:28	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 16:28	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 16:28	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 16:28	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 16:28	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 16:28	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Styrene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Tetrachloroethene	9.88		0.500	1	04/20/2018 16:28	WG1100931
Toluene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 16:28	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 16:28	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 16:28	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 16:28	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 16:28	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 16:28	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 16:28	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 16:28	WG1100931
(S) Toluene-d8	*107*		*80.0-120*		*04/20/2018 16:28*	WG1100931
(S) Dibromofluoromethane	*98.3*		*76.0-123*		*04/20/2018 16:28*	WG1100931
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*04/20/2018 16:28*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 16:47	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 16:47	WG1100931
Benzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Bromoform	ND		0.500	1	04/20/2018 16:47	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 16:47	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 16:47	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 16:47	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 16:47	WG1100931
Chloroform	ND		0.500	1	04/20/2018 16:47	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 16:47	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 16:47	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 16:47	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 16:47	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 16:47	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 16:47	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 16:47	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 16:47	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 16:47	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 16:47	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 16:47	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 16:47	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 16:47	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 16:47	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 16:47	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 16:47	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 16:47	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 16:47	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 16:47	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 16:47	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 16:47	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 16:47	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Styrene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Tetrachloroethene	13.0		0.500	1	04/20/2018 16:47	WG1100931
Toluene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 16:47	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 16:47	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 16:47	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 16:47	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 16:47	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 16:47	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 16:47	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 16:47	WG1100931
(S) Toluene-d8	*100*		*80.0-120*		*04/20/2018 16:47*	WG1100931
(S) Dibromofluoromethane	*99.0*		*76.0-123*		*04/20/2018 16:47*	WG1100931
(S) 4-Bromofluorobenzene	*110*		*80.0-120*		*04/20/2018 16:47*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 17:07	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 17:07	WG1100931
Benzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Bromoform	ND		0.500	1	04/20/2018 17:07	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 17:07	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 17:07	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 17:07	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 17:07	WG1100931
Chloroform	ND		0.500	1	04/20/2018 17:07	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 17:07	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 17:07	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 17:07	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 17:07	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 17:07	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:07	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 17:07	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:07	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:07	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 17:07	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 17:07	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 17:07	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 17:07	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 17:07	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 17:07	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 17:07	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 17:07	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 17:07	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 17:07	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 17:07	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 17:07	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 17:07	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Styrene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Tetrachloroethene	ND		0.500	1	04/20/2018 17:07	WG1100931
Toluene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 17:07	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 17:07	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 17:07	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 17:07	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 17:07	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 17:07	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 17:07	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 17:07	WG1100931
(S) Toluene-d8	*102*		*80.0-120*		*04/20/2018 17:07*	WG1100931
(S) Dibromofluoromethane	*97.1*		*76.0-123*		*04/20/2018 17:07*	WG1100931
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*04/20/2018 17:07*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 17:26	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 17:26	WG1100931
Benzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Bromoform	ND		0.500	1	04/20/2018 17:26	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 17:26	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 17:26	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 17:26	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 17:26	WG1100931
Chloroform	ND		0.500	1	04/20/2018 17:26	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 17:26	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 17:26	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 17:26	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 17:26	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 17:26	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:26	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 17:26	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:26	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:26	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 17:26	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 17:26	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 17:26	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 17:26	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 17:26	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 17:26	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 17:26	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 17:26	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 17:26	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 17:26	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 17:26	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 17:26	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 17:26	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Styrene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Tetrachloroethene	ND		0.500	1	04/20/2018 17:26	WG1100931
Toluene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 17:26	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 17:26	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 17:26	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 17:26	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 17:26	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 17:26	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 17:26	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 17:26	WG1100931
(S) Toluene-d8	*102*		*80.0-120*		*04/20/2018 17:26*	WG1100931
(S) Dibromofluoromethane	*98.2*		*76.0-123*		*04/20/2018 17:26*	WG1100931
(S) 4-Bromofluorobenzene	*105*		*80.0-120*		*04/20/2018 17:26*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 17:46	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 17:46	WG1100931
Benzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Bromoform	ND		0.500	1	04/20/2018 17:46	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 17:46	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 17:46	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 17:46	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 17:46	WG1100931
Chloroform	ND		0.500	1	04/20/2018 17:46	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 17:46	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 17:46	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 17:46	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 17:46	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 17:46	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:46	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 17:46	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:46	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 17:46	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 17:46	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 17:46	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 17:46	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 17:46	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 17:46	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 17:46	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 17:46	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 17:46	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 17:46	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 17:46	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 17:46	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 17:46	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 17:46	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Styrene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Tetrachloroethene	ND		0.500	1	04/20/2018 17:46	WG1100931
Toluene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 17:46	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 17:46	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 17:46	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 17:46	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 17:46	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 17:46	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 17:46	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 17:46	WG1100931
(S) Toluene-d8	*103*		*80.0-120*		*04/20/2018 17:46*	WG1100931
(S) Dibromofluoromethane	*99.3*		*76.0-123*		*04/20/2018 17:46*	WG1100931
(S) 4-Bromofluorobenzene	*104*		*80.0-120*		*04/20/2018 17:46*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
Acetone	ND		25.0	1	04/20/2018 18:05	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 18:05	WG1100931
Benzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Bromoform	ND		0.500	1	04/20/2018 18:05	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 18:05	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 18:05	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 18:05	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 18:05	WG1100931
Chloroform	ND		0.500	1	04/20/2018 18:05	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 18:05	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 18:05	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 18:05	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 18:05	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 18:05	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 18:05	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 18:05	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 18:05	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 18:05	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 18:05	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 18:05	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 18:05	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 18:05	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 18:05	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 18:05	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 18:05	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 18:05	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 18:05	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 18:05	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 18:05	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 18:05	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 18:05	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Styrene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Tetrachloroethene	0.716		0.500	1	04/20/2018 18:05	WG1100931
Toluene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 18:05	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 18:05	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 18:05	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 18:05	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 18:05	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 18:05	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 18:05	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 18:05	WG1100931
(S) Toluene-d8	*104*		*80.0-120*		*04/20/2018 18:05*	WG1100931
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*04/20/2018 18:05*	WG1100931
(S) 4-Bromofluorobenzene	*106*		*80.0-120*		*04/20/2018 18:05*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/20/2018 18:25	WG1100931
Acrylonitrile	ND		5.00	1	04/20/2018 18:25	WG1100931
Benzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Bromobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Bromodichloromethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Bromochloromethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Bromoform	ND		0.500	1	04/20/2018 18:25	WG1100931
Bromomethane	ND		2.50	1	04/20/2018 18:25	WG1100931
n-Butylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
sec-Butylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
tert-Butylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Carbon disulfide	ND		0.500	1	04/20/2018 18:25	WG1100931
Carbon tetrachloride	ND		0.500	1	04/20/2018 18:25	WG1100931
Chlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Chlorodibromomethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Chloroethane	ND		2.50	1	04/20/2018 18:25	WG1100931
Chloroform	ND		0.500	1	04/20/2018 18:25	WG1100931
Chloromethane	ND		1.25	1	04/20/2018 18:25	WG1100931
2-Chlorotoluene	ND		0.500	1	04/20/2018 18:25	WG1100931
4-Chlorotoluene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/20/2018 18:25	WG1100931
1,2-Dibromoethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Dibromomethane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2-Dichlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,3-Dichlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,4-Dichlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Dichlorodifluoromethane	ND		2.50	1	04/20/2018 18:25	WG1100931
1,1-Dichloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2-Dichloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1-Dichloroethene	ND		0.500	1	04/20/2018 18:25	WG1100931
cis-1,2-Dichloroethene	ND		0.500	1	04/20/2018 18:25	WG1100931
trans-1,2-Dichloroethene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2-Dichloropropane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1-Dichloropropene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,3-Dichloropropane	ND		1.00	1	04/20/2018 18:25	WG1100931
cis-1,3-Dichloropropene	ND		0.500	1	04/20/2018 18:25	WG1100931
trans-1,3-Dichloropropene	ND		0.500	1	04/20/2018 18:25	WG1100931
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/20/2018 18:25	WG1100931
2,2-Dichloropropane	ND		0.500	1	04/20/2018 18:25	WG1100931
Di-isopropyl ether	ND		0.500	1	04/20/2018 18:25	WG1100931
Ethylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Hexachloro-1,3-butadiene	ND		1.00	1	04/20/2018 18:25	WG1100931
2-Hexanone	ND		5.00	1	04/20/2018 18:25	WG1100931
n-Hexane	ND		5.00	1	04/20/2018 18:25	WG1100931
Iodomethane	ND		10.0	1	04/20/2018 18:25	WG1100931
Isopropylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
p-Isopropyltoluene	ND		0.500	1	04/20/2018 18:25	WG1100931
2-Butanone (MEK)	ND		5.00	1	04/20/2018 18:25	WG1100931
Methylene Chloride	ND		2.50	1	04/20/2018 18:25	WG1100931
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/20/2018 18:25	WG1100931
Methyl tert-butyl ether	ND		0.500	1	04/20/2018 18:25	WG1100931
Naphthalene	ND		2.50	1	04/20/2018 18:25	WG1100931
n-Propylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Styrene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Tetrachloroethene	ND		0.500	1	04/20/2018 18:25	WG1100931
Toluene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2,3-Trichlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2,4-Trichlorobenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1,1-Trichloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
1,1,2-Trichloroethane	ND		0.500	1	04/20/2018 18:25	WG1100931
Trichloroethene	ND		0.500	1	04/20/2018 18:25	WG1100931
Trichlorofluoromethane	ND		2.50	1	04/20/2018 18:25	WG1100931
1,2,3-Trichloropropane	ND		2.50	1	04/20/2018 18:25	WG1100931
1,2,4-Trimethylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,2,3-Trimethylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
1,3,5-Trimethylbenzene	ND		0.500	1	04/20/2018 18:25	WG1100931
Vinyl acetate	ND		5.00	1	04/20/2018 18:25	WG1100931
Vinyl chloride	ND		0.500	1	04/20/2018 18:25	WG1100931
Xylenes, Total	ND		1.50	1	04/20/2018 18:25	WG1100931
(S) Toluene-d8	*102*		*80.0-120*		*04/20/2018 18:25*	WG1100931
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*04/20/2018 18:25*	WG1100931
(S) 4-Bromofluorobenzene	*108*		*80.0-120*		*04/20/2018 18:25*	WG1100931

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/21/2018 14:49	WG1101352
Acrylonitrile	ND	J0	5.00	1	04/21/2018 14:49	WG1101352
Benzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromodichloromethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromochloromethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromoform	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromomethane	ND		2.50	1	04/21/2018 14:49	WG1101352
n-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
sec-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
tert-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Carbon disulfide	ND	J0	0.500	1	04/21/2018 14:49	WG1101352
Carbon tetrachloride	ND		0.500	1	04/21/2018 14:49	WG1101352
Chlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Chlorodibromomethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Chloroethane	ND		2.50	1	04/21/2018 14:49	WG1101352
Chloroform	ND		0.500	1	04/21/2018 14:49	WG1101352
Chloromethane	ND		1.25	1	04/21/2018 14:49	WG1101352
2-Chlorotoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
4-Chlorotoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2-Dibromoethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Dibromomethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,1-Dichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichloropropane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3-Dichloropropane	ND		1.00	1	04/21/2018 14:49	WG1101352
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 14:49	WG1101352
2,2-Dichloropropane	ND	J0 J3	0.500	1	04/21/2018 14:49	WG1101352
Di-isopropyl ether	ND		0.500	1	04/21/2018 14:49	WG1101352
Ethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 14:49	WG1101352
2-Hexanone	ND		5.00	1	04/21/2018 14:49	WG1101352
n-Hexane	ND		5.00	1	04/21/2018 14:49	WG1101352
Iodomethane	ND		10.0	1	04/21/2018 14:49	WG1101352
Isopropylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
p-Isopropyltoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
2-Butanone (MEK)	ND		5.00	1	04/21/2018 14:49	WG1101352
Methylene Chloride	ND		2.50	1	04/21/2018 14:49	WG1101352
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 14:49	WG1101352
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 14:49	WG1101352
Naphthalene	ND		2.50	1	04/21/2018 14:49	WG1101352
n-Propylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Styrene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Tetrachloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
Toluene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 14:49	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 14:49	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 14:49	WG1101352
(S) Toluene-d8	*102*		*80.0-120*		*04/21/2018 14:49*	WG1101352
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/21/2018 14:49*	WG1101352
(S) 4-Bromofluorobenzene	*92.8*		*80.0-120*		*04/21/2018 14:49*	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/21/2018 15:07	WG1101352
Acrylonitrile	ND	J0	5.00	1	04/21/2018 15:07	WG1101352
Benzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Bromobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Bromodichloromethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Bromochloromethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Bromoform	ND		0.500	1	04/21/2018 15:07	WG1101352
Bromomethane	ND		2.50	1	04/21/2018 15:07	WG1101352
n-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
sec-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
tert-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Carbon disulfide	ND	J0	0.500	1	04/21/2018 15:07	WG1101352
Carbon tetrachloride	ND		0.500	1	04/21/2018 15:07	WG1101352
Chlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Chlorodibromomethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Chloroethane	ND		2.50	1	04/21/2018 15:07	WG1101352
Chloroform	ND		0.500	1	04/21/2018 15:07	WG1101352
Chloromethane	ND		1.25	1	04/21/2018 15:07	WG1101352
2-Chlorotoluene	ND		0.500	1	04/21/2018 15:07	WG1101352
4-Chlorotoluene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,2-Dibromoethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Dibromomethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,1-Dichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2-Dichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2-Dichloropropane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,3-Dichloropropane	ND		1.00	1	04/21/2018 15:07	WG1101352
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 15:07	WG1101352
2,2-Dichloropropane	ND	J0 J3	0.500	1	04/21/2018 15:07	WG1101352
Di-isopropyl ether	ND		0.500	1	04/21/2018 15:07	WG1101352
Ethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 15:07	WG1101352
2-Hexanone	ND		5.00	1	04/21/2018 15:07	WG1101352
n-Hexane	ND		5.00	1	04/21/2018 15:07	WG1101352
Iodomethane	ND		10.0	1	04/21/2018 15:07	WG1101352
Isopropylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
p-Isopropyltoluene	ND		0.500	1	04/21/2018 15:07	WG1101352
2-Butanone (MEK)	ND		5.00	1	04/21/2018 15:07	WG1101352
Methylene Chloride	ND		2.50	1	04/21/2018 15:07	WG1101352
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 15:07	WG1101352
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 15:07	WG1101352
Naphthalene	ND		2.50	1	04/21/2018 15:07	WG1101352
n-Propylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Styrene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Tetrachloroethene	1.02		0.500	1	04/21/2018 15:07	WG1101352
Toluene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 15:07	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 15:07	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 15:07	WG1101352
(S) Toluene-d8	*102*		*80.0-120*		*04/21/2018 15:07*	WG1101352
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/21/2018 15:07*	WG1101352
(S) 4-Bromofluorobenzene	*88.5*		*80.0-120*		*04/21/2018 15:07*	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/21/2018 13:34	WG1101352
Acrylonitrile	ND	J0	5.00	1	04/21/2018 13:34	WG1101352
Benzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromodichloromethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromochloromethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromoform	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromomethane	ND		2.50	1	04/21/2018 13:34	WG1101352
n-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
sec-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
tert-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Carbon disulfide	ND	J0	0.500	1	04/21/2018 13:34	WG1101352
Carbon tetrachloride	ND		0.500	1	04/21/2018 13:34	WG1101352
Chlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Chlorodibromomethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Chloroethane	ND		2.50	1	04/21/2018 13:34	WG1101352
Chloroform	ND		0.500	1	04/21/2018 13:34	WG1101352
Chloromethane	ND		1.25	1	04/21/2018 13:34	WG1101352
2-Chlorotoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
4-Chlorotoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2-Dibromoethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Dibromomethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,1-Dichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichloropropane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3-Dichloropropane	ND		1.00	1	04/21/2018 13:34	WG1101352
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 13:34	WG1101352
2,2-Dichloropropane	ND	J0 J3	0.500	1	04/21/2018 13:34	WG1101352
Di-isopropyl ether	ND		0.500	1	04/21/2018 13:34	WG1101352
Ethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 13:34	WG1101352
2-Hexanone	ND		5.00	1	04/21/2018 13:34	WG1101352
n-Hexane	ND		5.00	1	04/21/2018 13:34	WG1101352
Iodomethane	ND		10.0	1	04/21/2018 13:34	WG1101352
Isopropylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
p-Isopropyltoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
2-Butanone (MEK)	ND		5.00	1	04/21/2018 13:34	WG1101352
Methylene Chloride	ND		2.50	1	04/21/2018 13:34	WG1101352
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 13:34	WG1101352
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 13:34	WG1101352
Naphthalene	ND		2.50	1	04/21/2018 13:34	WG1101352
n-Propylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Styrene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Tetrachloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
Toluene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 13:34	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 13:34	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 13:34	WG1101352
(S) Toluene-d8	*103*		*80.0-120*		*04/21/2018 13:34*	WG1101352
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/21/2018 13:34*	WG1101352
(S) 4-Bromofluorobenzene	*92.3*		*80.0-120*		*04/21/2018 13:34*	WG1101352

Method Blank (MB)

(MB) R3303992-3 04/20/18 10:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3303992-3 04/20/18 10:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*101*			*80.0-120*
(S) Dibromofluoromethane	*99.4*			*76.0-123*
(S) 4-Bromofluorobenzene	*108*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3303992-1 04/20/18 09:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	191	153	10.0-160	
Acrylonitrile	125	125	99.8	60.0-142	
Benzene	25.0	21.8	87.0	69.0-123	
Bromobenzene	25.0	23.6	94.5	79.0-120	
Bromodichloromethane	25.0	24.5	97.8	76.0-120	
Bromochloromethane	25.0	24.9	99.5	76.0-122	
Bromoform	25.0	28.8	115	67.0-132	
Bromomethane	25.0	21.4	85.7	18.0-160	
n-Butylbenzene	25.0	26.0	104	72.0-126	
sec-Butylbenzene	25.0	25.0	100	74.0-121	
tert-Butylbenzene	25.0	25.2	101	75.0-122	
Carbon disulfide	25.0	21.8	87.3	55.0-127	
Carbon tetrachloride	25.0	25.9	103	63.0-122	
Chlorobenzene	25.0	23.8	95.3	79.0-121	
Chlorodibromomethane	25.0	26.2	105	75.0-125	
Chloroethane	25.0	21.3	85.3	47.0-152	
Chloroform	25.0	23.6	94.5	72.0-121	
Chloromethane	25.0	19.1	76.3	48.0-139	
2-Chlorotoluene	25.0	23.8	95.3	74.0-122	
4-Chlorotoluene	25.0	24.6	98.5	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	25.2	101	64.0-127	
1,2-Dibromoethane	25.0	24.5	97.9	77.0-123	
Dibromomethane	25.0	24.4	97.7	78.0-120	
1,2-Dichlorobenzene	25.0	23.6	94.6	80.0-120	
1,3-Dichlorobenzene	25.0	24.2	96.6	72.0-123	
1,4-Dichlorobenzene	25.0	23.4	93.7	77.0-120	
Dichlorodifluoromethane	25.0	22.8	91.2	49.0-155	
1,1-Dichloroethane	25.0	23.6	94.3	70.0-126	
1,2-Dichloroethane	25.0	25.9	104	67.0-126	
1,1-Dichloroethene	25.0	22.5	89.9	64.0-129	
cis-1,2-Dichloroethene	25.0	22.3	89.1	73.0-120	
trans-1,2-Dichloroethene	25.0	23.4	93.5	71.0-121	
1,2-Dichloropropane	25.0	23.4	93.4	75.0-125	
1,1-Dichloropropene	25.0	24.0	96.0	71.0-129	
1,3-Dichloropropane	25.0	23.5	93.9	80.0-121	
cis-1,3-Dichloropropene	25.0	25.3	101	79.0-123	
trans-1,3-Dichloropropene	25.0	25.2	101	74.0-127	
trans-1,4-Dichloro-2-butene	25.0	30.1	120	55.0-134	
2,2-Dichloropropane	25.0	27.5	110	60.0-125	
Di-isopropyl ether	25.0	24.6	98.6	59.0-133	

Laboratory Control Sample (LCS)

(LCS) R3303992-1 04/20/18 09:30

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	25.0	24.5	98.1	77.0-120	
Hexachloro-1,3-butadiene	25.0	26.7	107	64.0-131	
2-Hexanone	125	132	106	58.0-147	
n-Hexane	25.0	24.2	96.7	56.0-124	
Iodomethane	125	116	92.9	57.0-140	
Isopropylbenzene	25.0	24.9	99.5	75.0-120	
p-Isopropyltoluene	25.0	25.9	104	74.0-126	
2-Butanone (MEK)	125	170	136	37.0-158	
Methylene Chloride	25.0	23.1	92.5	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	123	98.6	59.0-143	
Methyl tert-butyl ether	25.0	25.9	104	64.0-123	
Naphthalene	25.0	23.0	92.0	62.0-128	
n-Propylbenzene	25.0	24.3	97.1	79.0-120	
Styrene	25.0	25.2	101	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	25.4	102	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	23.8	95.2	71.0-122	
1,1,2-Trichlorotrifluoroethane	25.0	23.1	92.5	61.0-136	
Tetrachloroethene	25.0	25.4	102	70.0-127	
Toluene	25.0	23.4	93.7	77.0-120	
1,2,3-Trichlorobenzene	25.0	22.1	88.4	61.0-133	
1,2,4-Trichlorobenzene	25.0	23.4	93.5	69.0-129	
1,1,1-Trichloroethane	25.0	25.3	101	68.0-122	
1,1,2-Trichloroethane	25.0	23.9	95.8	78.0-120	
Trichloroethene	25.0	24.5	98.1	78.0-120	
Trichlorofluoromethane	25.0	22.5	90.0	56.0-137	
1,2,3-Trichloropropane	25.0	25.2	101	72.0-124	
1,2,4-Trimethylbenzene	25.0	25.4	102	75.0-120	
1,2,3-Trimethylbenzene	25.0	25.1	100	75.0-120	
1,3,5-Trimethylbenzene	25.0	24.6	98.3	75.0-120	
Vinyl acetate	125	125	99.8	46.0-160	
Vinyl chloride	25.0	22.2	88.6	64.0-133	
Xylenes, Total	75.0	72.0	96.0	77.0-120	
(S) Toluene-d8			*95.9*	*80.0-120*	
(S) Dibromofluoromethane			*100*	*76.0-123*	
(S) 4-Bromofluorobenzene			*103*	*80.0-120*	

Method Blank (MB)

(MB) R3303975-3 04/21/18 11:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromochloromethane	U		0.145	0.500
Bromodichloromethane	U		0.0800	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
2-Hexanone	U		0.757	5.00

Method Blank (MB)

(MB) R3303975-3 04/21/18 11:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
n-Hexane	U		0.305	5.00
Di-isopropyl ether	U		0.0924	0.500
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Vinyl acetate	U		0.645	5.00
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,2,4-Trimethylbenzene	U		0.123	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*101*			*76.0-123*
(S) 4-Bromofluorobenzene	*96.3*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303975-1 04/21/18 10:21 • (LCSD) R3303975-2 04/21/18 10:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromochloromethane	25.0	21.9	23.0	87.4	91.9	76.0-122			4.95	20
Acetone	125	121	117	96.6	93.4	10.0-160			3.44	23
Acrylonitrile	125	99.5	112	79.6	89.7	60.0-142			12.0	20
trans-1,4-Dichloro-2-butene	25.0	22.8	22.4	91.3	89.7	55.0-134			1.79	20
Benzene	25.0	21.4	21.7	85.4	86.6	69.0-123			1.42	20
Bromobenzene	25.0	21.0	20.6	83.9	82.5	79.0-120			1.70	20
Bromodichloromethane	25.0	22.9	22.9	91.5	91.7	76.0-120			0.242	20
2-Hexanone	125	123	119	98.6	95.4	58.0-147			3.28	20
Bromoform	25.0	22.5	22.3	90.1	89.3	67.0-132			0.960	20
Bromomethane	25.0	21.0	22.5	84.1	89.9	18.0-160			6.57	20
n-Hexane	25.0	20.8	21.3	83.2	85.2	56.0-124			2.45	20
Iodomethane	125	104	107	82.9	85.7	57.0-140			3.37	20
n-Butylbenzene	25.0	21.9	22.0	87.7	88.2	72.0-126			0.480	20
sec-Butylbenzene	25.0	21.3	21.6	85.3	86.4	74.0-121			1.24	20
tert-Butylbenzene	25.0	21.1	21.1	84.4	84.2	75.0-122			0.249	20
Carbon disulfide	25.0	19.3	20.0	77.3	79.8	55.0-127			3.16	20
Carbon tetrachloride	25.0	20.4	21.0	81.5	84.1	63.0-122			3.13	20
Chlorobenzene	25.0	22.6	22.9	90.3	91.5	79.0-121			1.34	20
Chlorodibromomethane	25.0	23.1	23.2	92.2	93.0	75.0-125			0.810	20
Chloroethane	25.0	20.9	22.2	83.7	88.8	47.0-152			5.89	20
Chloroform	25.0	21.7	22.4	86.9	89.5	72.0-121			2.92	20
Chloromethane	25.0	21.1	21.7	84.5	86.8	48.0-139			2.66	20
2-Chlorotoluene	25.0	20.9	21.2	83.5	84.6	74.0-122			1.31	20
4-Chlorotoluene	25.0	21.5	21.2	85.9	85.0	79.0-120			1.10	20
1,2-Dibromo-3-Chloropropane	25.0	23.6	23.4	94.6	93.6	64.0-127			1.07	20
1,2-Dibromoethane	25.0	23.1	23.4	92.5	93.4	77.0-123			1.00	20
Dibromomethane	25.0	23.4	23.4	93.8	93.4	78.0-120			0.371	20
1,2-Dichlorobenzene	25.0	22.2	22.8	88.7	91.3	80.0-120			2.82	20
1,3-Dichlorobenzene	25.0	21.9	22.1	87.7	88.4	72.0-123			0.899	20
1,4-Dichlorobenzene	25.0	22.4	22.5	89.5	89.8	77.0-120			0.407	20
Dichlorodifluoromethane	25.0	21.5	22.3	85.8	89.2	49.0-155			3.81	20
1,1-Dichloroethane	25.0	21.9	22.3	87.5	89.2	70.0-126			1.90	20
1,2-Dichloroethane	25.0	22.9	23.4	91.7	93.4	67.0-126			1.87	20
1,1-Dichloroethene	25.0	20.6	21.4	82.6	85.7	64.0-129			3.72	20
Vinyl acetate	125	120	124	95.8	99.3	46.0-160			3.51	20
cis-1,2-Dichloroethene	25.0	21.0	21.9	84.0	87.7	73.0-120			4.28	20
trans-1,2-Dichloroethene	25.0	20.5	21.2	82.2	84.9	71.0-121			3.19	20
1,2-Dichloropropane	25.0	22.8	22.8	91.1	91.2	75.0-125			0.0919	20
1,1-Dichloropropene	25.0	21.8	22.0	87.0	88.1	71.0-129			1.21	20
1,3-Dichloropropane	25.0	23.4	23.3	93.5	93.3	80.0-121			0.166	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3303975-1 04/21/18 10:21 • (LCSD) R3303975-2 04/21/18 10:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,3-Dichloropropene	25.0	23.2	23.4	92.7	93.5	79.0-123			0.909	20
trans-1,3-Dichloropropene	25.0	23.4	23.6	93.7	94.4	74.0-127			0.687	20
2,2-Dichloropropane	25.0	17.8	22.3	71.0	89.1	60.0-125		J3	22.6	20
Di-isopropyl ether	25.0	22.2	22.7	88.7	91.0	59.0-133			2.50	20
Ethylbenzene	25.0	22.1	22.5	88.3	90.0	77.0-120			1.89	20
Hexachloro-1,3-butadiene	25.0	20.3	21.0	81.3	84.1	64.0-131			3.32	20
Isopropylbenzene	25.0	20.8	21.1	83.0	84.6	75.0-120			1.82	20
p-Isopropyltoluene	25.0	21.4	21.8	85.5	87.1	74.0-126			1.85	20
2-Butanone (MEK)	125	120	115	95.7	92.4	37.0-158			3.54	20
Methylene Chloride	25.0	21.4	22.0	85.6	87.9	66.0-121			2.71	20
4-Methyl-2-pentanone (MIBK)	125	120	117	96.2	93.2	59.0-143			3.08	20
Methyl tert-butyl ether	25.0	21.8	23.4	87.3	93.5	64.0-123			6.80	20
Naphthalene	25.0	21.9	24.1	87.7	96.5	62.0-128			9.48	20
n-Propylbenzene	25.0	21.0	20.9	84.0	83.7	79.0-120			0.339	20
Styrene	25.0	22.0	21.4	87.9	85.6	78.0-124			2.74	20
1,1,1,2-Tetrachloroethane	25.0	22.2	22.9	88.8	91.7	75.0-122			3.23	20
1,1,2,2-Tetrachloroethane	25.0	22.4	22.2	89.5	89.0	71.0-122			0.596	20
Tetrachloroethene	25.0	21.5	21.6	85.9	86.3	70.0-127			0.563	20
Toluene	25.0	21.3	21.5	85.2	86.2	77.0-120			1.09	20
1,1,2-Trichlorotrifluoroethane	25.0	21.9	22.4	87.7	89.6	61.0-136			2.19	20
1,2,3-Trichlorobenzene	25.0	20.2	22.5	80.7	90.1	61.0-133			10.9	20
1,2,4-Trichlorobenzene	25.0	20.9	22.4	83.8	89.7	69.0-129			6.88	20
1,1,1-Trichloroethane	25.0	21.6	22.1	86.5	88.6	68.0-122			2.40	20
1,1,2-Trichloroethane	25.0	22.7	22.9	90.6	91.6	78.0-120			1.03	20
Trichloroethene	25.0	21.9	21.8	87.6	87.1	78.0-120			0.574	20
Trichlorofluoromethane	25.0	22.4	22.8	89.7	91.2	56.0-137			1.74	20
1,2,3-Trichloropropane	25.0	22.6	22.0	90.6	88.0	72.0-124			2.90	20
1,2,3-Trimethylbenzene	25.0	21.8	22.4	87.3	89.7	75.0-120			2.73	20
1,2,4-Trimethylbenzene	25.0	20.9	21.6	83.4	86.3	75.0-120			3.31	20
1,3,5-Trimethylbenzene	25.0	20.8	21.2	83.2	84.8	75.0-120			1.87	20
Vinyl chloride	25.0	21.7	22.6	86.8	90.4	64.0-133			4.04	20
Xylenes, Total	75.0	65.6	66.9	87.5	89.2	77.0-120			1.96	20
(S) Toluene-d8				*101*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*98.8*	*99.9*	*76.0-123*				
(S) 4-Bromofluorobenzene				*95.6*	*95.1*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J3	The associated batch QC was outside the established quality control range for precision.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

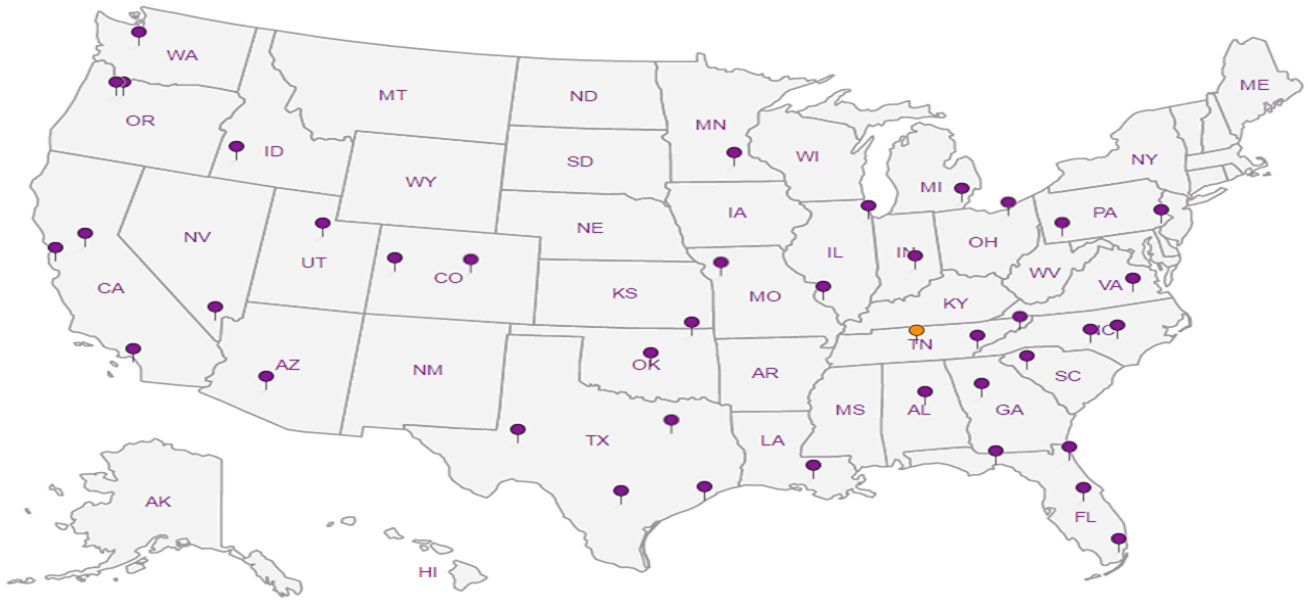
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Burien, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Jeff Dobbins

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260LLC VOCs 40mlAmb-HCl									Remarks	Sample # (lab only)
DC-15-041818	Grab	GW		4/18/18	0920	3	X										-01
DC-8-041818		GW		4/18/18	1010	3	X										-02
DC-4-041818		GW		4/18/18	1115	3	X										-03
MW-13-041818		GW		4/18/18	1227	3	X										-04
KMW-2-041818		GW		4/18/18	1324	3	X										-05
MW-10-041818		GW		4/18/18	1401	3	X										-06
MW-9-041818		GW		4/18/18	1453	3	X										-07
MW-12-041818		GW		4/18/18	1609	3	X										-08
KMW-9-041818		GW		4/18/18	1700	3	X										-09
TRIP BLANK		GW		—	—	1	X										-10

Chain of Custody Page 1 of 1

ESC LABORATORIES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 987257

Table F141

Acctnum: PESENVSWA
Template: T131700
Prelogin: P647347
TSR: 110 - Brian Ford
PB: 4-3-18 AE
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4269 9217 6326

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.6 °C Bottles Received: 27
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/19/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

MEMORANDUM

TO: Project File **DATE:** June 4, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: 1358.001.01.003

TASK: April 18, 2018 Groundwater Samples

LAB: ECS Lab Sciences Request No. L987257

Nine (9) groundwater samples and a trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on April 18, 2018. Samples associated with SDG L987257 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by ESC Lab Sciences (ESC) of Mt. Juliet, Tennessee.

The monitoring event occurred between April 18 and 20, 2018. SDGs associated with this sampling period include three SDGs (L987257, L987914, and L987916). The quality assurance review of the laboratory data for SDG L987257 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 4.6 degrees Centigrade (°C). The

cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition with the following discussions:

No data qualifications were warranted.

- SDGs L987257: Review of associated chain of custody (COC) shows that the relinquished portion was not signed however daily field forms show a record of sample delivery to FedEx for shipment to ESC. Internal corrective action has been implemented by PES to ensure that all COCs are signed and dated when relinquishing possession/custody of the samples.

No data were qualified based upon the sample collection and preservation information.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by ESC for acrylonitrile, carbon disulfide, and 2,2-dichloropropane associated with analytical batch WG1101352 (analyzed on April 21, 2018). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated acrylonitrile, carbon disulfide, and 2,2-dichloropropane results with laboratory qualified (J0) results are estimated and qualified (J/UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

A trip blank was submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at concentrations at or above the RDLs.

Equipment Blank Results

Two equipment blank samples (EQ-1-042018 and EQ-2-042018) were collected and analyzed and are reported in SDG L987914.

- Equipment blank sample EQ-1-042018 is associated with monitoring wells DC-15, DC-8, DC-4, MW-13, KMW-2, MW10, MW-9, MW-12, KMW-9, DC-12, DC-13, DC-3,

KMW-7, KMW-8, DC-14, DC-20, DC-11, MW-4, MW-7, and KMW-3 (SDGs L987257, L987914, and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

- Equipment blank sample EQ-2-042018 is associated with monitoring wells DC-10A, DC-17, DC-18, MW-2, MW-3, MW-11, MW-14, MW-15, MW-16, and DC-7 (SDGs L987914 and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

Field Duplicate Analyses

Field duplicate samples were not collected. Refer to field duplicate results reported in SDG L987916.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's for analytical batch (WG1100931) are within the laboratory control limits. Refer to the field duplicate data in SDG L987916 for precision information. Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) % Rs and RPDs for analytical batch (WG1101352) are within laboratory control limit criteria with one exception:

- LCS/LCSD RPD for 2,2-dichloropropane is slightly above laboratory acceptance criteria and laboratory qualified (J3). No action was taken since both recoveries are within criteria.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/21/2018 14:49	WG1101352
Acrylonitrile	ND	UJ J0	5.00	1	04/21/2018 14:49	WG1101352
Benzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromodichloromethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromochloromethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromoform	ND		0.500	1	04/21/2018 14:49	WG1101352
Bromomethane	ND		2.50	1	04/21/2018 14:49	WG1101352
n-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
sec-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
tert-Butylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Carbon disulfide	ND	UJ J0	0.500	1	04/21/2018 14:49	WG1101352
Carbon tetrachloride	ND		0.500	1	04/21/2018 14:49	WG1101352
Chlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Chlorodibromomethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Chloroethane	ND		2.50	1	04/21/2018 14:49	WG1101352
Chloroform	ND		0.500	1	04/21/2018 14:49	WG1101352
Chloromethane	ND		1.25	1	04/21/2018 14:49	WG1101352
2-Chlorotoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
4-Chlorotoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2-Dibromoethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Dibromomethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,1-Dichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2-Dichloropropane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3-Dichloropropane	ND		1.00	1	04/21/2018 14:49	WG1101352
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 14:49	WG1101352
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 14:49	WG1101352
2,2-Dichloropropane	ND	UJ J0 J3	0.500	1	04/21/2018 14:49	WG1101352
Di-isopropyl ether	ND		0.500	1	04/21/2018 14:49	WG1101352
Ethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 14:49	WG1101352
2-Hexanone	ND		5.00	1	04/21/2018 14:49	WG1101352
n-Hexane	ND		5.00	1	04/21/2018 14:49	WG1101352
Iodomethane	ND		10.0	1	04/21/2018 14:49	WG1101352
Isopropylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
p-Isopropyltoluene	ND		0.500	1	04/21/2018 14:49	WG1101352
2-Butanone (MEK)	ND		5.00	1	04/21/2018 14:49	WG1101352
Methylene Chloride	ND		2.50	1	04/21/2018 14:49	WG1101352
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 14:49	WG1101352
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 14:49	WG1101352
Naphthalene	ND		2.50	1	04/21/2018 14:49	WG1101352 JC 5/29/18
n-Propylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Styrene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Tetrachloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
Toluene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 14:49	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 14:49	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 14:49	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 14:49	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 14:49	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 14:49	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 14:49	WG1101352
(S) Toluene-d8	*102*		*80.0-120*		*04/21/2018 14:49*	WG1101352
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/21/2018 14:49*	WG1101352
(S) 4-Bromofluorobenzene	*92.8*		*80.0-120*		*04/21/2018 14:49*	WG1101352

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	04/21/2018 15:07	WG1101352	
Acrylonitrile	ND	UJ J0	5.00	1	04/21/2018 15:07	WG1101352	
Benzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Bromobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Bromodichloromethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
Bromochloromethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
Bromoform	ND		0.500	1	04/21/2018 15:07	WG1101352	
Bromomethane	ND		2.50	1	04/21/2018 15:07	WG1101352	
n-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
sec-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
tert-Butylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Carbon disulfide	ND	UJ J0	0.500	1	04/21/2018 15:07	WG1101352	
Carbon tetrachloride	ND		0.500	1	04/21/2018 15:07	WG1101352	
Chlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Chlorodibromomethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
Chloroethane	ND		2.50	1	04/21/2018 15:07	WG1101352	
Chloroform	ND		0.500	1	04/21/2018 15:07	WG1101352	
Chloromethane	ND		1.25	1	04/21/2018 15:07	WG1101352	
2-Chlorotoluene	ND		0.500	1	04/21/2018 15:07	WG1101352	
4-Chlorotoluene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 15:07	WG1101352	
1,2-Dibromoethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
Dibromomethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 15:07	WG1101352	
1,1-Dichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,2-Dichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,1-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352	
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352	
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,2-Dichloropropane	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,1-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,3-Dichloropropane	ND		1.00	1	04/21/2018 15:07	WG1101352	JC 5/29/18
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352	
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 15:07	WG1101352	
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 15:07	WG1101352	
2,2-Dichloropropane	ND	UJ J0 J3	0.500	1	04/21/2018 15:07	WG1101352	
Di-isopropyl ether	ND		0.500	1	04/21/2018 15:07	WG1101352	
Ethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 15:07	WG1101352	
2-Hexanone	ND		5.00	1	04/21/2018 15:07	WG1101352	
n-Hexane	ND		5.00	1	04/21/2018 15:07	WG1101352	
Iodomethane	ND		10.0	1	04/21/2018 15:07	WG1101352	
Isopropylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
p-Isopropyltoluene	ND		0.500	1	04/21/2018 15:07	WG1101352	
2-Butanone (MEK)	ND		5.00	1	04/21/2018 15:07	WG1101352	
Methylene Chloride	ND		2.50	1	04/21/2018 15:07	WG1101352	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 15:07	WG1101352	
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 15:07	WG1101352	
Naphthalene	ND		2.50	1	04/21/2018 15:07	WG1101352	
n-Propylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352	
Styrene	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352	
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Tetrachloroethene	1.02		0.500	1	04/21/2018 15:07	WG1101352
Toluene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 15:07	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 15:07	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 15:07	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 15:07	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 15:07	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 15:07	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 15:07	WG1101352
(S) Toluene-d8	*102*		*80.0-120*		*04/21/2018 15:07*	WG1101352
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/21/2018 15:07*	WG1101352
(S) 4-Bromofluorobenzene	*88.5*		*80.0-120*		*04/21/2018 15:07*	WG1101352

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/21/2018 13:34	WG1101352
Acrylonitrile	ND	UJ J0	5.00	1	04/21/2018 13:34	WG1101352
Benzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromodichloromethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromochloromethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromoform	ND		0.500	1	04/21/2018 13:34	WG1101352
Bromomethane	ND		2.50	1	04/21/2018 13:34	WG1101352
n-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
sec-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
tert-Butylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Carbon disulfide	ND	UJ J0	0.500	1	04/21/2018 13:34	WG1101352
Carbon tetrachloride	ND		0.500	1	04/21/2018 13:34	WG1101352
Chlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Chlorodibromomethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Chloroethane	ND		2.50	1	04/21/2018 13:34	WG1101352
Chloroform	ND		0.500	1	04/21/2018 13:34	WG1101352
Chloromethane	ND		1.25	1	04/21/2018 13:34	WG1101352
2-Chlorotoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
4-Chlorotoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2-Dibromoethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Dibromomethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,4-Dichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Dichlorodifluoromethane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,1-Dichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
cis-1,2-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,2-Dichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2-Dichloropropane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3-Dichloropropane	ND		1.00	1	04/21/2018 13:34	WG1101352
cis-1,3-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,3-Dichloropropene	ND		0.500	1	04/21/2018 13:34	WG1101352
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/21/2018 13:34	WG1101352
2,2-Dichloropropane	ND	UJ J0 J3	0.500	1	04/21/2018 13:34	WG1101352
Di-isopropyl ether	ND		0.500	1	04/21/2018 13:34	WG1101352
Ethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Hexachloro-1,3-butadiene	ND		1.00	1	04/21/2018 13:34	WG1101352
2-Hexanone	ND		5.00	1	04/21/2018 13:34	WG1101352
n-Hexane	ND		5.00	1	04/21/2018 13:34	WG1101352
Iodomethane	ND		10.0	1	04/21/2018 13:34	WG1101352
Isopropylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
p-Isopropyltoluene	ND		0.500	1	04/21/2018 13:34	WG1101352
2-Butanone (MEK)	ND		5.00	1	04/21/2018 13:34	WG1101352
Methylene Chloride	ND		2.50	1	04/21/2018 13:34	WG1101352
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/21/2018 13:34	WG1101352
Methyl tert-butyl ether	ND		0.500	1	04/21/2018 13:34	WG1101352
Naphthalene	ND		2.50	1	04/21/2018 13:34	WG1101352
n-Propylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Styrene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Tetrachloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
Toluene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,3-Trichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,4-Trichlorobenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,1-Trichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
1,1,2-Trichloroethane	ND		0.500	1	04/21/2018 13:34	WG1101352
Trichloroethene	ND		0.500	1	04/21/2018 13:34	WG1101352
Trichlorofluoromethane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2,3-Trichloropropane	ND		2.50	1	04/21/2018 13:34	WG1101352
1,2,4-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,2,3-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
1,3,5-Trimethylbenzene	ND		0.500	1	04/21/2018 13:34	WG1101352
Vinyl acetate	ND		5.00	1	04/21/2018 13:34	WG1101352
Vinyl chloride	ND		0.500	1	04/21/2018 13:34	WG1101352
Xylenes, Total	ND		1.50	1	04/21/2018 13:34	WG1101352
(S) Toluene-d8	*103*		*80.0-120*		*04/21/2018 13:34*	WG1101352
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/21/2018 13:34*	WG1101352
(S) 4-Bromofluorobenzene	*92.3*		*80.0-120*		*04/21/2018 13:34*	WG1101352

JC 5/29/18

ANALYTICAL REPORT

April 30, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L987914
Samples Received:	04/21/2018
Project Number:	1358.001.01.003
Description:	MVSC

Report To: Karsten Springstead
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Entire Report Reviewed By:

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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DC-12-042018 L987914-01 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 12:34 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 16:00	04/24/18 16:00	JHH

DC-13-042018 L987914-02 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 13:21 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 16:22	04/24/18 16:22	JHH

DC-18-042018 L987914-03 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 12:45 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 16:43	04/24/18 16:43	JHH

DC-10A-042018 L987914-04 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 13:40 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 17:04	04/24/18 17:04	JHH

EQ-1-042018 L987914-05 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 13:42 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 17:26	04/24/18 17:26	JHH

EQ-2-042018 L987914-06 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 13:58 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 17:48	04/24/18 17:48	JHH

W-DRUM-042018 L987914-07 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 14:06 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 18:10	04/24/18 18:10	JHH

TRIPBLANK-042018 L987914-08 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 00:00 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1102311	1	04/24/18 14:55	04/24/18 14:55	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:00	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:00	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:00	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:00	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:00	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:00	WG1102311
Chloroform	ND		0.500	1	04/24/2018 16:00	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:00	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:00	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 16:00	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 16:00	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:00	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:00	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:00	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:00	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:00	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:00	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:00	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:00	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:00	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:00	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Tetrachloroethene	1.50		0.500	1	04/24/2018 16:00	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:00	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:00	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:00	WG1102311
(S) Toluene-d8	*95.7*		*80.0-120*		*04/24/2018 16:00*	WG1102311
(S) Dibromofluoromethane	*112*		*76.0-123*		*04/24/2018 16:00*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 16:00*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:22	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:22	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:22	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:22	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:22	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:22	WG1102311
Chloroform	ND		0.500	1	04/24/2018 16:22	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:22	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:22	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 16:22	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 16:22	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:22	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:22	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:22	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:22	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:22	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:22	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:22	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:22	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:22	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:22	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Tetrachloroethene	2.87		0.500	1	04/24/2018 16:22	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:22	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:22	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:22	WG1102311
(S) Toluene-d8	*93.4*		*80.0-120*		*04/24/2018 16:22*	WG1102311
(S) Dibromofluoromethane	*112*		*76.0-123*		*04/24/2018 16:22*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 16:22*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:43	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:43	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:43	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:43	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:43	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:43	WG1102311
Chloroform	3.23		0.500	1	04/24/2018 16:43	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:43	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:43	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 16:43	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 16:43	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:43	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:43	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:43	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:43	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:43	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:43	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:43	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:43	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:43	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:43	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Tetrachloroethene	3.31		0.500	1	04/24/2018 16:43	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:43	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:43	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:43	WG1102311
(S) Toluene-d8	*95.2*		*80.0-120*		*04/24/2018 16:43*	WG1102311
(S) Dibromofluoromethane	*113*		*76.0-123*		*04/24/2018 16:43*	WG1102311
(S) 4-Bromofluorobenzene	*93.6*		*80.0-120*		*04/24/2018 16:43*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:04	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:04	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:04	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:04	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:04	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:04	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:04	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:04	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:04	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 17:04	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:04	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:04	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:04	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:04	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:04	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:04	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:04	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:04	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:04	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:04	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:04	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Tetrachloroethene	4.67		0.500	1	04/24/2018 17:04	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:04	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:04	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:04	WG1102311
(S) Toluene-d8	*94.3*		*80.0-120*		*04/24/2018 17:04*	WG1102311
(S) Dibromofluoromethane	*115*		*76.0-123*		*04/24/2018 17:04*	WG1102311
(S) 4-Bromofluorobenzene	*98.5*		*80.0-120*		*04/24/2018 17:04*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:26	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:26	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:26	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:26	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:26	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:26	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:26	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:26	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:26	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 17:26	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:26	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:26	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:26	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:26	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:26	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:26	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:26	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:26	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:26	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:26	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:26	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:26	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:26	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:26	WG1102311
(S) Toluene-d8	*93.5*		*80.0-120*		*04/24/2018 17:26*	WG1102311
(S) Dibromofluoromethane	*116*		*76.0-123*		*04/24/2018 17:26*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 17:26*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:48	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:48	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:48	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:48	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:48	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:48	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:48	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:48	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:48	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 17:48	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:48	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:48	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:48	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:48	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:48	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:48	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:48	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:48	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:48	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:48	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:48	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:48	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:48	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:48	WG1102311
(S) Toluene-d8	*95.1*		*80.0-120*		*04/24/2018 17:48*	WG1102311
(S) Dibromofluoromethane	*114*		*76.0-123*		*04/24/2018 17:48*	WG1102311
(S) 4-Bromofluorobenzene	*97.1*		*80.0-120*		*04/24/2018 17:48*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 18:10	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 18:10	WG1102311
Benzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromoform	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 18:10	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 18:10	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 18:10	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 18:10	WG1102311
Chloroform	ND		0.500	1	04/24/2018 18:10	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 18:10	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 18:10	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 18:10	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 18:10	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 18:10	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 18:10	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 18:10	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 18:10	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 18:10	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 18:10	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 18:10	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 18:10	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 18:10	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 18:10	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Styrene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Tetrachloroethene	0.893		0.500	1	04/24/2018 18:10	WG1102311
Toluene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 18:10	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 18:10	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 18:10	WG1102311
(S) Toluene-d8	*97.7*		*80.0-120*		*04/24/2018 18:10*	WG1102311
(S) Dibromofluoromethane	*108*		*76.0-123*		*04/24/2018 18:10*	WG1102311
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*04/24/2018 18:10*	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 14:55	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 14:55	WG1102311
Benzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromoform	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 14:55	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 14:55	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 14:55	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 14:55	WG1102311
Chloroform	ND		0.500	1	04/24/2018 14:55	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 14:55	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 14:55	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 14:55	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 14:55	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 14:55	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 14:55	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 14:55	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 14:55	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 14:55	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 14:55	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 14:55	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 14:55	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 14:55	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 14:55	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Styrene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
Toluene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 14:55	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 14:55	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 14:55	WG1102311
(S) Toluene-d8	*95.2*		*80.0-120*		*04/24/2018 14:55*	WG1102311
(S) Dibromofluoromethane	*115*		*76.0-123*		*04/24/2018 14:55*	WG1102311
(S) 4-Bromofluorobenzene	*99.1*		*80.0-120*		*04/24/2018 14:55*	WG1102311

Method Blank (MB)

(MB) R3305745-3 04/24/18 11:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,2-Dichloroethene	U		0.0933	0.500
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3305745-3 04/24/18 11:11

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Ethylbenzene	U		0.158	0.500
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Methyl tert-butyl ether	U		0.102	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
Naphthalene	U		0.174	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Toluene	U		0.412	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*114*			*76.0-123*
(S) 4-Bromofluorobenzene	*98.3*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3305745-1 04/24/18 10:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	105	83.9	10.0-160	
Acrylonitrile	125	134	107	60.0-142	
Bromobenzene	25.0	22.5	90.0	79.0-120	
Bromodichloromethane	25.0	22.7	90.8	76.0-120	
Bromochloromethane	25.0	25.7	103	76.0-122	
Bromoform	25.0	21.4	85.7	67.0-132	
Bromomethane	25.0	31.6	126	18.0-160	
n-Butylbenzene	25.0	27.6	111	72.0-126	
sec-Butylbenzene	25.0	24.8	99.2	74.0-121	
tert-Butylbenzene	25.0	23.1	92.6	75.0-122	
Carbon disulfide	25.0	25.1	100	55.0-127	
Carbon tetrachloride	25.0	25.6	102	63.0-122	
Chlorobenzene	25.0	22.3	89.3	79.0-121	
Chlorodibromomethane	25.0	22.6	90.5	75.0-125	
Chloroethane	25.0	27.7	111	47.0-152	
Chloroform	25.0	24.3	97.4	72.0-121	
Chloromethane	25.0	28.5	114	48.0-139	
2-Chlorotoluene	25.0	24.4	97.6	74.0-122	
4-Chlorotoluene	25.0	23.5	93.9	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	22.0	88.1	64.0-127	
1,2-Dibromoethane	25.0	22.7	90.7	77.0-123	
Dibromomethane	25.0	25.3	101	78.0-120	
1,2-Dichlorobenzene	25.0	25.7	103	80.0-120	
1,3-Dichlorobenzene	25.0	23.3	93.3	72.0-123	
1,4-Dichlorobenzene	25.0	25.0	100	77.0-120	
Dichlorodifluoromethane	25.0	28.7	115	49.0-155	
1,1-Dichloroethane	25.0	27.8	111	70.0-126	
1,2-Dichloroethane	25.0	26.9	107	67.0-126	
1,1-Dichloroethene	25.0	23.7	94.9	64.0-129	
1,2-Dichloropropane	25.0	25.1	100	75.0-125	
1,1-Dichloropropene	25.0	28.6	114	71.0-129	
1,3-Dichloropropane	25.0	24.2	96.9	80.0-121	
cis-1,3-Dichloropropene	25.0	23.8	95.2	79.0-123	
trans-1,3-Dichloropropene	25.0	23.9	95.6	74.0-127	
trans-1,4-Dichloro-2-butene	25.0	11.5	46.1	55.0-134	J4
2,2-Dichloropropane	25.0	28.6	114	60.0-125	
Benzene	25.0	26.3	105	69.0-123	
Di-isopropyl ether	25.0	27.5	110	59.0-133	
Hexachloro-1,3-butadiene	25.0	21.2	85.0	64.0-131	
2-Hexanone	125	112	89.9	58.0-147	

Laboratory Control Sample (LCS)

(LCS) R3305745-1 04/24/18 10:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
n-Hexane	25.0	26.4	106	56.0-124	
Iodomethane	125	124	98.9	57.0-140	
Isopropylbenzene	25.0	24.3	97.0	75.0-120	
p-Isopropyltoluene	25.0	23.4	93.5	74.0-126	
2-Butanone (MEK)	125	130	104	37.0-158	
Methylene Chloride	25.0	24.5	98.2	66.0-121	
4-Methyl-2-pentanone (MIBK)	125	120	95.7	59.0-143	
n-Propylbenzene	25.0	24.3	97.2	79.0-120	
Styrene	25.0	21.9	87.6	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	22.1	88.6	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	21.8	87.2	71.0-122	
1,1,2-Trichlorotrifluoroethane	25.0	29.6	118	61.0-136	
Tetrachloroethene	25.0	21.9	87.6	70.0-127	
1,2,3-Trichlorobenzene	25.0	23.2	92.7	61.0-133	
1,2,4-Trichlorobenzene	25.0	23.3	93.3	69.0-129	
1,1,1-Trichloroethane	25.0	25.8	103	68.0-122	
1,1,2-Trichloroethane	25.0	21.0	84.0	78.0-120	
Trichloroethene	25.0	23.3	93.3	78.0-120	
Trichlorofluoromethane	25.0	31.4	126	56.0-137	
1,2,3-Trichloropropane	25.0	21.9	87.6	72.0-124	
1,2,4-Trimethylbenzene	25.0	23.3	93.1	75.0-120	
1,2,3-Trimethylbenzene	25.0	27.3	109	75.0-120	
1,3,5-Trimethylbenzene	25.0	23.8	95.2	75.0-120	
Vinyl acetate	125	159	127	46.0-160	
cis-1,2-Dichloroethene	25.0	23.9	95.8	73.0-120	
Vinyl chloride	25.0	29.0	116	64.0-133	
trans-1,2-Dichloroethene	25.0	25.1	101	71.0-121	
Ethylbenzene	25.0	22.6	90.2	77.0-120	
Methyl tert-butyl ether	25.0	25.7	103	64.0-123	
Naphthalene	25.0	23.8	95.2	62.0-128	
Toluene	25.0	23.1	92.2	77.0-120	
Xylenes, Total	75.0	68.8	91.7	77.0-120	
(S) Toluene-d8			*95.0*	*80.0-120*	
(S) Dibromofluoromethane			*110*	*76.0-123*	
(S) 4-Bromofluorobenzene			*95.3*	*80.0-120*	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

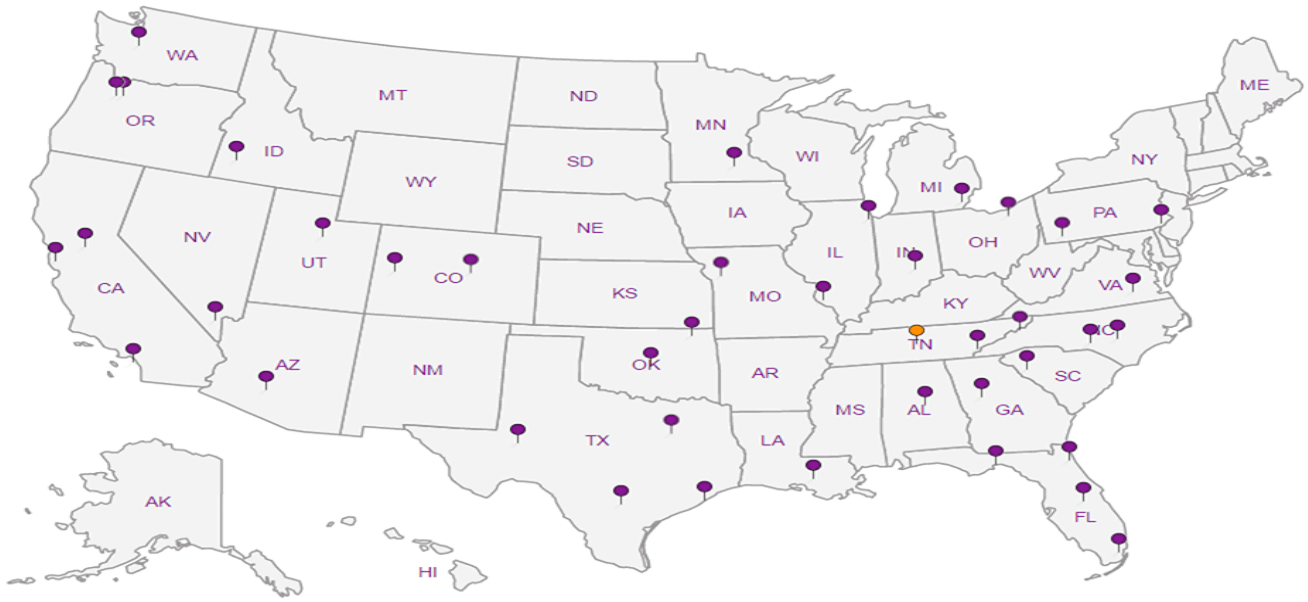
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



Chain of Custody Page 1 of 1

ESC LABS — a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 487914

Table E021

Acctnum: PESENVSWA

Template: T131700

Prelogin: P647346

TSR: 110 - Brian Ford

PB: 4/3/18 DD

Shipped Via: FedEX Ground

PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Normandy Park, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Jeff Dobbins

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260LLC VOCs 40mlAmb-HCl	Remarks	Sample # (lab only)
DC-12-042018	Grab	GW		4/20/18	1234	3	X		01
DC-13-042018		GW		4/20/18	1321	3	X		02
DC-18-042018		GW		4/20/18	1245	3	X		03
DC-10A-042018		GW		4/20/18	1340	3	X		04
EQ-1-042018		GW		4/20/18	1342	3	X		05
EQ-2-042018	↓	GW		4/20/18	1358	3	X		06
W-DRUM-042018	Comp	GW		4/20/18	1406	3	X		07
TRIPBLANK-042018		GW		4/20/18	—	1	X		08
		GW							
		GW							

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4269 9297 6360

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
				1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7 °C Bottles Received: 22
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/21/18 Time: 645

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

MEMORANDUM

TO: Project File **DATE:** June 4, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: 1358.001.01.003

TASK: April 20, 2018 Groundwater Samples

LAB: ECS Lab Sciences Request No. L987914

Four (4) groundwater, one wastewater drum, two equipment blank samples, and a trip blank sample were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on April 20, 2018. Samples associated with SDG L987914 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by ESC Lab Sciences (ESC) of Mt. Juliet, Tennessee.

The monitoring event occurred between April 18 and 20, 2018. SDGs associated with this sampling period include three SDGs (L987257, L987914, and L987916). The quality assurance review of the laboratory data for SDG L987914 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 3.7 degrees Centigrade (°C). The

cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition with the following discussions:

No data qualifications were warranted.

- SDG L987914: Review of associated chain of custody (COC) shows that the relinquished portion was not signed however daily field forms show a record of sample delivery to FedEx for shipment to ESC. Internal corrective action has been implemented by PES to ensure that all COCs are signed and dated when relinquishing possession/custody of the samples.

No data were qualified based upon the sample collection and preservation information.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by ESC for trans-1,4-dichloro-2-butene associated with analytical batch WG1102311 (analyzed on April 24, 2018). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **All associated trans-1,4-dichloro-2-butene results with laboratory qualified (J0) results are estimated and qualified (J/UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

A trip blank was submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at concentrations at or above the RDLs.

Equipment Blank Results

Two equipment blank samples (EQ-1-042018 and EQ-2-042018) were collected and analyzed.

- Equipment blank sample EQ-1-042018 is associated with monitoring wells DC-15, DC-8, DC-4, MW-13, KMW-2, MW10, MW-9, MW-12, KMW-9, DC-12, DC-13, DC-3, KMW-7, KMW-8, DC-14, DC-20, DC-11, MW-4, MW-7, and KMW-3 (SDGs L987257,

L987914, and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

- Equipment blank sample EQ-2-042018 is associated with monitoring wells DC-10A, DC-17, DC-18, MW-2, MW-3, MW-11, MW-14, MW-15, MW-16, and DC-7 (SDGs L987914 and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

Field Duplicate Analyses

Field duplicate samples were not collected. Refer to field duplicate results in SDG L987916. Refer to laboratory control sample results collected and analyzed for VOCs.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's for analytical batch (WG1102311) are within the laboratory control limits. Refer to the field duplicate data in SDG L987916 for precision information. LCS recoveries for analytical batch (WG1102311) are within laboratory control limit criteria with one exception:

- LCS recovery for trans-1,4-dichloro-2-butene is low and below laboratory acceptance criteria. **Associated sample results for trans-1,4-dichloro-2-butene are already estimated and qualified (UJ) due to CCV recoveries.**

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the

reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:00	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:00	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:00	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:00	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:00	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:00	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:00	WG1102311
Chloroform	ND		0.500	1	04/24/2018 16:00	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:00	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:00	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:00	WG1102311
trans-1,4-Dichloro-2-butene	ND	UJ J0 J4	5.00	1	04/24/2018 16:00	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 16:00	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:00	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:00	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:00	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:00	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:00	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:00	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:00	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:00	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:00	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:00	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:00	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Tetrachloroethene	1.50		0.500	1	04/24/2018 16:00	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:00	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:00	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:00	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:00	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:00	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:00	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:00	WG1102311
(S) Toluene-d8	*95.7*		*80.0-120*		*04/24/2018 16:00*	WG1102311
(S) Dibromofluoromethane	*112*		*76.0-123*		*04/24/2018 16:00*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 16:00*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:22	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:22	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:22	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:22	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:22	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:22	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:22	WG1102311
Chloroform	ND		0.500	1	04/24/2018 16:22	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:22	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:22	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:22	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 16:22	WG1102311
2,2-Dichloropropane	ND	UJ	0.500	1	04/24/2018 16:22	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:22	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:22	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:22	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:22	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:22	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:22	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:22	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:22	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:22	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:22	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:22	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Tetrachloroethene	2.87		0.500	1	04/24/2018 16:22	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:22	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:22	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:22	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:22	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:22	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:22	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:22	WG1102311
(S) Toluene-d8	*93.4*		*80.0-120*		*04/24/2018 16:22*	WG1102311
(S) Dibromofluoromethane	*112*		*76.0-123*		*04/24/2018 16:22*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 16:22*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 16:43	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 16:43	WG1102311
Benzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromoform	ND		0.500	1	04/24/2018 16:43	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 16:43	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 16:43	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 16:43	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 16:43	WG1102311
Chloroform	3.23		0.500	1	04/24/2018 16:43	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 16:43	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 16:43	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 16:43	WG1102311
trans-1,4-Dichloro-2-butene	ND	UJ J0 J4	5.00	1	04/24/2018 16:43	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 16:43	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 16:43	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 16:43	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 16:43	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 16:43	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 16:43	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 16:43	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 16:43	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 16:43	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 16:43	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 16:43	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 16:43	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Styrene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Tetrachloroethene	3.31		0.500	1	04/24/2018 16:43	WG1102311
Toluene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 16:43	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 16:43	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 16:43	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 16:43	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 16:43	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 16:43	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 16:43	WG1102311
(S) Toluene-d8	*95.2*		*80.0-120*		*04/24/2018 16:43*	WG1102311
(S) Dibromofluoromethane	*113*		*76.0-123*		*04/24/2018 16:43*	WG1102311
(S) 4-Bromofluorobenzene	*93.6*		*80.0-120*		*04/24/2018 16:43*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:04	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:04	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:04	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:04	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:04	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:04	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:04	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:04	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:04	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:04	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:04	WG1102311
trans-1,4-Dichloro-2-butene	ND	UJ J0 J4	5.00	1	04/24/2018 17:04	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:04	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:04	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:04	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:04	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:04	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:04	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:04	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:04	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:04	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:04	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:04	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:04	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311

MD for JC 11/26/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Tetrachloroethene	4.67		0.500	1	04/24/2018 17:04	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:04	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:04	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:04	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:04	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:04	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:04	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:04	WG1102311
(S) Toluene-d8	*94.3*		*80.0-120*		*04/24/2018 17:04*	WG1102311
(S) Dibromofluoromethane	*115*		*76.0-123*		*04/24/2018 17:04*	WG1102311
(S) 4-Bromofluorobenzene	*98.5*		*80.0-120*		*04/24/2018 17:04*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:26	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:26	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:26	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:26	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:26	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:26	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:26	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:26	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:26	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:26	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:26	WG1102311
trans-1,4-Dichloro-2-butene	ND	UJ J0 J4	5.00	1	04/24/2018 17:26	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:26	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:26	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:26	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:26	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:26	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:26	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:26	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:26	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:26	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:26	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:26	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:26	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:26	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:26	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:26	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:26	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:26	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:26	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:26	WG1102311
(S) Toluene-d8	*93.5*		*80.0-120*		*04/24/2018 17:26*	WG1102311
(S) Dibromofluoromethane	*116*		*76.0-123*		*04/24/2018 17:26*	WG1102311
(S) 4-Bromofluorobenzene	*101*		*80.0-120*		*04/24/2018 17:26*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 17:48	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 17:48	WG1102311
Benzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromoform	ND		0.500	1	04/24/2018 17:48	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 17:48	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 17:48	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 17:48	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 17:48	WG1102311
Chloroform	ND		0.500	1	04/24/2018 17:48	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 17:48	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 17:48	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 17:48	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 17:48	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 17:48	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 17:48	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 17:48	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 17:48	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 17:48	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 17:48	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 17:48	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 17:48	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 17:48	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 17:48	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 17:48	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 17:48	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Styrene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311

UJ

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
Toluene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 17:48	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 17:48	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 17:48	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 17:48	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 17:48	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 17:48	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 17:48	WG1102311
(S) Toluene-d8	*95.1*		*80.0-120*		*04/24/2018 17:48*	WG1102311
(S) Dibromofluoromethane	*114*		*76.0-123*		*04/24/2018 17:48*	WG1102311
(S) 4-Bromofluorobenzene	*97.1*		*80.0-120*		*04/24/2018 17:48*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 18:10	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 18:10	WG1102311
Benzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromoform	ND		0.500	1	04/24/2018 18:10	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 18:10	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 18:10	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 18:10	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 18:10	WG1102311
Chloroform	ND		0.500	1	04/24/2018 18:10	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 18:10	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 18:10	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 18:10	WG1102311
trans-1,4-Dichloro-2-butene	ND	UJ J0 J4	5.00	1	04/24/2018 18:10	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 18:10	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 18:10	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 18:10	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 18:10	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 18:10	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 18:10	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 18:10	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 18:10	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 18:10	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 18:10	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 18:10	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 18:10	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Styrene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Tetrachloroethene	0.893		0.500	1	04/24/2018 18:10	WG1102311
Toluene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 18:10	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 18:10	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 18:10	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 18:10	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 18:10	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 18:10	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 18:10	WG1102311
(S) Toluene-d8	*97.7*		*80.0-120*		*04/24/2018 18:10*	WG1102311
(S) Dibromofluoromethane	*108*		*76.0-123*		*04/24/2018 18:10*	WG1102311
(S) 4-Bromofluorobenzene	*95.8*		*80.0-120*		*04/24/2018 18:10*	WG1102311

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 14:55	WG1102311
Acrylonitrile	ND		5.00	1	04/24/2018 14:55	WG1102311
Benzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromodichloromethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromochloromethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromoform	ND		0.500	1	04/24/2018 14:55	WG1102311
Bromomethane	ND		2.50	1	04/24/2018 14:55	WG1102311
n-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
sec-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
tert-Butylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Carbon disulfide	ND		0.500	1	04/24/2018 14:55	WG1102311
Carbon tetrachloride	ND		0.500	1	04/24/2018 14:55	WG1102311
Chlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Chlorodibromomethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Chloroethane	ND		2.50	1	04/24/2018 14:55	WG1102311
Chloroform	ND		0.500	1	04/24/2018 14:55	WG1102311
Chloromethane	ND		1.25	1	04/24/2018 14:55	WG1102311
2-Chlorotoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
4-Chlorotoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2-Dibromoethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Dibromomethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,1-Dichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2-Dichloropropane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3-Dichloropropane	ND		1.00	1	04/24/2018 14:55	WG1102311
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:55	WG1102311
trans-1,4-Dichloro-2-butene	ND	J0 J4	5.00	1	04/24/2018 14:55	WG1102311
2,2-Dichloropropane	ND		0.500	1	04/24/2018 14:55	WG1102311
Di-isopropyl ether	ND		0.500	1	04/24/2018 14:55	WG1102311
Ethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 14:55	WG1102311
2-Hexanone	ND		5.00	1	04/24/2018 14:55	WG1102311
n-Hexane	ND		5.00	1	04/24/2018 14:55	WG1102311
Iodomethane	ND		10.0	1	04/24/2018 14:55	WG1102311
Isopropylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
p-Isopropyltoluene	ND		0.500	1	04/24/2018 14:55	WG1102311
2-Butanone (MEK)	ND		5.00	1	04/24/2018 14:55	WG1102311
Methylene Chloride	ND		2.50	1	04/24/2018 14:55	WG1102311
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 14:55	WG1102311
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 14:55	WG1102311
Naphthalene	ND		2.50	1	04/24/2018 14:55	WG1102311
n-Propylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Styrene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311

UJ

MD for JC 11/26/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Tetrachloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
Toluene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 14:55	WG1102311
Trichloroethene	ND		0.500	1	04/24/2018 14:55	WG1102311
Trichlorofluoromethane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 14:55	WG1102311
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 14:55	WG1102311
Vinyl acetate	ND		5.00	1	04/24/2018 14:55	WG1102311
Vinyl chloride	ND		0.500	1	04/24/2018 14:55	WG1102311
Xylenes, Total	ND		1.50	1	04/24/2018 14:55	WG1102311
(S) Toluene-d8	*95.2*		*80.0-120*		*04/24/2018 14:55*	WG1102311
(S) Dibromofluoromethane	*115*		*76.0-123*		*04/24/2018 14:55*	WG1102311
(S) 4-Bromofluorobenzene	*99.1*		*80.0-120*		*04/24/2018 14:55*	WG1102311

MD for JC 11/26/18

ANALYTICAL REPORT

April 25, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L987916
Samples Received:	04/21/2018
Project Number:	1358.001.01.003
Description:	MVSC

Report To: Karsten Springstead
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Entire Report Reviewed By:

Brian Ford
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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DC-3-041918 L987916-01 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 08:45 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 22:43	04/23/18 22:43	JHH

KMW-7-041918 L987916-02 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 09:30 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 23:02	04/23/18 23:02	JHH

KMW-8-041918 L987916-03 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 10:09 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 23:20	04/23/18 23:20	JHH

DC-14-041918 L987916-04 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 10:47 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 23:39	04/23/18 23:39	JHH

DC-20-041918 L987916-05 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 12:02 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 23:57	04/23/18 23:57	JHH

DC-11-041918 L987916-06 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 13:16 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 10:46	04/24/18 10:46	JHH

MW-15-041918 L987916-07 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 13:11 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 11:04	04/24/18 11:04	JHH

MW-16-041918 L987916-08 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 14:12 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 11:24	04/24/18 11:24	JHH

MW-11-041918 L987916-09 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 16:11 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 11:42	04/24/18 11:42	JHH

MW-2-041918 L987916-10 GW

Collected by: Jeff Dobbins | Collected date/time: 04/19/18 15:23 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 12:00	04/24/18 12:00	JHH

MW-4-042018 L987916-11 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 08:57 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 12:19	04/24/18 12:19	JHH

MW-3-042018 L987916-12 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 09:01 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 12:37	04/24/18 12:37	JHH

DC-17-042018 L987916-13 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 10:43 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 12:56	04/24/18 12:56	JHH

MW-14-042018 L987916-14 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 10:02 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 13:15	04/24/18 13:15	JHH

MW-101-042018 L987916-15 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 13:45 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 13:34	04/24/18 13:34	JHH

DC-7-042018 L987916-16 GW

Collected by: Jeff Dobbins | Collected date/time: 04/20/18 11:24 | Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 13:52	04/24/18 13:52	JHH

MW-7-042018 L987916-17 GW

Collected by: Jeff Dobbins
Collected date/time: 04/20/18 11:02
Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 14:11	04/24/18 14:11	JHH

KMW-3-042018 L987916-18 GW

Collected by: Jeff Dobbins
Collected date/time: 04/20/18 10:11
Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 14:30	04/24/18 14:30	JHH

MW-102-042018 L987916-19 GW

Collected by: Jeff Dobbins
Collected date/time: 04/20/18 14:00
Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/24/18 14:48	04/24/18 14:48	JHH

TRIPBLANK-042018 L987916-20 GW

Collected by: Jeff Dobbins
Collected date/time: 04/20/18 00:00
Received date/time: 04/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1101940	1	04/23/18 22:24	04/23/18 22:24	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 22:43	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 22:43	WG1101940
Benzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromoform	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 22:43	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 22:43	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 22:43	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 22:43	WG1101940
Chloroform	ND		0.500	1	04/23/2018 22:43	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 22:43	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 22:43	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 22:43	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 22:43	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 22:43	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 22:43	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 22:43	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 22:43	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 22:43	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 22:43	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 22:43	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 22:43	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 22:43	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 22:43	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Styrene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Tetrachloroethene	1.23		0.500	1	04/23/2018 22:43	WG1101940
Toluene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 22:43	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 22:43	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 22:43	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/23/2018 22:43*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/23/2018 22:43*	WG1101940
(S) 4-Bromofluorobenzene	*89.9*		*80.0-120*		*04/23/2018 22:43*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:02	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:02	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:02	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:02	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:02	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:02	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:02	WG1101940
Chloroform	ND		0.500	1	04/23/2018 23:02	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:02	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:02	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:02	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:02	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:02	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:02	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:02	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:02	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:02	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:02	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:02	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:02	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:02	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:02	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:02	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:02	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Tetrachloroethene	1.59		0.500	1	04/23/2018 23:02	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 23:02	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:02	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:02	WG1101940
(S) Toluene-d8	*104*		*80.0-120*		*04/23/2018 23:02*	WG1101940
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/23/2018 23:02*	WG1101940
(S) 4-Bromofluorobenzene	*90.8*		*80.0-120*		*04/23/2018 23:02*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:20	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:20	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:20	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:20	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:20	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:20	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:20	WG1101940
Chloroform	1.68		0.500	1	04/23/2018 23:20	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:20	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:20	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:20	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:20	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:20	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:20	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:20	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:20	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:20	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:20	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:20	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:20	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:20	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:20	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:20	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:20	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Tetrachloroethene	5.74		0.500	1	04/23/2018 23:20	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 23:20	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:20	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:20	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/23/2018 23:20*	WG1101940
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*04/23/2018 23:20*	WG1101940
(S) 4-Bromofluorobenzene	*91.8*		*80.0-120*		*04/23/2018 23:20*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:39	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:39	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:39	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:39	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:39	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:39	WG1101940
Chloroform	2.27		0.500	1	04/23/2018 23:39	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:39	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:39	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:39	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:39	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:39	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:39	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:39	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:39	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:39	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:39	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:39	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:39	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:39	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:39	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Tetrachloroethene	5.14		0.500	1	04/23/2018 23:39	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 23:39	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:39	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:39	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/23/2018 23:39*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/23/2018 23:39*	WG1101940
(S) 4-Bromofluorobenzene	*92.8*		*80.0-120*		*04/23/2018 23:39*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:57	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:57	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:57	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:57	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:57	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:57	WG1101940
Chloroform	ND		0.500	1	04/23/2018 23:57	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:57	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:57	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:57	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:57	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:57	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:57	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:57	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:57	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:57	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:57	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:57	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:57	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:57	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:57	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Tetrachloroethene	1.14		0.500	1	04/23/2018 23:57	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 23:57	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:57	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:57	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/23/2018 23:57*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/23/2018 23:57*	WG1101940
(S) 4-Bromofluorobenzene	*91.0*		*80.0-120*		*04/23/2018 23:57*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 10:46	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 10:46	WG1101940
Benzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Bromoform	ND		0.500	1	04/24/2018 10:46	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 10:46	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 10:46	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 10:46	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 10:46	WG1101940
Chloroform	ND		0.500	1	04/24/2018 10:46	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 10:46	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 10:46	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 10:46	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 10:46	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 10:46	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 10:46	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 10:46	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 10:46	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 10:46	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 10:46	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 10:46	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 10:46	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 10:46	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 10:46	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 10:46	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 10:46	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 10:46	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 10:46	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 10:46	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 10:46	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 10:46	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 10:46	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Styrene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Tetrachloroethene	1.21		0.500	1	04/24/2018 10:46	WG1101940
Toluene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 10:46	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 10:46	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 10:46	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 10:46	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 10:46	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 10:46	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 10:46	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 10:46	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 10:46*	WG1101940
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/24/2018 10:46*	WG1101940
(S) 4-Bromofluorobenzene	*90.8*		*80.0-120*		*04/24/2018 10:46*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 11:04	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 11:04	WG1101940
Benzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Bromoform	ND		0.500	1	04/24/2018 11:04	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 11:04	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 11:04	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 11:04	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 11:04	WG1101940
Chloroform	ND		0.500	1	04/24/2018 11:04	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 11:04	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 11:04	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 11:04	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 11:04	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 11:04	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:04	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 11:04	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:04	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:04	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 11:04	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 11:04	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 11:04	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 11:04	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 11:04	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 11:04	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 11:04	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 11:04	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 11:04	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 11:04	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 11:04	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 11:04	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 11:04	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Styrene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Tetrachloroethene	1.13		0.500	1	04/24/2018 11:04	WG1101940
Toluene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 11:04	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 11:04	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 11:04	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 11:04	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 11:04	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 11:04	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 11:04	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 11:04	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 11:04*	WG1101940
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/24/2018 11:04*	WG1101940
(S) 4-Bromofluorobenzene	*92.6*		*80.0-120*		*04/24/2018 11:04*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 11:24	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 11:24	WG1101940
Benzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Bromoform	ND		0.500	1	04/24/2018 11:24	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 11:24	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 11:24	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 11:24	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 11:24	WG1101940
Chloroform	ND		0.500	1	04/24/2018 11:24	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 11:24	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 11:24	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 11:24	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 11:24	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 11:24	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:24	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 11:24	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:24	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:24	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 11:24	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 11:24	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 11:24	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 11:24	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 11:24	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 11:24	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 11:24	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 11:24	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 11:24	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 11:24	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 11:24	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 11:24	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 11:24	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Styrene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Tetrachloroethene	1.33		0.500	1	04/24/2018 11:24	WG1101940
Toluene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 11:24	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 11:24	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 11:24	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 11:24	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 11:24	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 11:24	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 11:24	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 11:24	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/24/2018 11:24*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 11:24*	WG1101940
(S) 4-Bromofluorobenzene	*91.3*		*80.0-120*		*04/24/2018 11:24*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 11:42	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 11:42	WG1101940
Benzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Bromoform	ND		0.500	1	04/24/2018 11:42	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 11:42	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 11:42	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 11:42	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 11:42	WG1101940
Chloroform	ND		0.500	1	04/24/2018 11:42	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 11:42	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 11:42	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 11:42	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 11:42	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 11:42	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:42	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 11:42	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:42	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 11:42	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 11:42	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 11:42	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 11:42	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 11:42	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 11:42	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 11:42	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 11:42	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 11:42	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 11:42	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 11:42	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 11:42	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 11:42	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 11:42	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Styrene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Tetrachloroethene	2.97		0.500	1	04/24/2018 11:42	WG1101940
Toluene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 11:42	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 11:42	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 11:42	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 11:42	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 11:42	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 11:42	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 11:42	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 11:42	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 11:42*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 11:42*	WG1101940
(S) 4-Bromofluorobenzene	*90.6*		*80.0-120*		*04/24/2018 11:42*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 12:00	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 12:00	WG1101940
Benzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Bromoform	ND		0.500	1	04/24/2018 12:00	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 12:00	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 12:00	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 12:00	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 12:00	WG1101940
Chloroform	ND		0.500	1	04/24/2018 12:00	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 12:00	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 12:00	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 12:00	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 12:00	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 12:00	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:00	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 12:00	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:00	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:00	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 12:00	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 12:00	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 12:00	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 12:00	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 12:00	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 12:00	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 12:00	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 12:00	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 12:00	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 12:00	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 12:00	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 12:00	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 12:00	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Styrene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Tetrachloroethene	3.39		0.500	1	04/24/2018 12:00	WG1101940
Toluene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 12:00	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 12:00	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 12:00	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 12:00	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 12:00	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 12:00	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 12:00	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 12:00	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 12:00*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 12:00*	WG1101940
(S) 4-Bromofluorobenzene	*88.5*		*80.0-120*		*04/24/2018 12:00*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 12:19	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 12:19	WG1101940
Benzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Bromoform	ND		0.500	1	04/24/2018 12:19	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 12:19	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 12:19	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 12:19	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 12:19	WG1101940
Chloroform	ND		0.500	1	04/24/2018 12:19	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 12:19	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 12:19	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 12:19	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 12:19	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 12:19	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:19	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 12:19	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:19	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:19	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 12:19	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 12:19	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 12:19	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 12:19	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 12:19	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 12:19	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 12:19	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 12:19	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 12:19	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 12:19	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 12:19	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 12:19	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 12:19	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Styrene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Tetrachloroethene	ND		0.500	1	04/24/2018 12:19	WG1101940
Toluene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 12:19	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 12:19	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 12:19	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 12:19	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 12:19	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 12:19	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 12:19	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 12:19	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/24/2018 12:19*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/24/2018 12:19*	WG1101940
(S) 4-Bromofluorobenzene	*90.7*		*80.0-120*		*04/24/2018 12:19*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 12:37	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 12:37	WG1101940
Benzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Bromoform	ND		0.500	1	04/24/2018 12:37	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 12:37	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 12:37	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 12:37	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 12:37	WG1101940
Chloroform	ND		0.500	1	04/24/2018 12:37	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 12:37	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 12:37	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 12:37	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 12:37	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 12:37	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:37	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 12:37	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:37	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:37	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 12:37	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 12:37	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 12:37	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 12:37	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 12:37	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 12:37	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 12:37	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 12:37	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 12:37	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 12:37	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 12:37	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 12:37	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 12:37	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Styrene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Tetrachloroethene	1.00		0.500	1	04/24/2018 12:37	WG1101940
Toluene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 12:37	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 12:37	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 12:37	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 12:37	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 12:37	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 12:37	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 12:37	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 12:37	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/24/2018 12:37*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 12:37*	WG1101940
(S) 4-Bromofluorobenzene	*89.0*		*80.0-120*		*04/24/2018 12:37*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 12:56	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 12:56	WG1101940
Benzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Bromoform	ND		0.500	1	04/24/2018 12:56	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 12:56	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 12:56	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 12:56	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 12:56	WG1101940
Chloroform	ND		0.500	1	04/24/2018 12:56	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 12:56	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 12:56	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 12:56	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 12:56	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 12:56	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:56	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 12:56	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:56	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 12:56	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 12:56	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 12:56	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 12:56	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 12:56	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 12:56	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 12:56	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 12:56	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 12:56	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 12:56	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 12:56	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 12:56	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 12:56	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 12:56	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Styrene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Tetrachloroethene	10.1		0.500	1	04/24/2018 12:56	WG1101940
Toluene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 12:56	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 12:56	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 12:56	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 12:56	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 12:56	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 12:56	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 12:56	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 12:56	WG1101940
(S) Toluene-d8	*104*		*80.0-120*		*04/24/2018 12:56*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/24/2018 12:56*	WG1101940
(S) 4-Bromofluorobenzene	*92.1*		*80.0-120*		*04/24/2018 12:56*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 13:15	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 13:15	WG1101940
Benzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Bromoform	ND		0.500	1	04/24/2018 13:15	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 13:15	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 13:15	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 13:15	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 13:15	WG1101940
Chloroform	ND		0.500	1	04/24/2018 13:15	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 13:15	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 13:15	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 13:15	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 13:15	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 13:15	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:15	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 13:15	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:15	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:15	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 13:15	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 13:15	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 13:15	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 13:15	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 13:15	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 13:15	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 13:15	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 13:15	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 13:15	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 13:15	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 13:15	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 13:15	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 13:15	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Styrene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Tetrachloroethene	1.27		0.500	1	04/24/2018 13:15	WG1101940
Toluene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 13:15	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 13:15	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 13:15	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 13:15	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 13:15	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 13:15	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 13:15	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 13:15	WG1101940
(S) Toluene-d8	*101*		*80.0-120*		*04/24/2018 13:15*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 13:15*	WG1101940
(S) 4-Bromofluorobenzene	*91.3*		*80.0-120*		*04/24/2018 13:15*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 13:34	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 13:34	WG1101940
Benzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Bromoform	ND		0.500	1	04/24/2018 13:34	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 13:34	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 13:34	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 13:34	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 13:34	WG1101940
Chloroform	ND		0.500	1	04/24/2018 13:34	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 13:34	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 13:34	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 13:34	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 13:34	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 13:34	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:34	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 13:34	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:34	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:34	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 13:34	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 13:34	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 13:34	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 13:34	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 13:34	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 13:34	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 13:34	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 13:34	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 13:34	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 13:34	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 13:34	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 13:34	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 13:34	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Styrene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Tetrachloroethene	ND		0.500	1	04/24/2018 13:34	WG1101940
Toluene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 13:34	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 13:34	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 13:34	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 13:34	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 13:34	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 13:34	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 13:34	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 13:34	WG1101940
(S) Toluene-d8	*101*		*80.0-120*		*04/24/2018 13:34*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/24/2018 13:34*	WG1101940
(S) 4-Bromofluorobenzene	*89.7*		*80.0-120*		*04/24/2018 13:34*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 13:52	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 13:52	WG1101940
Benzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Bromoform	ND		0.500	1	04/24/2018 13:52	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 13:52	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 13:52	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 13:52	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 13:52	WG1101940
Chloroform	ND		0.500	1	04/24/2018 13:52	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 13:52	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 13:52	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 13:52	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 13:52	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 13:52	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:52	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 13:52	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:52	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 13:52	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 13:52	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 13:52	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 13:52	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 13:52	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 13:52	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 13:52	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 13:52	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 13:52	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 13:52	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 13:52	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 13:52	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 13:52	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 13:52	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Styrene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Tetrachloroethene	12.8		0.500	1	04/24/2018 13:52	WG1101940
Toluene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 13:52	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 13:52	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 13:52	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 13:52	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 13:52	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 13:52	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 13:52	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 13:52	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 13:52*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/24/2018 13:52*	WG1101940
(S) 4-Bromofluorobenzene	*90.3*		*80.0-120*		*04/24/2018 13:52*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 14:11	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 14:11	WG1101940
Benzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Bromoform	ND		0.500	1	04/24/2018 14:11	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 14:11	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 14:11	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 14:11	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 14:11	WG1101940
Chloroform	ND		0.500	1	04/24/2018 14:11	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 14:11	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 14:11	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 14:11	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 14:11	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 14:11	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:11	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 14:11	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:11	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:11	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 14:11	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 14:11	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 14:11	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 14:11	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 14:11	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 14:11	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 14:11	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 14:11	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 14:11	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 14:11	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 14:11	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 14:11	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 14:11	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Styrene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Tetrachloroethene	7.64		0.500	1	04/24/2018 14:11	WG1101940
Toluene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 14:11	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 14:11	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 14:11	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 14:11	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 14:11	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 14:11	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 14:11	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 14:11	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 14:11*	WG1101940
(S) Dibromofluoromethane	*98.4*		*76.0-123*		*04/24/2018 14:11*	WG1101940
(S) 4-Bromofluorobenzene	*91.1*		*80.0-120*		*04/24/2018 14:11*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 14:30	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 14:30	WG1101940
Benzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Bromoform	ND		0.500	1	04/24/2018 14:30	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 14:30	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 14:30	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 14:30	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 14:30	WG1101940
Chloroform	ND		0.500	1	04/24/2018 14:30	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 14:30	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 14:30	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 14:30	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 14:30	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 14:30	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:30	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 14:30	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:30	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:30	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 14:30	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 14:30	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 14:30	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 14:30	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 14:30	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 14:30	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 14:30	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 14:30	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 14:30	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 14:30	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 14:30	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 14:30	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 14:30	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Styrene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Tetrachloroethene	5.37		0.500	1	04/24/2018 14:30	WG1101940
Toluene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 14:30	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 14:30	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 14:30	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 14:30	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 14:30	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 14:30	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 14:30	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 14:30	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/24/2018 14:30*	WG1101940
(S) Dibromofluoromethane	*99.9*		*76.0-123*		*04/24/2018 14:30*	WG1101940
(S) 4-Bromofluorobenzene	*89.9*		*80.0-120*		*04/24/2018 14:30*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/24/2018 14:48	WG1101940
Acrylonitrile	ND		5.00	1	04/24/2018 14:48	WG1101940
Benzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Bromobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Bromodichloromethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Bromochloromethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Bromoform	ND		0.500	1	04/24/2018 14:48	WG1101940
Bromomethane	ND		2.50	1	04/24/2018 14:48	WG1101940
n-Butylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
sec-Butylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
tert-Butylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Carbon disulfide	ND		0.500	1	04/24/2018 14:48	WG1101940
Carbon tetrachloride	ND		0.500	1	04/24/2018 14:48	WG1101940
Chlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Chlorodibromomethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Chloroethane	ND		2.50	1	04/24/2018 14:48	WG1101940
Chloroform	ND		0.500	1	04/24/2018 14:48	WG1101940
Chloromethane	ND		1.25	1	04/24/2018 14:48	WG1101940
2-Chlorotoluene	ND		0.500	1	04/24/2018 14:48	WG1101940
4-Chlorotoluene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/24/2018 14:48	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Dibromomethane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/24/2018 14:48	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/24/2018 14:48	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:48	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/24/2018 14:48	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:48	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/24/2018 14:48	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/24/2018 14:48	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/24/2018 14:48	WG1101940
Di-isopropyl ether	ND		0.500	1	04/24/2018 14:48	WG1101940
Ethylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/24/2018 14:48	WG1101940
2-Hexanone	ND		5.00	1	04/24/2018 14:48	WG1101940
n-Hexane	ND		5.00	1	04/24/2018 14:48	WG1101940
Iodomethane	ND		10.0	1	04/24/2018 14:48	WG1101940
Isopropylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/24/2018 14:48	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/24/2018 14:48	WG1101940
Methylene Chloride	ND		2.50	1	04/24/2018 14:48	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/24/2018 14:48	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/24/2018 14:48	WG1101940
Naphthalene	ND		2.50	1	04/24/2018 14:48	WG1101940
n-Propylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Styrene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Tetrachloroethene	7.18		0.500	1	04/24/2018 14:48	WG1101940
Toluene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/24/2018 14:48	WG1101940
Trichloroethene	ND		0.500	1	04/24/2018 14:48	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/24/2018 14:48	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/24/2018 14:48	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/24/2018 14:48	WG1101940
Vinyl acetate	ND		5.00	1	04/24/2018 14:48	WG1101940
Vinyl chloride	ND		0.500	1	04/24/2018 14:48	WG1101940
Xylenes, Total	ND		1.50	1	04/24/2018 14:48	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/24/2018 14:48*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/24/2018 14:48*	WG1101940
(S) 4-Bromofluorobenzene	*89.5*		*80.0-120*		*04/24/2018 14:48*	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 22:24	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 22:24	WG1101940
Benzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromoform	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 22:24	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 22:24	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 22:24	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 22:24	WG1101940
Chloroform	ND		0.500	1	04/23/2018 22:24	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 22:24	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 22:24	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 22:24	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 22:24	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 22:24	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 22:24	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 22:24	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 22:24	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 22:24	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 22:24	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 22:24	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 22:24	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 22:24	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 22:24	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Styrene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Tetrachloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
Toluene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Vinyl acetate	ND	J0	5.00	1	04/23/2018 22:24	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 22:24	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 22:24	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/23/2018 22:24*	WG1101940
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/23/2018 22:24*	WG1101940
(S) 4-Bromofluorobenzene	*90.9*		*80.0-120*		*04/23/2018 22:24*	WG1101940

Method Blank (MB)

(MB) R3304591-3 04/23/18 22:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3304591-3 04/23/18 22:06

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*103*			*80.0-120*
(S) Dibromofluoromethane	*98.4*			*76.0-123*
(S) 4-Bromofluorobenzene	*91.3*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3304591-1 04/23/18 20:51 • (LCSD) R3304591-2 04/23/18 21:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	142	145	114	116	10.0-160			1.69	23
Acrylonitrile	125	117	130	93.3	104	60.0-142			10.7	20
Benzene	25.0	24.4	24.3	97.8	97.0	69.0-123			0.768	20
Bromobenzene	25.0	22.0	22.6	88.1	90.3	79.0-120			2.46	20
Bromodichloromethane	25.0	24.9	24.9	99.7	99.6	76.0-120			0.0708	20
Bromochloromethane	25.0	25.0	24.9	99.9	99.7	76.0-122			0.222	20
Bromoform	25.0	22.8	23.7	91.3	94.6	67.0-132			3.55	20
Bromomethane	25.0	25.8	25.2	103	101	18.0-160			2.36	20
n-Butylbenzene	25.0	24.9	25.3	99.5	101	72.0-126			1.56	20
sec-Butylbenzene	25.0	24.7	24.8	98.9	99.3	74.0-121			0.370	20
tert-Butylbenzene	25.0	23.8	24.1	95.3	96.4	75.0-122			1.13	20
Carbon disulfide	25.0	21.9	21.4	87.8	85.5	55.0-127			2.57	20
Carbon tetrachloride	25.0	24.1	23.3	96.5	93.2	63.0-122			3.40	20
Chlorobenzene	25.0	25.3	25.1	101	100	79.0-121			0.791	20
Chlorodibromomethane	25.0	24.8	24.6	99.1	98.5	75.0-125			0.609	20
Chloroethane	25.0	25.8	25.4	103	102	47.0-152			1.77	20
Chloroform	25.0	25.0	24.4	100	97.7	72.0-121			2.31	20
Chloromethane	25.0	23.8	23.9	95.1	95.6	48.0-139			0.487	20
2-Chlorotoluene	25.0	22.9	23.3	91.7	93.3	74.0-122			1.72	20
4-Chlorotoluene	25.0	22.8	23.5	91.4	93.9	79.0-120			2.74	20
1,2-Dibromo-3-Chloropropane	25.0	24.3	25.9	97.2	104	64.0-127			6.39	20
1,2-Dibromoethane	25.0	25.4	25.1	102	100	77.0-123			1.18	20
Dibromomethane	25.0	25.2	25.4	101	102	78.0-120			0.830	20
1,2-Dichlorobenzene	25.0	24.6	25.0	98.4	100	80.0-120			1.67	20
1,3-Dichlorobenzene	25.0	24.3	24.4	97.0	97.4	72.0-123			0.410	20
1,4-Dichlorobenzene	25.0	24.4	24.8	97.6	99.1	77.0-120			1.54	20
Dichlorodifluoromethane	25.0	22.1	22.5	88.6	89.9	49.0-155			1.48	20
1,1-Dichloroethane	25.0	25.3	24.8	101	99.0	70.0-126			2.07	20
1,2-Dichloroethane	25.0	25.7	25.5	103	102	67.0-126			0.925	20
1,1-Dichloroethene	25.0	23.5	22.7	93.9	90.8	64.0-129			3.41	20
cis-1,2-Dichloroethene	25.0	24.6	24.3	98.3	97.1	73.0-120			1.29	20
trans-1,2-Dichloroethene	25.0	24.2	23.5	96.7	93.8	71.0-121			3.02	20
1,2-Dichloropropane	25.0	25.2	25.1	101	100	75.0-125			0.466	20
1,1-Dichloropropene	25.0	25.2	25.0	101	100	71.0-129			0.844	20
1,3-Dichloropropane	25.0	25.2	25.1	101	100	80.0-121			0.554	20
cis-1,3-Dichloropropene	25.0	25.2	24.8	101	99.2	79.0-123			1.39	20
trans-1,3-Dichloropropene	25.0	25.2	24.7	101	98.7	74.0-127			2.05	20
trans-1,4-Dichloro-2-butene	25.0	22.2	23.1	88.9	92.2	55.0-134			3.66	20
2,2-Dichloropropane	25.0	22.3	21.2	89.3	84.8	60.0-125			5.23	20
Di-isopropyl ether	25.0	24.8	24.5	99.1	98.2	59.0-133			0.936	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3304591-1 04/23/18 20:51 • (LCSD) R3304591-2 04/23/18 21:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	25.1	24.9	100	99.7	77.0-120			0.498	20
Hexachloro-1,3-butadiene	25.0	26.5	26.7	106	107	64.0-131			0.624	20
2-Hexanone	125	128	130	103	104	58.0-147			1.35	20
n-Hexane	25.0	21.2	21.0	84.9	83.9	56.0-124			1.25	20
Iodomethane	125	116	114	92.5	91.4	57.0-140			1.20	20
Isopropylbenzene	25.0	23.2	23.6	92.7	94.2	75.0-120			1.61	20
p-Isopropyltoluene	25.0	25.0	24.7	99.8	98.8	74.0-126			1.04	20
2-Butanone (MEK)	125	125	131	100	104	37.0-158			3.99	20
Methylene Chloride	25.0	23.6	23.2	94.6	92.6	66.0-121			2.11	20
4-Methyl-2-pentanone (MIBK)	125	125	128	99.7	102	59.0-143			2.48	20
Methyl tert-butyl ether	25.0	24.5	24.3	97.9	97.3	64.0-123			0.603	20
Naphthalene	25.0	24.9	26.2	99.7	105	62.0-128			5.14	20
n-Propylbenzene	25.0	23.0	23.5	92.1	93.8	79.0-120			1.81	20
Styrene	25.0	23.0	23.3	92.2	93.1	78.0-124			0.955	20
1,1,1,2-Tetrachloroethane	25.0	25.1	24.7	100	98.7	75.0-122			1.73	20
1,1,2,2-Tetrachloroethane	25.0	21.6	22.3	86.2	89.2	71.0-122			3.34	20
1,1,2-Trichlorotrifluoroethane	25.0	23.1	22.5	92.5	89.8	61.0-136			2.96	20
Tetrachloroethene	25.0	24.7	24.4	98.9	97.7	70.0-127			1.16	20
Toluene	25.0	24.2	23.8	96.7	95.3	77.0-120			1.51	20
1,2,3-Trichlorobenzene	25.0	25.3	26.3	101	105	61.0-133			3.59	20
1,2,4-Trichlorobenzene	25.0	25.9	26.1	104	105	69.0-129			0.801	20
1,1,1-Trichloroethane	25.0	25.5	24.8	102	99.4	68.0-122			2.60	20
1,1,2-Trichloroethane	25.0	24.4	24.2	97.7	96.8	78.0-120			0.939	20
Trichloroethene	25.0	26.0	25.9	104	104	78.0-120			0.0545	20
Trichlorofluoromethane	25.0	26.8	26.5	107	106	56.0-137			1.03	20
1,2,3-Trichloropropane	25.0	22.7	23.8	90.9	95.3	72.0-124			4.71	20
1,2,4-Trimethylbenzene	25.0	23.7	23.9	94.7	95.6	75.0-120			0.903	20
1,2,3-Trimethylbenzene	25.0	24.4	24.7	97.6	98.7	75.0-120			1.10	20
1,3,5-Trimethylbenzene	25.0	23.2	23.3	92.8	93.3	75.0-120			0.561	20
Vinyl acetate	125	84.6	79.2	67.7	63.3	46.0-160			6.71	20
Vinyl chloride	25.0	26.3	26.0	105	104	64.0-133			1.23	20
Xylenes, Total	75.0	75.8	73.5	101	98.0	77.0-120			3.08	20
(S) Toluene-d8				*102*	*101*	*80.0-120*				
(S) Dibromofluoromethane				*100*	*98.8*	*76.0-123*				
(S) 4-Bromofluorobenzene				*91.1*	*93.2*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

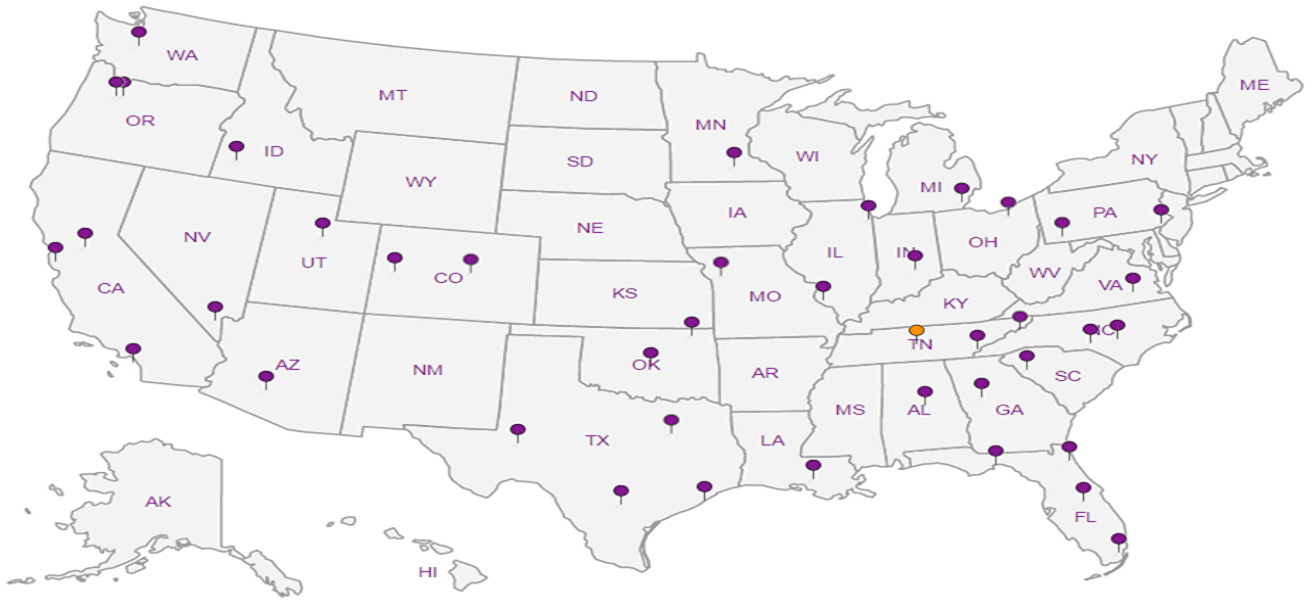
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Fres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Normandy Park, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Jeff Dobbins

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260LLC VOCs 40mlAmb-HCl										Remarks	Sample # (lab only)
DC-3-041918	Grab	GW		4/19/18	0845	3	X											01
KMW-7-041918		GW		4/19/18	0930	3	X											02
KMW-8-041918		GW		4/19/18	1009	3	X											03
DC-14-041918		GW		4/19/18	1047	3	X											04
DC-20-041918		GW		4/19/18	1202	3	X											05
DC-11-041918		GW		4/19/18	1316	3	X											06
MW-15-041918		GW		4/19/18	1311	3	X											07
MW-16-041918		GW		4/19/18	1412	3	X											08
MW-11-041918		GW		4/19/18	1611	3	X											09
MW-2-041918	↓	GW		4/19/18	1523	3	X											10

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LABORATORIES
a subsidiary of Accelerated

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 987916

E020

Acctnum: PESENVSWA
Template: T131700
Prelogin: P647348
TSR: 110 - Brian Ford
PB: 4-13-18 DL
Shipped Via: FedEx Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__UPS ✓FedEx __Courier __ _____

Tracking # 4269 9219 6304

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
				1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7 °C Bottles Received: 58
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/24/18 Time: 645

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Normandy Park, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Jeff Dobbins

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	V8260LLC VOCs 40mlAmb-HCl	Pres Chk	Remarks	Sample # (lab only)
MW-4-042018	Grab	GW		4/20/18	0857	3	X			
MW-3-042018		GW		4/20/18	0901	3	X			
DC-17-042018		GW		4/20/18	1043	3	X			
MW-14-042018		GW		4/20/18	1002	3	X			
MW-101-042018		GW		4/20/18	1345	3	X			
DC-7-042018		GW		4/20/18	1124	3	X			
MW-7-042018		GW		4/20/18	1102	3	X			
KMW-3-042018		GW		4/20/18	1011	3	X			
MW-102-042018	V	GW		4/20/18	1400	3	X			
TRIPBLANK-042018		GW		4/20/18	—	1	X			

Chain of Custody Page 2 of 2

ESC LABORATORY SCIENCES
a subsidiary of Pace Analytical

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 987916

Table #

Acctnum: PESENVSWA

Template: T131700

Prelogin: P647348

TSR: 110 - Brian Ford

PB: 4/13/18 DC

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
				1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7 °C Bottles Received: 58
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/21/18 Time: 845
				Hold: Condition: NCF / OK

MEMORANDUM

TO: Project File **DATE:** June 4, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center/Harris Family LTD

PROJECT #: 1358.001.01.003

TASK: April 19-20, 2018 Groundwater Samples

LAB: ECS Lab Sciences Request No. L987916

Nineteen (19) groundwater samples including two field duplicates, and a trip blank sample were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center and Harris Family LTD site in Normandy Park, Washington on April 19-20, 2018. Samples associated with SDG L987916 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by ESC Lab Sciences (ESC) of Mt. Juliet, Tennessee.

The monitoring event occurred on between April 18 and 20, 2018. SDGs associated with this sampling period include three SDGs (L987257, L987914, and L987916). The quality assurance review of the laboratory data for SDG L987916 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 0.7 degrees Centigrade (°C). The

cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition with the following discussions:

- SDG L987916: Review of associated chain of custody (COC) shows that the relinquished portion was not signed however daily field forms show a record of sample delivery to FedEx for shipment to ESC. Internal corrective action has been implemented by PES to ensure that all COCs are signed and dated when relinquishing possession/custody of the samples.

No data were qualified based upon the sample collection and preservation information.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however ESC's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by ESC for vinyl acetate associated with analytical batch WG1101940 (analyzed on April 23, 2018). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated vinyl acetate results with laboratory qualified (J0) results are estimated and qualified (J/UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blank at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

A trip blank was submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at concentrations at or above the RDLs.

Equipment Blank Results

Two equipment blank samples (EQ-1-042018 and EQ-2-042018) were collected and analyzed and are reported in SDG L987914.

- Equipment blank sample EQ-1-042018 is associated with monitoring wells DC-15, DC-8, DC-4, MW-13, KMW-2, MW10, MW-9, MW-12, KMW-9, DC-12, DC-13, DC-3, KMW-7, KMW-8, DC-14, DC-20, DC-11, MW-4, MW-7, and KMW-3 (SDGs L987257,

L987914, and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

- Equipment blank sample EQ-2-042018 is associated with monitoring wells DC-10A, DC-17, DC-18, MW-2, MW-3, MW-11, MW-14, MW-15, MW-16, and DC-7 (SDGs L987914 and L987916). The target analytes (VOCs) were not detected in the equipment blank at concentrations at or above the RDLs.

Field Duplicate Analyses

Field duplicate pairs are as follows:

- Samples MW-4-042018 and MW-101-042018
- Samples MW-7-042018 and MW-102-042018

Field duplicate results are comparable and within 20% RPD.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) %R's and RPDs for analytical batch (WG1101940) are within ESC laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 22:43	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 22:43	WG1101940
Benzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromoform	ND		0.500	1	04/23/2018 22:43	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 22:43	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 22:43	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 22:43	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 22:43	WG1101940
Chloroform	ND		0.500	1	04/23/2018 22:43	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 22:43	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 22:43	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:43	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 22:43	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 22:43	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 22:43	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 22:43	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 22:43	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 22:43	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 22:43	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 22:43	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 22:43	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 22:43	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 22:43	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 22:43	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 22:43	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Styrene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940

JC 6/4/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Tetrachloroethene	1.23		0.500	1	04/23/2018 22:43	WG1101940
Toluene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 22:43	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 22:43	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 22:43	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 22:43	WG1101940
Vinyl acetate	ND	UJ J0	5.00	1	04/23/2018 22:43	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 22:43	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 22:43	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/23/2018 22:43*	WG1101940
(S) Dibromofluoromethane	*102*		*76.0-123*		*04/23/2018 22:43*	WG1101940
(S) 4-Bromofluorobenzene	*89.9*		*80.0-120*		*04/23/2018 22:43*	WG1101940

JC 6/4/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	04/23/2018 23:02	WG1101940	
Acrylonitrile	ND		5.00	1	04/23/2018 23:02	WG1101940	
Benzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Bromobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Bromodichloromethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
Bromochloromethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
Bromoform	ND		0.500	1	04/23/2018 23:02	WG1101940	
Bromomethane	ND		2.50	1	04/23/2018 23:02	WG1101940	
n-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Carbon disulfide	ND		0.500	1	04/23/2018 23:02	WG1101940	
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:02	WG1101940	
Chlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
Chloroethane	ND		2.50	1	04/23/2018 23:02	WG1101940	
Chloroform	ND		0.500	1	04/23/2018 23:02	WG1101940	
Chloromethane	ND		1.25	1	04/23/2018 23:02	WG1101940	
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:02	WG1101940	
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:02	WG1101940	
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
Dibromomethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:02	WG1101940	
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940	
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940	
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:02	WG1101940	
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940	
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:02	WG1101940	
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:02	WG1101940	
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:02	WG1101940	
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:02	WG1101940	
Ethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:02	WG1101940	
2-Hexanone	ND		5.00	1	04/23/2018 23:02	WG1101940	
n-Hexane	ND		5.00	1	04/23/2018 23:02	WG1101940	
Iodomethane	ND		10.0	1	04/23/2018 23:02	WG1101940	
Isopropylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:02	WG1101940	
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:02	WG1101940	
Methylene Chloride	ND		2.50	1	04/23/2018 23:02	WG1101940	JC 6/4/18
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:02	WG1101940	
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:02	WG1101940	
Naphthalene	ND		2.50	1	04/23/2018 23:02	WG1101940	
n-Propylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940	
Styrene	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940	
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Tetrachloroethene	1.59		0.500	1	04/23/2018 23:02	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:02	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:02	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:02	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:02	WG1101940
Vinyl acetate	ND UJ	J0	5.00	1	04/23/2018 23:02	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:02	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:02	WG1101940
(S) Toluene-d8	*104*		*80.0-120*		*04/23/2018 23:02*	WG1101940
(S) Dibromofluoromethane	*100*		*76.0-123*		*04/23/2018 23:02*	WG1101940
(S) 4-Bromofluorobenzene	*90.8*		*80.0-120*		*04/23/2018 23:02*	WG1101940

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	04/23/2018 23:20	WG1101940	
Acrylonitrile	ND		5.00	1	04/23/2018 23:20	WG1101940	
Benzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Bromobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Bromodichloromethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
Bromochloromethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
Bromoform	ND		0.500	1	04/23/2018 23:20	WG1101940	
Bromomethane	ND		2.50	1	04/23/2018 23:20	WG1101940	
n-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Carbon disulfide	ND		0.500	1	04/23/2018 23:20	WG1101940	
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:20	WG1101940	
Chlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
Chloroethane	ND		2.50	1	04/23/2018 23:20	WG1101940	
Chloroform	1.68		0.500	1	04/23/2018 23:20	WG1101940	
Chloromethane	ND		1.25	1	04/23/2018 23:20	WG1101940	
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:20	WG1101940	
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:20	WG1101940	
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
Dibromomethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:20	WG1101940	
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940	
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940	
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:20	WG1101940	
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940	
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:20	WG1101940	
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:20	WG1101940	
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:20	WG1101940	
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:20	WG1101940	
Ethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:20	WG1101940	
2-Hexanone	ND		5.00	1	04/23/2018 23:20	WG1101940	
n-Hexane	ND		5.00	1	04/23/2018 23:20	WG1101940	
Iodomethane	ND		10.0	1	04/23/2018 23:20	WG1101940	
Isopropylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:20	WG1101940	
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:20	WG1101940	
Methylene Chloride	ND		2.50	1	04/23/2018 23:20	WG1101940	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:20	WG1101940	
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:20	WG1101940	
Naphthalene	ND		2.50	1	04/23/2018 23:20	WG1101940	
n-Propylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940	
Styrene	ND		0.500	1	04/23/2018 23:20	WG1101940	JC 6/4/18
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940	
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Tetrachloroethene	5.74		0.500	1	04/23/2018 23:20	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:20	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:20	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:20	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:20	WG1101940
Vinyl acetate	ND	UJ J0	5.00	1	04/23/2018 23:20	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:20	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:20	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/23/2018 23:20*	WG1101940
(S) Dibromofluoromethane	*99.8*		*76.0-123*		*04/23/2018 23:20*	WG1101940
(S) 4-Bromofluorobenzene	*91.8*		*80.0-120*		*04/23/2018 23:20*	WG1101940

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:39	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:39	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:39	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:39	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:39	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:39	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:39	WG1101940
Chloroform	2.27		0.500	1	04/23/2018 23:39	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:39	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:39	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:39	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:39	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:39	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:39	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:39	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:39	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:39	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:39	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:39	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:39	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:39	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:39	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:39	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:39	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Tetrachloroethene	5.14		0.500	1	04/23/2018 23:39	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:39	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:39	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:39	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:39	WG1101940
Vinyl acetate	ND	UJ J0	5.00	1	04/23/2018 23:39	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:39	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:39	WG1101940
(S) Toluene-d8	*102*		*80.0-120*		*04/23/2018 23:39*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/23/2018 23:39*	WG1101940
(S) 4-Bromofluorobenzene	*92.8*		*80.0-120*		*04/23/2018 23:39*	WG1101940

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 23:57	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 23:57	WG1101940
Benzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromoform	ND		0.500	1	04/23/2018 23:57	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 23:57	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 23:57	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 23:57	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 23:57	WG1101940
Chloroform	ND		0.500	1	04/23/2018 23:57	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 23:57	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 23:57	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 23:57	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 23:57	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 23:57	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 23:57	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 23:57	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 23:57	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 23:57	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 23:57	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 23:57	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 23:57	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 23:57	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 23:57	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 23:57	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 23:57	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Styrene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Tetrachloroethene	1.14		0.500	1	04/23/2018 23:57	WG1101940
Toluene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,3-Trichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,4-Trichlorobenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,1-Trichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
1,1,2-Trichloroethane	ND		0.500	1	04/23/2018 23:57	WG1101940
Trichloroethene	ND		0.500	1	04/23/2018 23:57	WG1101940
Trichlorofluoromethane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2,3-Trichloropropane	ND		2.50	1	04/23/2018 23:57	WG1101940
1,2,4-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,2,3-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
1,3,5-Trimethylbenzene	ND		0.500	1	04/23/2018 23:57	WG1101940
Vinyl acetate	ND	UJ J0	5.00	1	04/23/2018 23:57	WG1101940
Vinyl chloride	ND		0.500	1	04/23/2018 23:57	WG1101940
Xylenes, Total	ND		1.50	1	04/23/2018 23:57	WG1101940
(S) Toluene-d8	*103*		*80.0-120*		*04/23/2018 23:57*	WG1101940
(S) Dibromofluoromethane	*101*		*76.0-123*		*04/23/2018 23:57*	WG1101940
(S) 4-Bromofluorobenzene	*91.0*		*80.0-120*		*04/23/2018 23:57*	WG1101940

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	04/23/2018 22:24	WG1101940
Acrylonitrile	ND		5.00	1	04/23/2018 22:24	WG1101940
Benzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromodichloromethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromochloromethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromoform	ND		0.500	1	04/23/2018 22:24	WG1101940
Bromomethane	ND		2.50	1	04/23/2018 22:24	WG1101940
n-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
sec-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
tert-Butylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Carbon disulfide	ND		0.500	1	04/23/2018 22:24	WG1101940
Carbon tetrachloride	ND		0.500	1	04/23/2018 22:24	WG1101940
Chlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Chlorodibromomethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Chloroethane	ND		2.50	1	04/23/2018 22:24	WG1101940
Chloroform	ND		0.500	1	04/23/2018 22:24	WG1101940
Chloromethane	ND		1.25	1	04/23/2018 22:24	WG1101940
2-Chlorotoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
4-Chlorotoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dibromo-3-Chloropropane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,2-Dibromoethane	ND		0.500	1	04/23/2018 22:24	WG1101940
Dibromomethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,3-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,4-Dichlorobenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Dichlorodifluoromethane	ND		2.50	1	04/23/2018 22:24	WG1101940
1,1-Dichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
cis-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,2-Dichloroethene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,2-Dichloropropane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,3-Dichloropropane	ND		1.00	1	04/23/2018 22:24	WG1101940
cis-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,3-Dichloropropene	ND		0.500	1	04/23/2018 22:24	WG1101940
trans-1,4-Dichloro-2-butene	ND		5.00	1	04/23/2018 22:24	WG1101940
2,2-Dichloropropane	ND		0.500	1	04/23/2018 22:24	WG1101940
Di-isopropyl ether	ND		0.500	1	04/23/2018 22:24	WG1101940
Ethylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Hexachloro-1,3-butadiene	ND		1.00	1	04/23/2018 22:24	WG1101940
2-Hexanone	ND		5.00	1	04/23/2018 22:24	WG1101940
n-Hexane	ND		5.00	1	04/23/2018 22:24	WG1101940
Iodomethane	ND		10.0	1	04/23/2018 22:24	WG1101940
Isopropylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
p-Isopropyltoluene	ND		0.500	1	04/23/2018 22:24	WG1101940
2-Butanone (MEK)	ND		5.00	1	04/23/2018 22:24	WG1101940
Methylene Chloride	ND		2.50	1	04/23/2018 22:24	WG1101940
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	04/23/2018 22:24	WG1101940
Methyl tert-butyl ether	ND		0.500	1	04/23/2018 22:24	WG1101940
Naphthalene	ND		2.50	1	04/23/2018 22:24	WG1101940
n-Propylbenzene	ND		0.500	1	04/23/2018 22:24	WG1101940
Styrene	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,1,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940
1,1,2,2-Tetrachloroethane	ND		0.500	1	04/23/2018 22:24	WG1101940

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l		Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND			0.500	1	04/23/2018 22:24	WG1101940
Tetrachloroethene	ND			0.500	1	04/23/2018 22:24	WG1101940
Toluene	ND			0.500	1	04/23/2018 22:24	WG1101940
1,2,3-Trichlorobenzene	ND			0.500	1	04/23/2018 22:24	WG1101940
1,2,4-Trichlorobenzene	ND			0.500	1	04/23/2018 22:24	WG1101940
1,1,1-Trichloroethane	ND			0.500	1	04/23/2018 22:24	WG1101940
1,1,2-Trichloroethane	ND			0.500	1	04/23/2018 22:24	WG1101940
Trichloroethene	ND			0.500	1	04/23/2018 22:24	WG1101940
Trichlorofluoromethane	ND			2.50	1	04/23/2018 22:24	WG1101940
1,2,3-Trichloropropane	ND			2.50	1	04/23/2018 22:24	WG1101940
1,2,4-Trimethylbenzene	ND			0.500	1	04/23/2018 22:24	WG1101940
1,2,3-Trimethylbenzene	ND			0.500	1	04/23/2018 22:24	WG1101940
1,3,5-Trimethylbenzene	ND			0.500	1	04/23/2018 22:24	WG1101940
Vinyl acetate	ND	UJ	J0	5.00	1	04/23/2018 22:24	WG1101940
Vinyl chloride	ND			0.500	1	04/23/2018 22:24	WG1101940
Xylenes, Total	ND			1.50	1	04/23/2018 22:24	WG1101940
(S) Toluene-d8	*103*			*80.0-120*		*04/23/2018 22:24*	WG1101940
(S) Dibromofluoromethane	*100*			*76.0-123*		*04/23/2018 22:24*	WG1101940
(S) 4-Bromofluorobenzene	*90.9*			*80.0-120*		*04/23/2018 22:24*	WG1101940

JC 6/4/18

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 30, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L1011270
Samples Received:	07/21/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	1358.001.01.003
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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MW-2-071718 L1011270-02 GW

Collected by: Shannon McKernan | Collected date/time: 07/17/18 10:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 01:02	07/23/18 01:02	LRL

DC-15-071818 L1011270-03 GW

Collected by: Shannon McKernan | Collected date/time: 07/18/18 09:30 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 01:22	07/23/18 01:22	LRL

MW-101-071818 L1011270-04 GW

Collected by: Shannon McKernan | Collected date/time: 07/18/18 12:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 01:42	07/23/18 01:42	LRL

DC-08-071818 L1011270-05 GW

Collected by: Shannon McKernan | Collected date/time: 07/18/18 11:30 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 02:02	07/23/18 02:02	LRL

DC-10A-071718 L1011270-06 GW

Collected by: Shannon McKernan | Collected date/time: 07/17/18 11:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 02:22	07/23/18 02:22	LRL

KMW-03-071918 L1011270-07 GW

Collected by: Shannon McKernan | Collected date/time: 07/19/18 10:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 02:42	07/23/18 02:42	LRL

MW-7-071918 L1011270-08 GW

Collected by: Shannon McKernan | Collected date/time: 07/19/18 10:45 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 03:02	07/23/18 03:02	LRL

KMW-8-071918 L1011270-09 GW

Collected by: Shannon McKernan | Collected date/time: 07/19/18 11:45 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 03:21	07/23/18 03:21	LRL

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 01:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:02	WG1141579
Chloroform	0.569		0.500	1	07/23/2018 01:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:02	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 01:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Tetrachloroethene	1.78		0.500	1	07/23/2018 01:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:02	WG1141579
(S) Toluene-d8	*107*		*80.0-120*		*07/23/2018 01:02*	WG1141579
(S) Dibromofluoromethane	*104*		*76.0-123*		*07/23/2018 01:02*	WG1141579
(S) 4-Bromofluorobenzene	*88.6*		*80.0-120*		*07/23/2018 01:02*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:22	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:22	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 01:22	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:22	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:22	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:22	WG1141579
Chloroform	ND		0.500	1	07/23/2018 01:22	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:22	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:22	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:22	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:22	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:22	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:22	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:22	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:22	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 01:22	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:22	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:22	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:22	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:22	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:22	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Tetrachloroethene	7.82		0.500	1	07/23/2018 01:22	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:22	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:22	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:22	WG1141579
(S) Toluene-d8	*104*		*80.0-120*		*07/23/2018 01:22*	WG1141579
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/23/2018 01:22*	WG1141579
(S) 4-Bromofluorobenzene	*87.5*		*80.0-120*		*07/23/2018 01:22*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:42	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:42	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 01:42	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:42	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:42	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:42	WG1141579
Chloroform	ND		0.500	1	07/23/2018 01:42	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:42	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:42	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:42	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:42	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:42	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:42	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:42	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:42	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 01:42	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:42	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:42	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:42	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:42	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:42	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Tetrachloroethene	7.39		0.500	1	07/23/2018 01:42	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:42	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:42	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:42	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 01:42*	WG1141579
(S) Dibromofluoromethane	*99.9*		*76.0-123*		*07/23/2018 01:42*	WG1141579
(S) 4-Bromofluorobenzene	*84.7*		*80.0-120*		*07/23/2018 01:42*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 02:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 02:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 02:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 02:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 02:02	WG1141579
Chloroform	ND		0.500	1	07/23/2018 02:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 02:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 02:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 02:02	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 02:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 02:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 02:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Tetrachloroethene	11.7		0.500	1	07/23/2018 02:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:02	WG1141579
(S) Toluene-d8	*106*		*80.0-120*		*07/23/2018 02:02*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 02:02*	WG1141579
(S) 4-Bromofluorobenzene	*89.7*		*80.0-120*		*07/23/2018 02:02*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 02:22	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 02:22	WG1141579
Benzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Bromoform	ND		0.500	1	07/23/2018 02:22	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 02:22	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 02:22	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:22	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 02:22	WG1141579
Chloroform	ND		0.500	1	07/23/2018 02:22	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 02:22	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:22	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:22	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:22	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:22	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:22	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:22	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 02:22	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 02:22	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 02:22	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:22	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:22	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 02:22	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:22	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:22	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 02:22	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Styrene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Tetrachloroethene	2.68		0.500	1	07/23/2018 02:22	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:22	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:22	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:22	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 02:22*	WG1141579
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/23/2018 02:22*	WG1141579
(S) 4-Bromofluorobenzene	*84.9*		*80.0-120*		*07/23/2018 02:22*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 02:42	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 02:42	WG1141579
Benzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Bromoform	ND		0.500	1	07/23/2018 02:42	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 02:42	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 02:42	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:42	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 02:42	WG1141579
Chloroform	ND		0.500	1	07/23/2018 02:42	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 02:42	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:42	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:42	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:42	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:42	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:42	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:42	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 02:42	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 02:42	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 02:42	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:42	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:42	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 02:42	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:42	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:42	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 02:42	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Styrene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Tetrachloroethene	5.18		0.500	1	07/23/2018 02:42	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:42	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:42	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:42	WG1141579
(S) Toluene-d8	*102*		*80.0-120*		*07/23/2018 02:42*	WG1141579
(S) Dibromofluoromethane	*100*		*76.0-123*		*07/23/2018 02:42*	WG1141579
(S) 4-Bromofluorobenzene	*85.5*		*80.0-120*		*07/23/2018 02:42*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 03:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 03:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 03:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 03:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 03:02	WG1141579
Chloroform	ND		0.500	1	07/23/2018 03:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 03:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 03:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 03:02	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 03:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 03:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 03:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Tetrachloroethene	6.60		0.500	1	07/23/2018 03:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:02	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 03:02*	WG1141579
(S) Dibromofluoromethane	*99.7*		*76.0-123*		*07/23/2018 03:02*	WG1141579
(S) 4-Bromofluorobenzene	*88.9*		*80.0-120*		*07/23/2018 03:02*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 03:21	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 03:21	WG1141579
Benzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromoform	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 03:21	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 03:21	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:21	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 03:21	WG1141579
Chloroform	1.13		0.500	1	07/23/2018 03:21	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 03:21	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:21	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:21	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:21	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:21	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:21	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 03:21	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 03:21	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 03:21	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:21	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 03:21	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:21	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:21	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 03:21	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Styrene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Tetrachloroethene	5.17		0.500	1	07/23/2018 03:21	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:21	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:21	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:21	WG1141579
(S) Toluene-d8	*106*		*80.0-120*		*07/23/2018 03:21*	WG1141579
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/23/2018 03:21*	WG1141579
(S) 4-Bromofluorobenzene	*87.1*		*80.0-120*		*07/23/2018 03:21*	WG1141579

Method Blank (MB)

(MB) R3327795-5 07/22/18 21:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3327795-5 07/22/18 21:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*99.9*			*76.0-123*
(S) 4-Bromofluorobenzene	*87.9*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3327795-1 07/22/18 19:04 • (LCSD) R3327795-3 07/22/18 19:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	109	123	87.1	98.1	10.0-160			11.9	23
Acrylonitrile	125	125	126	100	101	60.0-142			0.704	20
Benzene	25.0	24.3	23.1	97.3	92.3	69.0-123			5.22	20
Bromobenzene	25.0	21.6	21.1	86.3	84.4	79.0-120			2.26	20
Bromodichloromethane	25.0	25.8	24.9	103	99.5	76.0-120			3.66	20
Bromochloromethane	25.0	25.9	25.0	104	100	76.0-122			3.62	20
Bromoform	25.0	22.6	23.0	90.5	92.0	67.0-132			1.62	20
Bromomethane	25.0	13.5	13.6	54.1	54.5	18.0-160			0.783	20
n-Butylbenzene	25.0	25.0	24.1	100	96.6	72.0-126			3.42	20
sec-Butylbenzene	25.0	25.0	24.8	100	99.3	74.0-121			0.830	20
tert-Butylbenzene	25.0	23.2	23.1	92.7	92.3	75.0-122			0.465	20
Carbon disulfide	25.0	21.6	21.4	86.4	85.5	55.0-127			1.03	20
Carbon tetrachloride	25.0	23.5	23.1	93.8	92.3	63.0-122			1.62	20
Chlorobenzene	25.0	25.5	25.8	102	103	79.0-121			1.21	20
Chlorodibromomethane	25.0	24.5	24.7	97.9	98.8	75.0-125			0.878	20
Chloroethane	25.0	30.0	28.1	120	112	47.0-152			6.54	20
Chloroform	25.0	25.8	24.4	103	97.8	72.0-121			5.33	20
Chloromethane	25.0	31.1	31.4	124	125	48.0-139			0.900	20
2-Chlorotoluene	25.0	24.1	23.5	96.3	93.9	74.0-122			2.55	20
4-Chlorotoluene	25.0	23.9	23.1	95.6	92.5	79.0-120			3.36	20
1,2-Dibromo-3-Chloropropane	25.0	26.0	24.7	104	98.8	64.0-127			5.21	20
1,2-Dibromoethane	25.0	25.5	26.0	102	104	77.0-123			1.61	20
Dibromomethane	25.0	25.4	24.5	102	98.2	78.0-120			3.37	20
1,2-Dichlorobenzene	25.0	25.6	25.2	102	101	80.0-120			1.85	20
1,3-Dichlorobenzene	25.0	24.0	23.8	96.0	95.2	72.0-123			0.795	20
1,4-Dichlorobenzene	25.0	24.8	23.8	99.3	95.3	77.0-120			4.13	20
Dichlorodifluoromethane	25.0	25.7	25.1	103	100	49.0-155			2.60	20
1,1-Dichloroethane	25.0	25.2	24.1	101	96.5	70.0-126			4.35	20
1,2-Dichloroethane	25.0	26.6	24.6	106	98.3	67.0-126			8.00	20
1,1-Dichloroethene	25.0	24.0	23.7	96.1	94.8	64.0-129			1.43	20
cis-1,2-Dichloroethene	25.0	25.3	24.0	101	96.1	73.0-120			5.24	20
trans-1,2-Dichloroethene	25.0	24.7	24.6	98.6	98.6	71.0-121			0.0770	20
1,2-Dichloropropane	25.0	26.0	25.4	104	102	75.0-125			2.22	20
1,1-Dichloropropene	25.0	25.5	24.1	102	96.4	71.0-129			5.85	20
1,3-Dichloropropane	25.0	25.9	25.6	103	102	80.0-121			1.05	20
cis-1,3-Dichloropropene	25.0	26.5	25.9	106	104	79.0-123			2.12	20
trans-1,3-Dichloropropene	25.0	24.8	23.9	99.3	95.4	74.0-127			4.02	20
trans-1,4-Dichloro-2-butene	25.0	25.5	23.9	102	95.7	55.0-134			6.48	20
2,2-Dichloropropane	25.0	25.1	23.5	100	94.1	60.0-125			6.37	20
Di-isopropyl ether	25.0	24.9	23.9	99.6	95.6	59.0-133			4.16	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3327795-1 07/22/18 19:04 • (LCSD) R3327795-3 07/22/18 19:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.8	25.3	99.2	101	77.0-120			2.01	20
Hexachloro-1,3-butadiene	25.0	20.7	20.9	82.7	83.6	64.0-131			1.09	20
2-Hexanone	125	129	134	103	107	58.0-147			3.63	20
n-Hexane	25.0	23.6	22.7	94.6	90.8	56.0-124			4.14	20
Iodomethane	125	60.1	72.8	48.1	58.2	57.0-140	J4		19.0	20
Isopropylbenzene	25.0	23.5	23.0	94.0	92.1	75.0-120			2.04	20
p-Isopropyltoluene	25.0	25.4	24.7	102	98.7	74.0-126			2.92	20
2-Butanone (MEK)	125	114	115	91.3	92.0	37.0-158			0.818	20
Methylene Chloride	25.0	22.6	21.8	90.5	87.2	66.0-121			3.70	20
4-Methyl-2-pentanone (MIBK)	125	126	127	101	101	59.0-143			0.539	20
Methyl tert-butyl ether	25.0	25.5	24.6	102	98.4	64.0-123			3.62	20
Naphthalene	25.0	23.8	24.8	95.0	99.0	62.0-128			4.15	20
n-Propylbenzene	25.0	22.8	22.6	91.1	90.5	79.0-120			0.659	20
Styrene	25.0	23.4	22.7	93.8	90.9	78.0-124			3.08	20
1,1,1,2-Tetrachloroethane	25.0	25.4	26.3	102	105	75.0-122			3.50	20
1,1,2,2-Tetrachloroethane	25.0	24.5	24.4	98.0	97.5	71.0-122			0.591	20
1,1,2-Trichlorotrifluoroethane	25.0	24.9	25.2	99.5	101	61.0-136			1.45	20
Tetrachloroethene	25.0	24.5	24.7	97.9	98.7	70.0-127			0.884	20
Toluene	25.0	24.3	24.7	97.2	98.9	77.0-120			1.63	20
1,2,3-Trichlorobenzene	25.0	23.8	24.1	95.2	96.2	61.0-133			1.04	20
1,2,4-Trichlorobenzene	25.0	23.9	24.2	95.5	96.9	69.0-129			1.54	20
1,1,1-Trichloroethane	25.0	24.6	23.9	98.4	95.6	68.0-122			2.85	20
1,1,2-Trichloroethane	25.0	26.0	25.4	104	102	78.0-120			2.27	20
Trichloroethene	25.0	24.5	23.6	98.0	94.2	78.0-120			3.91	20
Trichlorofluoromethane	25.0	27.4	27.0	110	108	56.0-137			1.50	20
1,2,3-Trichloropropane	25.0	25.4	24.8	101	99.3	72.0-124			2.11	20
1,2,4-Trimethylbenzene	25.0	24.8	25.7	99.3	103	75.0-120			3.56	20
1,2,3-Trimethylbenzene	25.0	25.1	24.5	100	97.8	75.0-120			2.56	20
1,3,5-Trimethylbenzene	25.0	24.7	23.8	98.7	95.4	75.0-120			3.48	20
Vinyl acetate	125	140	126	112	101	46.0-160			10.6	20
Vinyl chloride	25.0	25.9	24.8	104	99.1	64.0-133			4.65	20
Xylenes, Total	75.0	73.4	74.7	97.9	99.6	77.0-120			1.76	20
(S) Toluene-d8				*101*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*98.2*	*98.3*	*76.0-123*				
(S) 4-Bromofluorobenzene				*88.6*	*88.5*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

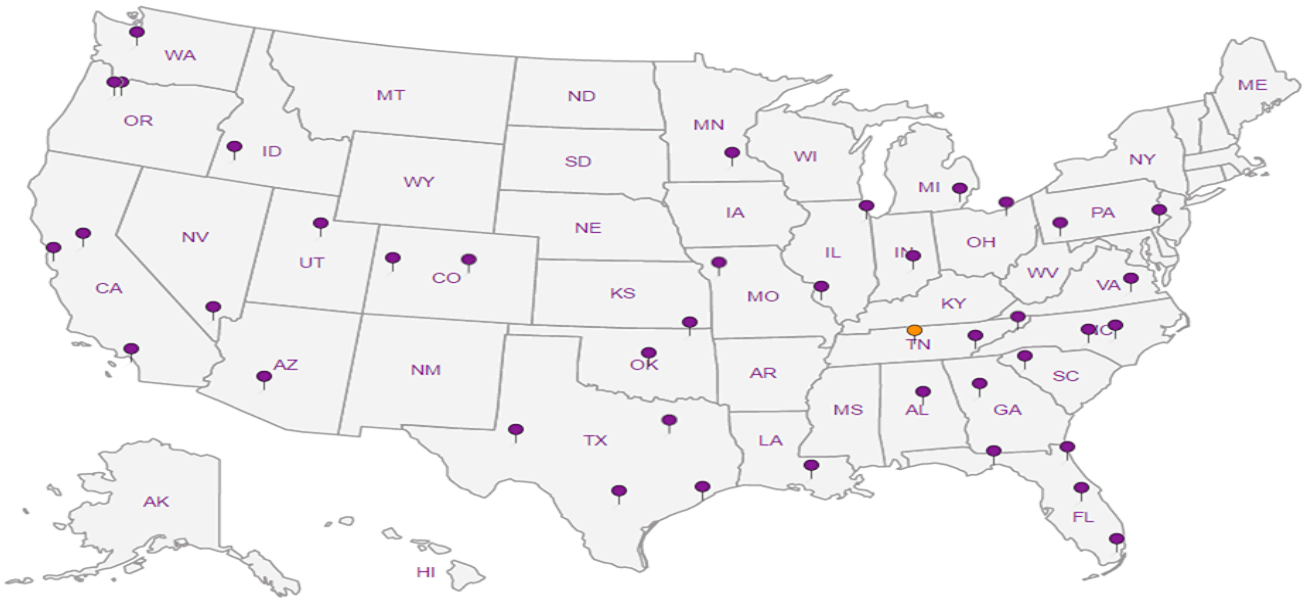
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: NORMANDY PARK, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): SHANNON MCKERNAN

Site/Facility ID # 1358.001.01.003

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	V8260LLC VOCs 40mlAmb-HCl	Remarks	Sample # (lab only)
TRIP BLANK	—	~~W~~ GW	—	9/11/17	—	1			
MW-2-071718	GRAB	GW	37	7/17/18	1000	3	X		01
DC-15 ~~071818~~ 071818	↓	GW	37	7/18/18	0930	3	X		02
~~DC-08-071818~~		GW	~~38~~						03
MW-101-071818		GW	37.5	7/18/18	1200	3	X		
DC-08-071818	↓	GW	38	↓	1130	3	X		04
DC-10A-071718	↓		36	7/17/18	1100	3	X		05
KMW-03-071918			~~35~~ 26.5	7/19/18	1000	3	X		06
MW-7-071918	↓	↓	28.5	↓	10~~45~~	3	X		07
KMW-8-071918	↓	↓	38	↓	1145	3	X		08

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 7466 1466 8897

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	7/20/18	1330		1
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9 °C Bottles Received: 24
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/21/18 Time: 845
				Hold: Condition NCF / OK

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

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L# 101270
F239

Acctnum: PESENVSWA
Template: T131700
Prelogin: P662457
TSR: 110 - Brian Ford
PB:
Shipped Via:

MEMORANDUM

TO: Project File **DATE:** August 8, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: **1358.001.01.003**

TASK: July 17-19, 2018 Groundwater Samples

LAB: Pace Analytical (formerly ESC Lab Sciences) Sample Delivery Group: L1011270

Eight (8) groundwater samples (including a field duplicate) were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on July 17-19, 2018. Samples associated with SDG L101270 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Pace Analytical (Pace) of Mt. Juliet, Tennessee.

The monitoring event occurred between July 17 and 20, 2018 and data are also reported in SDG L1011421. The quality assurance review of the laboratory data for SDG L101270 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

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

- A trip blank was collected but was not submitted for analysis.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 2.9 degrees Centigrade (°C). The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Pace's notes indicate the following:

USEPA Method 8260C: Continuing calibration verification (CCV) issue is noted by Pace for bromomethane and iodomethane (also known as methyl iodide) associated with analytical batch WG1141579 (analyzed on July 22, 2018). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **The associated sample bromomethane and iodomethane results are laboratory qualified J0, estimated, and qualified (UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

The trip blank was not analyzed.

Equipment Blank Results

An equipment blank sample was collected on July 19, 2018. Refer to SDG L1011421 for details.

Field Duplicate Analyses

Field duplicate samples (DC-15-071818 and MW-101-071818) were collected and analyzed for VOCs. Results are comparable with relative percent difference (RPDs) of less than 20%.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's for analytical batch (WG1067406) are within the laboratory control limits. Refer to the field duplicate data for precision information. Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) % Rs and RPDs for analytical batch (WG1141579) are within laboratory control limit criteria with one exception:

- LCS % R for iodomethane (also known as methyl iodide) is low and below laboratory acceptance criteria. **All associated samples iodomethane results are estimated and qualified (UJ) due to low LCS recoveries.**

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

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.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:02	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 01:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:02	WG1141579
Chloroform	0.569		0.500	1	07/23/2018 01:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:02	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 01:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:02	WG1141579 JC 8/8/18
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Tetrachloroethene	1.78		0.500	1	07/23/2018 01:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:02	WG1141579
(S) Toluene-d8	*107*		*80.0-120*		*07/23/2018 01:02*	WG1141579
(S) Dibromofluoromethane	*104*		*76.0-123*		*07/23/2018 01:02*	WG1141579
(S) 4-Bromofluorobenzene	*88.6*		*80.0-120*		*07/23/2018 01:02*	WG1141579

JC 8/8/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:22	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:22	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:22	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 01:22	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:22	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:22	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:22	WG1141579
Chloroform	ND		0.500	1	07/23/2018 01:22	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:22	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:22	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:22	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:22	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:22	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:22	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:22	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:22	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:22	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 01:22	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:22	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:22	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:22	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:22	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:22	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:22	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Tetrachloroethene	7.82		0.500	1	07/23/2018 01:22	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:22	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:22	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:22	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:22	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:22	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:22	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:22	WG1141579
(S) Toluene-d8	*104*		*80.0-120*		*07/23/2018 01:22*	WG1141579
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/23/2018 01:22*	WG1141579
(S) 4-Bromofluorobenzene	*87.5*		*80.0-120*		*07/23/2018 01:22*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 01:42	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 01:42	WG1141579
Benzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromoform	ND		0.500	1	07/23/2018 01:42	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 01:42	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 01:42	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 01:42	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 01:42	WG1141579
Chloroform	ND		0.500	1	07/23/2018 01:42	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 01:42	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 01:42	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 01:42	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 01:42	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 01:42	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 01:42	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 01:42	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 01:42	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 01:42	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 01:42	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 01:42	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 01:42	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 01:42	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 01:42	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 01:42	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 01:42	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Styrene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Tetrachloroethene	7.39		0.500	1	07/23/2018 01:42	WG1141579
Toluene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 01:42	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 01:42	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 01:42	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 01:42	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 01:42	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 01:42	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 01:42	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 01:42*	WG1141579
(S) Dibromofluoromethane	*99.9*		*76.0-123*		*07/23/2018 01:42*	WG1141579
(S) 4-Bromofluorobenzene	*84.7*		*80.0-120*		*07/23/2018 01:42*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 02:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 02:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 02:02	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 02:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 02:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 02:02	WG1141579
Chloroform	ND		0.500	1	07/23/2018 02:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 02:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 02:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 02:02	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 02:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 02:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 02:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Tetrachloroethene	11.7		0.500	1	07/23/2018 02:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:02	WG1141579
(S) Toluene-d8	*106*		*80.0-120*		*07/23/2018 02:02*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 02:02*	WG1141579
(S) 4-Bromofluorobenzene	*89.7*		*80.0-120*		*07/23/2018 02:02*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	07/23/2018 02:22	WG1141579	
Acrylonitrile	ND		5.00	1	07/23/2018 02:22	WG1141579	
Benzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Bromobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Bromodichloromethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
Bromochloromethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
Bromoform	ND		0.500	1	07/23/2018 02:22	WG1141579	
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 02:22	WG1141579	
n-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Carbon disulfide	ND		0.500	1	07/23/2018 02:22	WG1141579	
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:22	WG1141579	
Chlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
Chloroethane	ND		2.50	1	07/23/2018 02:22	WG1141579	
Chloroform	ND		0.500	1	07/23/2018 02:22	WG1141579	
Chloromethane	ND		1.25	1	07/23/2018 02:22	WG1141579	
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:22	WG1141579	
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:22	WG1141579	
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
Dibromomethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:22	WG1141579	
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579	
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579	
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:22	WG1141579	
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579	
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:22	WG1141579	
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:22	WG1141579	
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:22	WG1141579	
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:22	WG1141579	
Ethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:22	WG1141579	
2-Hexanone	ND		5.00	1	07/23/2018 02:22	WG1141579	
n-Hexane	ND		5.00	1	07/23/2018 02:22	WG1141579	
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 02:22	WG1141579	
Isopropylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:22	WG1141579	
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:22	WG1141579	
Methylene Chloride	ND		2.50	1	07/23/2018 02:22	WG1141579	JC 8/8/18
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:22	WG1141579	
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:22	WG1141579	
Naphthalene	ND		2.50	1	07/23/2018 02:22	WG1141579	
n-Propylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579	
Styrene	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579	
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Tetrachloroethene	2.68		0.500	1	07/23/2018 02:22	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:22	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:22	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:22	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:22	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:22	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:22	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:22	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 02:22*	WG1141579
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/23/2018 02:22*	WG1141579
(S) 4-Bromofluorobenzene	*84.9*		*80.0-120*		*07/23/2018 02:22*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	07/23/2018 02:42	WG1141579	
Acrylonitrile	ND		5.00	1	07/23/2018 02:42	WG1141579	
Benzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Bromobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Bromodichloromethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
Bromochloromethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
Bromoform	ND		0.500	1	07/23/2018 02:42	WG1141579	
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 02:42	WG1141579	
n-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
sec-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
tert-Butylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Carbon disulfide	ND		0.500	1	07/23/2018 02:42	WG1141579	
Carbon tetrachloride	ND		0.500	1	07/23/2018 02:42	WG1141579	
Chlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Chlorodibromomethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
Chloroethane	ND		2.50	1	07/23/2018 02:42	WG1141579	
Chloroform	ND		0.500	1	07/23/2018 02:42	WG1141579	
Chloromethane	ND		1.25	1	07/23/2018 02:42	WG1141579	
2-Chlorotoluene	ND		0.500	1	07/23/2018 02:42	WG1141579	
4-Chlorotoluene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 02:42	WG1141579	
1,2-Dibromoethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
Dibromomethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 02:42	WG1141579	
1,1-Dichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,2-Dichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,1-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579	
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579	
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,2-Dichloropropane	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,1-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,3-Dichloropropane	ND		1.00	1	07/23/2018 02:42	WG1141579	
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579	
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 02:42	WG1141579	
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 02:42	WG1141579	
2,2-Dichloropropane	ND		0.500	1	07/23/2018 02:42	WG1141579	
Di-isopropyl ether	ND		0.500	1	07/23/2018 02:42	WG1141579	
Ethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 02:42	WG1141579	JC 8/8/18
2-Hexanone	ND		5.00	1	07/23/2018 02:42	WG1141579	
n-Hexane	ND		5.00	1	07/23/2018 02:42	WG1141579	
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 02:42	WG1141579	
Isopropylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
p-Isopropyltoluene	ND		0.500	1	07/23/2018 02:42	WG1141579	
2-Butanone (MEK)	ND		5.00	1	07/23/2018 02:42	WG1141579	
Methylene Chloride	ND		2.50	1	07/23/2018 02:42	WG1141579	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 02:42	WG1141579	
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 02:42	WG1141579	
Naphthalene	ND		2.50	1	07/23/2018 02:42	WG1141579	
n-Propylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579	
Styrene	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579	
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Tetrachloroethene	5.18		0.500	1	07/23/2018 02:42	WG1141579
Toluene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 02:42	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 02:42	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 02:42	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 02:42	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 02:42	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 02:42	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 02:42	WG1141579
(S) Toluene-d8	*102*		*80.0-120*		*07/23/2018 02:42*	WG1141579
(S) Dibromofluoromethane	*100*		*76.0-123*		*07/23/2018 02:42*	WG1141579
(S) 4-Bromofluorobenzene	*85.5*		*80.0-120*		*07/23/2018 02:42*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 03:02	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 03:02	WG1141579
Benzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromoform	ND		0.500	1	07/23/2018 03:02	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 03:02	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 03:02	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:02	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 03:02	WG1141579
Chloroform	ND		0.500	1	07/23/2018 03:02	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 03:02	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:02	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:02	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:02	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:02	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:02	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:02	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 03:02	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 03:02	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 03:02	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:02	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:02	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 03:02	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:02	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:02	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 03:02	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Styrene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Tetrachloroethene	6.60		0.500	1	07/23/2018 03:02	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:02	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:02	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:02	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:02	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:02	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:02	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:02	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 03:02*	WG1141579
(S) Dibromofluoromethane	*99.7*		*76.0-123*		*07/23/2018 03:02*	WG1141579
(S) 4-Bromofluorobenzene	*88.9*		*80.0-120*		*07/23/2018 03:02*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 03:21	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 03:21	WG1141579
Benzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromoform	ND		0.500	1	07/23/2018 03:21	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 03:21	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 03:21	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:21	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 03:21	WG1141579
Chloroform	1.13		0.500	1	07/23/2018 03:21	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 03:21	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:21	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:21	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:21	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:21	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:21	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:21	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 03:21	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 03:21	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 03:21	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:21	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:21	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 03:21	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:21	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:21	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 03:21	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Styrene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Tetrachloroethene	5.17		0.500	1	07/23/2018 03:21	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:21	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:21	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:21	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:21	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:21	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:21	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:21	WG1141579
(S) Toluene-d8	*106*		*80.0-120*		*07/23/2018 03:21*	WG1141579
(S) Dibromofluoromethane	*101*		*76.0-123*		*07/23/2018 03:21*	WG1141579
(S) 4-Bromofluorobenzene	*87.1*		*80.0-120*		*07/23/2018 03:21*	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 30, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L1011421
Samples Received:	07/21/2018
Project Number:	1358.001.01.003
Description:	MVSC

Report To: Karsten Springstead
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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DC-14-071918 L1011421-01 GW

Collected by: Shannon McKernan | Collected date/time: 07/19/18 13:30 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 03:41	07/23/18 03:41	LRL

EQB-1-071918 L1011421-02 GW

Collected by: Shannon McKernan | Collected date/time: 07/19/18 14:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 04:01	07/23/18 04:01	LRL

DC-17-072018 L1011421-03 GW

Collected by: Shannon McKernan | Collected date/time: 07/20/18 09:35 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 04:21	07/23/18 04:21	LRL

DC-7-072018 L1011421-04 GW

Collected by: Shannon McKernan | Collected date/time: 07/20/18 10:40 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 04:41	07/23/18 04:41	LRL

TRIP BLANK L1011421-05 GW

Collected by: Shannon McKernan | Collected date/time: 09/11/17 00:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 00:23	07/23/18 00:23	LRL

DRUM-072018 L1011421-06 GW

Collected by: Shannon McKernan | Collected date/time: 07/20/18 12:00 | Received date/time: 07/21/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1141579	1	07/23/18 05:01	07/23/18 05:01	LRL

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 03:41	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 03:41	WG1141579
Benzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Bromoform	ND		0.500	1	07/23/2018 03:41	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 03:41	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 03:41	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:41	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 03:41	WG1141579
Chloroform	1.25		0.500	1	07/23/2018 03:41	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 03:41	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:41	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:41	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:41	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:41	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:41	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:41	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 03:41	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 03:41	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 03:41	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:41	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:41	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 03:41	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:41	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:41	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 03:41	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Styrene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Tetrachloroethene	5.40		0.500	1	07/23/2018 03:41	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:41	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:41	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:41	WG1141579
(S) Toluene-d8	*104*		*80.0-120*		*07/23/2018 03:41*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 03:41*	WG1141579
(S) 4-Bromofluorobenzene	*87.7*		*80.0-120*		*07/23/2018 03:41*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 04:01	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 04:01	WG1141579
Benzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromoform	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 04:01	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 04:01	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 04:01	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 04:01	WG1141579
Chloroform	ND		0.500	1	07/23/2018 04:01	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 04:01	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 04:01	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 04:01	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 04:01	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 04:01	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 04:01	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 04:01	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 04:01	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 04:01	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 04:01	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 04:01	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 04:01	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 04:01	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 04:01	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Styrene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:01	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:01	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:01	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:01*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 04:01*	WG1141579
(S) 4-Bromofluorobenzene	*86.8*		*80.0-120*		*07/23/2018 04:01*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 04:21	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 04:21	WG1141579
Benzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Bromoform	ND		0.500	1	07/23/2018 04:21	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 04:21	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 04:21	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 04:21	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 04:21	WG1141579
Chloroform	ND		0.500	1	07/23/2018 04:21	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 04:21	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 04:21	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 04:21	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:21	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 04:21	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:21	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:21	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 04:21	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 04:21	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 04:21	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 04:21	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 04:21	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 04:21	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 04:21	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 04:21	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 04:21	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 04:21	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 04:21	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 04:21	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 04:21	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Styrene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Tetrachloroethene	8.62		0.500	1	07/23/2018 04:21	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:21	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:21	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:21	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:21	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:21*	WG1141579
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/23/2018 04:21*	WG1141579
(S) 4-Bromofluorobenzene	*87.0*		*80.0-120*		*07/23/2018 04:21*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 04:41	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 04:41	WG1141579
Benzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Bromoform	ND		0.500	1	07/23/2018 04:41	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 04:41	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 04:41	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 04:41	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 04:41	WG1141579
Chloroform	ND		0.500	1	07/23/2018 04:41	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 04:41	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 04:41	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 04:41	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 04:41	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 04:41	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 04:41	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 04:41	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 04:41	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 04:41	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 04:41	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 04:41	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 04:41	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 04:41	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 04:41	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 04:41	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 04:41	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Styrene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Tetrachloroethene	12.3		0.500	1	07/23/2018 04:41	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:41	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:41	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:41	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:41*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 04:41*	WG1141579
(S) 4-Bromofluorobenzene	*85.7*		*80.0-120*		*07/23/2018 04:41*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 00:23	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 00:23	WG1141579
Benzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Bromoform	ND		0.500	1	07/23/2018 00:23	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 00:23	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 00:23	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 00:23	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 00:23	WG1141579
Chloroform	ND		0.500	1	07/23/2018 00:23	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 00:23	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 00:23	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 00:23	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 00:23	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 00:23	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 00:23	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 00:23	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 00:23	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 00:23	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 00:23	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 00:23	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 00:23	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 00:23	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 00:23	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 00:23	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 00:23	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 00:23	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 00:23	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Styrene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
Toluene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 00:23	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 00:23	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 00:23	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 00:23*	WG1141579
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*07/23/2018 00:23*	WG1141579
(S) 4-Bromofluorobenzene	*90.5*		*80.0-120*		*07/23/2018 00:23*	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 05:01	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 05:01	WG1141579
Benzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Bromoform	ND		0.500	1	07/23/2018 05:01	WG1141579
Bromomethane	ND	J0	2.50	1	07/23/2018 05:01	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Carbon disulfide	0.570		0.500	1	07/23/2018 05:01	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 05:01	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 05:01	WG1141579
Chloroform	ND		0.500	1	07/23/2018 05:01	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 05:01	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 05:01	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 05:01	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 05:01	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 05:01	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 05:01	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 05:01	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 05:01	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 05:01	WG1141579
Iodomethane	ND	J0 J4	10.0	1	07/23/2018 05:01	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 05:01	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 05:01	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 05:01	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 05:01	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 05:01	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 05:01	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Styrene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	ug/l		ug/l		date / time	
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
Toluene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 05:01	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 05:01	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 05:01	WG1141579
(S) Toluene-d8	*102*		*80.0-120*		*07/23/2018 05:01*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 05:01*	WG1141579
(S) 4-Bromofluorobenzene	*85.7*		*80.0-120*		*07/23/2018 05:01*	WG1141579

Method Blank (MB)

(MB) R3327795-5 07/22/18 21:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3327795-5 07/22/18 21:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*105*			*80.0-120*
(S) Dibromofluoromethane	*99.9*			*76.0-123*
(S) 4-Bromofluorobenzene	*87.9*			*80.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3327795-1 07/22/18 19:04 • (LCSD) R3327795-3 07/22/18 19:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	109	123	87.1	98.1	10.0-160			11.9	23
Acrylonitrile	125	125	126	100	101	60.0-142			0.704	20
Benzene	25.0	24.3	23.1	97.3	92.3	69.0-123			5.22	20
Bromobenzene	25.0	21.6	21.1	86.3	84.4	79.0-120			2.26	20
Bromodichloromethane	25.0	25.8	24.9	103	99.5	76.0-120			3.66	20
Bromochloromethane	25.0	25.9	25.0	104	100	76.0-122			3.62	20
Bromoform	25.0	22.6	23.0	90.5	92.0	67.0-132			1.62	20
Bromomethane	25.0	13.5	13.6	54.1	54.5	18.0-160			0.783	20
n-Butylbenzene	25.0	25.0	24.1	100	96.6	72.0-126			3.42	20
sec-Butylbenzene	25.0	25.0	24.8	100	99.3	74.0-121			0.830	20
tert-Butylbenzene	25.0	23.2	23.1	92.7	92.3	75.0-122			0.465	20
Carbon disulfide	25.0	21.6	21.4	86.4	85.5	55.0-127			1.03	20
Carbon tetrachloride	25.0	23.5	23.1	93.8	92.3	63.0-122			1.62	20
Chlorobenzene	25.0	25.5	25.8	102	103	79.0-121			1.21	20
Chlorodibromomethane	25.0	24.5	24.7	97.9	98.8	75.0-125			0.878	20
Chloroethane	25.0	30.0	28.1	120	112	47.0-152			6.54	20
Chloroform	25.0	25.8	24.4	103	97.8	72.0-121			5.33	20
Chloromethane	25.0	31.1	31.4	124	125	48.0-139			0.900	20
2-Chlorotoluene	25.0	24.1	23.5	96.3	93.9	74.0-122			2.55	20
4-Chlorotoluene	25.0	23.9	23.1	95.6	92.5	79.0-120			3.36	20
1,2-Dibromo-3-Chloropropane	25.0	26.0	24.7	104	98.8	64.0-127			5.21	20
1,2-Dibromoethane	25.0	25.5	26.0	102	104	77.0-123			1.61	20
Dibromomethane	25.0	25.4	24.5	102	98.2	78.0-120			3.37	20
1,2-Dichlorobenzene	25.0	25.6	25.2	102	101	80.0-120			1.85	20
1,3-Dichlorobenzene	25.0	24.0	23.8	96.0	95.2	72.0-123			0.795	20
1,4-Dichlorobenzene	25.0	24.8	23.8	99.3	95.3	77.0-120			4.13	20
Dichlorodifluoromethane	25.0	25.7	25.1	103	100	49.0-155			2.60	20
1,1-Dichloroethane	25.0	25.2	24.1	101	96.5	70.0-126			4.35	20
1,2-Dichloroethane	25.0	26.6	24.6	106	98.3	67.0-126			8.00	20
1,1-Dichloroethene	25.0	24.0	23.7	96.1	94.8	64.0-129			1.43	20
cis-1,2-Dichloroethene	25.0	25.3	24.0	101	96.1	73.0-120			5.24	20
trans-1,2-Dichloroethene	25.0	24.7	24.6	98.6	98.6	71.0-121			0.0770	20
1,2-Dichloropropane	25.0	26.0	25.4	104	102	75.0-125			2.22	20
1,1-Dichloropropene	25.0	25.5	24.1	102	96.4	71.0-129			5.85	20
1,3-Dichloropropane	25.0	25.9	25.6	103	102	80.0-121			1.05	20
cis-1,3-Dichloropropene	25.0	26.5	25.9	106	104	79.0-123			2.12	20
trans-1,3-Dichloropropene	25.0	24.8	23.9	99.3	95.4	74.0-127			4.02	20
trans-1,4-Dichloro-2-butene	25.0	25.5	23.9	102	95.7	55.0-134			6.48	20
2,2-Dichloropropane	25.0	25.1	23.5	100	94.1	60.0-125			6.37	20
Di-isopropyl ether	25.0	24.9	23.9	99.6	95.6	59.0-133			4.16	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3327795-1 07/22/18 19:04 • (LCSD) R3327795-3 07/22/18 19:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.8	25.3	99.2	101	77.0-120			2.01	20
Hexachloro-1,3-butadiene	25.0	20.7	20.9	82.7	83.6	64.0-131			1.09	20
2-Hexanone	125	129	134	103	107	58.0-147			3.63	20
n-Hexane	25.0	23.6	22.7	94.6	90.8	56.0-124			4.14	20
Iodomethane	125	60.1	72.8	48.1	58.2	57.0-140	J4		19.0	20
Isopropylbenzene	25.0	23.5	23.0	94.0	92.1	75.0-120			2.04	20
p-Isopropyltoluene	25.0	25.4	24.7	102	98.7	74.0-126			2.92	20
2-Butanone (MEK)	125	114	115	91.3	92.0	37.0-158			0.818	20
Methylene Chloride	25.0	22.6	21.8	90.5	87.2	66.0-121			3.70	20
4-Methyl-2-pentanone (MIBK)	125	126	127	101	101	59.0-143			0.539	20
Methyl tert-butyl ether	25.0	25.5	24.6	102	98.4	64.0-123			3.62	20
Naphthalene	25.0	23.8	24.8	95.0	99.0	62.0-128			4.15	20
n-Propylbenzene	25.0	22.8	22.6	91.1	90.5	79.0-120			0.659	20
Styrene	25.0	23.4	22.7	93.8	90.9	78.0-124			3.08	20
1,1,1,2-Tetrachloroethane	25.0	25.4	26.3	102	105	75.0-122			3.50	20
1,1,2,2-Tetrachloroethane	25.0	24.5	24.4	98.0	97.5	71.0-122			0.591	20
1,1,2-Trichlorotrifluoroethane	25.0	24.9	25.2	99.5	101	61.0-136			1.45	20
Tetrachloroethene	25.0	24.5	24.7	97.9	98.7	70.0-127			0.884	20
Toluene	25.0	24.3	24.7	97.2	98.9	77.0-120			1.63	20
1,2,3-Trichlorobenzene	25.0	23.8	24.1	95.2	96.2	61.0-133			1.04	20
1,2,4-Trichlorobenzene	25.0	23.9	24.2	95.5	96.9	69.0-129			1.54	20
1,1,1-Trichloroethane	25.0	24.6	23.9	98.4	95.6	68.0-122			2.85	20
1,1,2-Trichloroethane	25.0	26.0	25.4	104	102	78.0-120			2.27	20
Trichloroethene	25.0	24.5	23.6	98.0	94.2	78.0-120			3.91	20
Trichlorofluoromethane	25.0	27.4	27.0	110	108	56.0-137			1.50	20
1,2,3-Trichloropropane	25.0	25.4	24.8	101	99.3	72.0-124			2.11	20
1,2,4-Trimethylbenzene	25.0	24.8	25.7	99.3	103	75.0-120			3.56	20
1,2,3-Trimethylbenzene	25.0	25.1	24.5	100	97.8	75.0-120			2.56	20
1,3,5-Trimethylbenzene	25.0	24.7	23.8	98.7	95.4	75.0-120			3.48	20
Vinyl acetate	125	140	126	112	101	46.0-160			10.6	20
Vinyl chloride	25.0	25.9	24.8	104	99.1	64.0-133			4.65	20
Xylenes, Total	75.0	73.4	74.7	97.9	99.6	77.0-120			1.76	20
(S) Toluene-d8				*101*	*104*	*80.0-120*				
(S) Dibromofluoromethane				*98.2*	*98.3*	*76.0-123*				
(S) 4-Bromofluorobenzene				*88.6*	*88.5*	*80.0-120*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

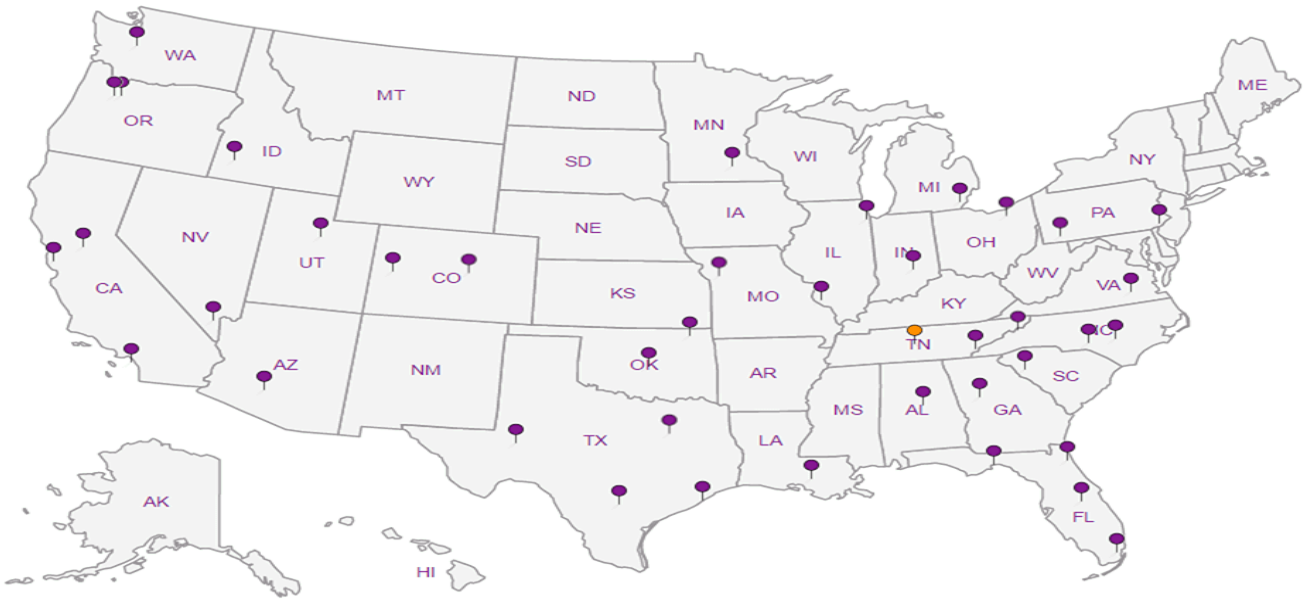
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



Chain of Custody Page ___ of ___

Pace Analytical
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1011421

B200

Acctnum: PESENVSWA
Template: T131700
Prelogin: P662457
TSR: 110 - Brian Ford
PB:
Shipped Via:

PES Environmental, Inc.- WA
1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected:

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): SHANNON MCKERNAN

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

V8260LLC VOCs 40mlAmb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Remarks	Sample # (lab only)
DC-14-071918	GRAB	GW	38.5	7/19/18	1330	3		-01
EQB-1-071918	GRAB	GW	—	7/19/18	1400	3		-02
DC-17-072018	↓	GW	34	7/20/18	0935	3		-03
DC-7-072018	↓	GW	35.5	↓	1040	3		-04
TRIP BLANK	—	~~GW~~ W	—	9/11/17	—	1		-05
DRUM-072018	GRAB	~~GW~~ W	—	7/20/18	1200	3		-06
		GW						
		GW						
		GW						
		GW						

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other: _____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier __ _____

Tracking # 416666 1406 9286

Sample Receipt Checklist
COC Seal Present/Intact: NP ___Y ___N
COC Signed/Accurate: ___Y ___N
Bottles arrive intact: ___Y ___N
Correct bottles used: ___Y ___N
Sufficient volume sent: ___Y ___N
If Applicable
VOA Zero Headspace: ___Y ___N
Preservation Correct/Checked: ___Y ___N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	7/20/18	1330	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 0.3K °C Bottles Received: 15

Date: 7/21/18 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

MEMORANDUM

TO: Project File **DATE:** August 8, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family LTD

PROJECT #: 1358.001.01.003

TASK: July 19-20, 2018 Groundwater Samples and Drum Water Sample

LAB: Pace Analytical (formerly ESC Lab Sciences) Sample Delivery Group: L1011421

Three (3) groundwater samples, drum water sample, equipment blank, and trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Center/Harris Family LTD site in Normandy Park, Washington on July 19-20, 2018. Samples associated with SDG L1011421 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Pace Analytical (Pace) of Mt. Juliet, Tennessee.

The monitoring event occurred between July 19 and 20, 2018 and data are also reported in SDG L1011270. The quality assurance review of the laboratory data for SDG L1011421 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 0.3 degrees Centigrade (°C). The

cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Pace's notes indicate the following:

USEPA Method 8260C: Continuing calibration verification (CCV) issue is noted by Pace for bromomethane and iodomethane (also known as methyl iodide) associated with analytical batch WG1141579 (analyzed on July 22, 2018). These results are qualified by the laboratory "J0" to indicate that percent difference CCVs are outside of laboratory acceptance criteria. **The associated sample bromomethane and iodomethane results are laboratory qualified J0, estimated, and qualified (UJ).**

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

The target analytes (VOCs) were not detected in the trip blank at a concentration at or above the reporting detection limits (RDLs).

Equipment Blank Results

An equipment blank sample was collected on July 19, 2018. The target analytes (VOCs) were not detected in the equipment blank at a concentration at or above the reporting detection limits (RDLs).

Field Duplicate Analyses

Field duplicate samples (DC-15-071818 and MW-101-071818) were collected and analyzed for VOCs. Refer to SDG L1011270 for field duplicate results.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's for analytical batch (WG1067406) are within the laboratory control limits. Refer to the field duplicate data for precision information. Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) % Rs and RPDs for analytical batch (WG1141579) are within laboratory control limit criteria with one exception:

- LCS % R for iodomethane (also known as methyl iodide) is low and below laboratory acceptance criteria. **All associated samples iodomethane results are estimated and qualified (UJ) due to low LCS recoveries.**

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS and field duplicate results for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

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.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	07/23/2018 03:41	WG1141579	
Acrylonitrile	ND		5.00	1	07/23/2018 03:41	WG1141579	
Benzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Bromobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Bromodichloromethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
Bromochloromethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
Bromoform	ND		0.500	1	07/23/2018 03:41	WG1141579	
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 03:41	WG1141579	
n-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
sec-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
tert-Butylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Carbon disulfide	ND		0.500	1	07/23/2018 03:41	WG1141579	
Carbon tetrachloride	ND		0.500	1	07/23/2018 03:41	WG1141579	
Chlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Chlorodibromomethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
Chloroethane	ND		2.50	1	07/23/2018 03:41	WG1141579	
Chloroform	1.25		0.500	1	07/23/2018 03:41	WG1141579	
Chloromethane	ND		1.25	1	07/23/2018 03:41	WG1141579	
2-Chlorotoluene	ND		0.500	1	07/23/2018 03:41	WG1141579	
4-Chlorotoluene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 03:41	WG1141579	
1,2-Dibromoethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
Dibromomethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 03:41	WG1141579	
1,1-Dichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,2-Dichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,1-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579	
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579	
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,2-Dichloropropane	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,1-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,3-Dichloropropane	ND		1.00	1	07/23/2018 03:41	WG1141579	JC 8/8/18
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579	
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 03:41	WG1141579	
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 03:41	WG1141579	
2,2-Dichloropropane	ND		0.500	1	07/23/2018 03:41	WG1141579	
Di-isopropyl ether	ND		0.500	1	07/23/2018 03:41	WG1141579	
Ethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 03:41	WG1141579	
2-Hexanone	ND		5.00	1	07/23/2018 03:41	WG1141579	
n-Hexane	ND		5.00	1	07/23/2018 03:41	WG1141579	
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 03:41	WG1141579	
Isopropylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
p-Isopropyltoluene	ND		0.500	1	07/23/2018 03:41	WG1141579	
2-Butanone (MEK)	ND		5.00	1	07/23/2018 03:41	WG1141579	
Methylene Chloride	ND		2.50	1	07/23/2018 03:41	WG1141579	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 03:41	WG1141579	
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 03:41	WG1141579	
Naphthalene	ND		2.50	1	07/23/2018 03:41	WG1141579	
n-Propylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579	
Styrene	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579	
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Tetrachloroethene	5.40		0.500	1	07/23/2018 03:41	WG1141579
Toluene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 03:41	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 03:41	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 03:41	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 03:41	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 03:41	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 03:41	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 03:41	WG1141579
(S) Toluene-d8	*104*		*80.0-120*		*07/23/2018 03:41*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 03:41*	WG1141579
(S) 4-Bromofluorobenzene	*87.7*		*80.0-120*		*07/23/2018 03:41*	WG1141579

JC 8/8/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	07/23/2018 04:01	WG1141579
Acrylonitrile	ND		5.00	1	07/23/2018 04:01	WG1141579
Benzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromodichloromethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromochloromethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromoform	ND		0.500	1	07/23/2018 04:01	WG1141579
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 04:01	WG1141579
n-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
sec-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
tert-Butylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Carbon disulfide	ND		0.500	1	07/23/2018 04:01	WG1141579
Carbon tetrachloride	ND		0.500	1	07/23/2018 04:01	WG1141579
Chlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Chlorodibromomethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Chloroethane	ND		2.50	1	07/23/2018 04:01	WG1141579
Chloroform	ND		0.500	1	07/23/2018 04:01	WG1141579
Chloromethane	ND		1.25	1	07/23/2018 04:01	WG1141579
2-Chlorotoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
4-Chlorotoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2-Dibromoethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Dibromomethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,1-Dichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2-Dichloropropane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3-Dichloropropane	ND		1.00	1	07/23/2018 04:01	WG1141579
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:01	WG1141579
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 04:01	WG1141579
2,2-Dichloropropane	ND		0.500	1	07/23/2018 04:01	WG1141579
Di-isopropyl ether	ND		0.500	1	07/23/2018 04:01	WG1141579
Ethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 04:01	WG1141579
2-Hexanone	ND		5.00	1	07/23/2018 04:01	WG1141579
n-Hexane	ND		5.00	1	07/23/2018 04:01	WG1141579
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 04:01	WG1141579
Isopropylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
p-Isopropyltoluene	ND		0.500	1	07/23/2018 04:01	WG1141579
2-Butanone (MEK)	ND		5.00	1	07/23/2018 04:01	WG1141579
Methylene Chloride	ND		2.50	1	07/23/2018 04:01	WG1141579
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 04:01	WG1141579
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 04:01	WG1141579
Naphthalene	ND		2.50	1	07/23/2018 04:01	WG1141579
n-Propylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Styrene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:01	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:01	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:01	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:01	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:01	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:01	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:01	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:01*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 04:01*	WG1141579
(S) 4-Bromofluorobenzene	*86.8*		*80.0-120*		*07/23/2018 04:01*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier		RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND			25.0	1	07/23/2018 04:21	WG1141579	
Acrylonitrile	ND			5.00	1	07/23/2018 04:21	WG1141579	
Benzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Bromobenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Bromodichloromethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
Bromochloromethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
Bromoform	ND			0.500	1	07/23/2018 04:21	WG1141579	
Bromomethane	ND	UJ	J0	2.50	1	07/23/2018 04:21	WG1141579	
n-Butylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
sec-Butylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
tert-Butylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Carbon disulfide	ND			0.500	1	07/23/2018 04:21	WG1141579	
Carbon tetrachloride	ND			0.500	1	07/23/2018 04:21	WG1141579	
Chlorobenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Chlorodibromomethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
Chloroethane	ND			2.50	1	07/23/2018 04:21	WG1141579	
Chloroform	ND			0.500	1	07/23/2018 04:21	WG1141579	
Chloromethane	ND			1.25	1	07/23/2018 04:21	WG1141579	
2-Chlorotoluene	ND			0.500	1	07/23/2018 04:21	WG1141579	
4-Chlorotoluene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,2-Dibromo-3-Chloropropane	ND			2.50	1	07/23/2018 04:21	WG1141579	
1,2-Dibromoethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
Dibromomethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,2-Dichlorobenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,3-Dichlorobenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,4-Dichlorobenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Dichlorodifluoromethane	ND			2.50	1	07/23/2018 04:21	WG1141579	
1,1-Dichloroethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,2-Dichloroethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,1-Dichloroethene	ND			0.500	1	07/23/2018 04:21	WG1141579	
cis-1,2-Dichloroethene	ND			0.500	1	07/23/2018 04:21	WG1141579	
trans-1,2-Dichloroethene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,2-Dichloropropane	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,1-Dichloropropene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,3-Dichloropropane	ND			1.00	1	07/23/2018 04:21	WG1141579	
cis-1,3-Dichloropropene	ND			0.500	1	07/23/2018 04:21	WG1141579	
trans-1,3-Dichloropropene	ND			0.500	1	07/23/2018 04:21	WG1141579	
trans-1,4-Dichloro-2-butene	ND			5.00	1	07/23/2018 04:21	WG1141579	
2,2-Dichloropropane	ND			0.500	1	07/23/2018 04:21	WG1141579	JC 8/8/18
Di-isopropyl ether	ND			0.500	1	07/23/2018 04:21	WG1141579	
Ethylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Hexachloro-1,3-butadiene	ND			1.00	1	07/23/2018 04:21	WG1141579	
2-Hexanone	ND			5.00	1	07/23/2018 04:21	WG1141579	
n-Hexane	ND			5.00	1	07/23/2018 04:21	WG1141579	
Iodomethane	ND	UJ	J0 J4	10.0	1	07/23/2018 04:21	WG1141579	
Isopropylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
p-Isopropyltoluene	ND			0.500	1	07/23/2018 04:21	WG1141579	
2-Butanone (MEK)	ND			5.00	1	07/23/2018 04:21	WG1141579	
Methylene Chloride	ND			2.50	1	07/23/2018 04:21	WG1141579	
4-Methyl-2-pentanone (MIBK)	ND			5.00	1	07/23/2018 04:21	WG1141579	
Methyl tert-butyl ether	ND			0.500	1	07/23/2018 04:21	WG1141579	
Naphthalene	ND			2.50	1	07/23/2018 04:21	WG1141579	
n-Propylbenzene	ND			0.500	1	07/23/2018 04:21	WG1141579	
Styrene	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,1,1,2-Tetrachloroethane	ND			0.500	1	07/23/2018 04:21	WG1141579	
1,1,2,2-Tetrachloroethane	ND			0.500	1	07/23/2018 04:21	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Tetrachloroethene	8.62		0.500	1	07/23/2018 04:21	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:21	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:21	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:21	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:21	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:21	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:21	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:21	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:21*	WG1141579
(S) Dibromofluoromethane	*102*		*76.0-123*		*07/23/2018 04:21*	WG1141579
(S) 4-Bromofluorobenzene	*87.0*		*80.0-120*		*07/23/2018 04:21*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	07/23/2018 04:41	WG1141579	
Acrylonitrile	ND		5.00	1	07/23/2018 04:41	WG1141579	
Benzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Bromobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Bromodichloromethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
Bromochloromethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
Bromoform	ND		0.500	1	07/23/2018 04:41	WG1141579	
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 04:41	WG1141579	
n-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
sec-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
tert-Butylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Carbon disulfide	ND		0.500	1	07/23/2018 04:41	WG1141579	
Carbon tetrachloride	ND		0.500	1	07/23/2018 04:41	WG1141579	
Chlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Chlorodibromomethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
Chloroethane	ND		2.50	1	07/23/2018 04:41	WG1141579	
Chloroform	ND		0.500	1	07/23/2018 04:41	WG1141579	
Chloromethane	ND		1.25	1	07/23/2018 04:41	WG1141579	
2-Chlorotoluene	ND		0.500	1	07/23/2018 04:41	WG1141579	
4-Chlorotoluene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 04:41	WG1141579	
1,2-Dibromoethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
Dibromomethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 04:41	WG1141579	
1,1-Dichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,2-Dichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,1-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579	
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579	
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,2-Dichloropropane	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,1-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,3-Dichloropropane	ND		1.00	1	07/23/2018 04:41	WG1141579	
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579	
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 04:41	WG1141579	
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 04:41	WG1141579	
2,2-Dichloropropane	ND		0.500	1	07/23/2018 04:41	WG1141579	
Di-isopropyl ether	ND		0.500	1	07/23/2018 04:41	WG1141579	
Ethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 04:41	WG1141579	
2-Hexanone	ND		5.00	1	07/23/2018 04:41	WG1141579	
n-Hexane	ND		5.00	1	07/23/2018 04:41	WG1141579	
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 04:41	WG1141579	
Isopropylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	JC 8/8/18
p-Isopropyltoluene	ND		0.500	1	07/23/2018 04:41	WG1141579	
2-Butanone (MEK)	ND		5.00	1	07/23/2018 04:41	WG1141579	
Methylene Chloride	ND		2.50	1	07/23/2018 04:41	WG1141579	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 04:41	WG1141579	
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 04:41	WG1141579	
Naphthalene	ND		2.50	1	07/23/2018 04:41	WG1141579	
n-Propylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579	
Styrene	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579	
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Tetrachloroethene	12.3		0.500	1	07/23/2018 04:41	WG1141579
Toluene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 04:41	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 04:41	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 04:41	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 04:41	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 04:41	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 04:41	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 04:41	WG1141579
(S) Toluene-d8	*105*		*80.0-120*		*07/23/2018 04:41*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 04:41*	WG1141579
(S) 4-Bromofluorobenzene	*85.7*		*80.0-120*		*07/23/2018 04:41*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier		RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND			25.0	1	07/23/2018 00:23	WG1141579
Acrylonitrile	ND			5.00	1	07/23/2018 00:23	WG1141579
Benzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Bromobenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Bromodichloromethane	ND			0.500	1	07/23/2018 00:23	WG1141579
Bromochloromethane	ND			0.500	1	07/23/2018 00:23	WG1141579
Bromoform	ND			0.500	1	07/23/2018 00:23	WG1141579
Bromomethane	ND	UJ	J0	2.50	1	07/23/2018 00:23	WG1141579
n-Butylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
sec-Butylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
tert-Butylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Carbon disulfide	ND			0.500	1	07/23/2018 00:23	WG1141579
Carbon tetrachloride	ND			0.500	1	07/23/2018 00:23	WG1141579
Chlorobenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Chlorodibromomethane	ND			0.500	1	07/23/2018 00:23	WG1141579
Chloroethane	ND			2.50	1	07/23/2018 00:23	WG1141579
Chloroform	ND			0.500	1	07/23/2018 00:23	WG1141579
Chloromethane	ND			1.25	1	07/23/2018 00:23	WG1141579
2-Chlorotoluene	ND			0.500	1	07/23/2018 00:23	WG1141579
4-Chlorotoluene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,2-Dibromo-3-Chloropropane	ND			2.50	1	07/23/2018 00:23	WG1141579
1,2-Dibromoethane	ND			0.500	1	07/23/2018 00:23	WG1141579
Dibromomethane	ND			0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichlorobenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,3-Dichlorobenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,4-Dichlorobenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Dichlorodifluoromethane	ND			2.50	1	07/23/2018 00:23	WG1141579
1,1-Dichloroethane	ND			0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichloroethane	ND			0.500	1	07/23/2018 00:23	WG1141579
1,1-Dichloroethene	ND			0.500	1	07/23/2018 00:23	WG1141579
cis-1,2-Dichloroethene	ND			0.500	1	07/23/2018 00:23	WG1141579
trans-1,2-Dichloroethene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,2-Dichloropropane	ND			0.500	1	07/23/2018 00:23	WG1141579
1,1-Dichloropropene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,3-Dichloropropane	ND			1.00	1	07/23/2018 00:23	WG1141579
cis-1,3-Dichloropropene	ND			0.500	1	07/23/2018 00:23	WG1141579
trans-1,3-Dichloropropene	ND			0.500	1	07/23/2018 00:23	WG1141579
trans-1,4-Dichloro-2-butene	ND			5.00	1	07/23/2018 00:23	WG1141579
2,2-Dichloropropane	ND			0.500	1	07/23/2018 00:23	WG1141579
Di-isopropyl ether	ND			0.500	1	07/23/2018 00:23	WG1141579
Ethylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Hexachloro-1,3-butadiene	ND			1.00	1	07/23/2018 00:23	WG1141579
2-Hexanone	ND			5.00	1	07/23/2018 00:23	WG1141579
n-Hexane	ND			5.00	1	07/23/2018 00:23	WG1141579
Iodomethane	ND	UJ	J0 J4	10.0	1	07/23/2018 00:23	WG1141579
Isopropylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
p-Isopropyltoluene	ND			0.500	1	07/23/2018 00:23	WG1141579
2-Butanone (MEK)	ND			5.00	1	07/23/2018 00:23	WG1141579
Methylene Chloride	ND			2.50	1	07/23/2018 00:23	WG1141579
4-Methyl-2-pentanone (MIBK)	ND			5.00	1	07/23/2018 00:23	WG1141579
Methyl tert-butyl ether	ND			0.500	1	07/23/2018 00:23	WG1141579
Naphthalene	ND			2.50	1	07/23/2018 00:23	WG1141579
n-Propylbenzene	ND			0.500	1	07/23/2018 00:23	WG1141579
Styrene	ND			0.500	1	07/23/2018 00:23	WG1141579
1,1,1,2-Tetrachloroethane	ND			0.500	1	07/23/2018 00:23	WG1141579
1,1,2,2-Tetrachloroethane	ND			0.500	1	07/23/2018 00:23	WG1141579

JC 8/8/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
Toluene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 00:23	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 00:23	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 00:23	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 00:23	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 00:23	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 00:23	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 00:23	WG1141579
(S) Toluene-d8	*103*		*80.0-120*		*07/23/2018 00:23*	WG1141579
(S) Dibromofluoromethane	*98.5*		*76.0-123*		*07/23/2018 00:23*	WG1141579
(S) 4-Bromofluorobenzene	*90.5*		*80.0-120*		*07/23/2018 00:23*	WG1141579

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	07/23/2018 05:01	WG1141579	
Acrylonitrile	ND		5.00	1	07/23/2018 05:01	WG1141579	
Benzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Bromobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Bromodichloromethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
Bromochloromethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
Bromoform	ND		0.500	1	07/23/2018 05:01	WG1141579	
Bromomethane	ND	UJ J0	2.50	1	07/23/2018 05:01	WG1141579	
n-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
sec-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
tert-Butylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Carbon disulfide	0.570		0.500	1	07/23/2018 05:01	WG1141579	
Carbon tetrachloride	ND		0.500	1	07/23/2018 05:01	WG1141579	
Chlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Chlorodibromomethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
Chloroethane	ND		2.50	1	07/23/2018 05:01	WG1141579	
Chloroform	ND		0.500	1	07/23/2018 05:01	WG1141579	
Chloromethane	ND		1.25	1	07/23/2018 05:01	WG1141579	
2-Chlorotoluene	ND		0.500	1	07/23/2018 05:01	WG1141579	
4-Chlorotoluene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	07/23/2018 05:01	WG1141579	
1,2-Dibromoethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
Dibromomethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,2-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,3-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,4-Dichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Dichlorodifluoromethane	ND		2.50	1	07/23/2018 05:01	WG1141579	
1,1-Dichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,2-Dichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,1-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579	
cis-1,2-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579	
trans-1,2-Dichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,2-Dichloropropane	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,1-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,3-Dichloropropane	ND		1.00	1	07/23/2018 05:01	WG1141579	
cis-1,3-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579	
trans-1,3-Dichloropropene	ND		0.500	1	07/23/2018 05:01	WG1141579	
trans-1,4-Dichloro-2-butene	ND		5.00	1	07/23/2018 05:01	WG1141579	
2,2-Dichloropropane	ND		0.500	1	07/23/2018 05:01	WG1141579	
Di-isopropyl ether	ND		0.500	1	07/23/2018 05:01	WG1141579	
Ethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Hexachloro-1,3-butadiene	ND		1.00	1	07/23/2018 05:01	WG1141579	
2-Hexanone	ND		5.00	1	07/23/2018 05:01	WG1141579	
n-Hexane	ND		5.00	1	07/23/2018 05:01	WG1141579	
Iodomethane	ND	UJ J0 J4	10.0	1	07/23/2018 05:01	WG1141579	
Isopropylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	JC 8/8/18
p-Isopropyltoluene	ND		0.500	1	07/23/2018 05:01	WG1141579	
2-Butanone (MEK)	ND		5.00	1	07/23/2018 05:01	WG1141579	
Methylene Chloride	ND		2.50	1	07/23/2018 05:01	WG1141579	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	07/23/2018 05:01	WG1141579	
Methyl tert-butyl ether	ND		0.500	1	07/23/2018 05:01	WG1141579	
Naphthalene	ND		2.50	1	07/23/2018 05:01	WG1141579	
n-Propylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579	
Styrene	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,1,1,2-Tetrachloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579	
1,1,2,2-Tetrachloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Tetrachloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
Toluene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,3-Trichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,4-Trichlorobenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,1-Trichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
1,1,2-Trichloroethane	ND		0.500	1	07/23/2018 05:01	WG1141579
Trichloroethene	ND		0.500	1	07/23/2018 05:01	WG1141579
Trichlorofluoromethane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,2,3-Trichloropropane	ND		2.50	1	07/23/2018 05:01	WG1141579
1,2,4-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,2,3-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
1,3,5-Trimethylbenzene	ND		0.500	1	07/23/2018 05:01	WG1141579
Vinyl acetate	ND		5.00	1	07/23/2018 05:01	WG1141579
Vinyl chloride	ND		0.500	1	07/23/2018 05:01	WG1141579
Xylenes, Total	ND		1.50	1	07/23/2018 05:01	WG1141579
(S) Toluene-d8	*102*		*80.0-120*		*07/23/2018 05:01*	WG1141579
(S) Dibromofluoromethane	*103*		*76.0-123*		*07/23/2018 05:01*	WG1141579
(S) 4-Bromofluorobenzene	*85.7*		*80.0-120*		*07/23/2018 05:01*	WG1141579

JC 8/8/18

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 25, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L1036062
Samples Received:	10/18/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	MVSC
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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KMW-2-101618 L1036062-01 GW

Collected by: Ben Hecht | Collected date/time: 10/16/18 11:15 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 13:23	10/19/18 13:23	BMB

MW-12-101618 L1036062-02 GW

Collected by: Ben Hecht | Collected date/time: 10/16/18 12:50 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 13:42	10/19/18 13:42	BMB

MW-3-101618 L1036062-03 GW

Collected by: Ben Hecht | Collected date/time: 10/16/18 14:05 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 14:02	10/19/18 14:02	BMB

MW-4-101618 L1036062-04 GW

Collected by: Ben Hecht | Collected date/time: 10/16/18 15:55 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 14:22	10/19/18 14:22	BMB

MW-13-101618 L1036062-05 GW

Collected by: Ben Hecht | Collected date/time: 10/16/18 17:10 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 14:42	10/19/18 14:42	BMB

MW-9-101718 L1036062-06 GW

Collected by: Ben Hecht | Collected date/time: 10/17/18 09:30 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 15:02	10/19/18 15:02	BMB

DC-4-101718 L1036062-07 GW

Collected by: Ben Hecht | Collected date/time: 10/17/18 14:00 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 15:22	10/19/18 15:22	BMB

DC-3-101718 L1036062-08 GW

Collected by: Ben Hecht | Collected date/time: 10/17/18 15:20 | Received date/time: 10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1183421	1	10/19/18 15:41	10/19/18 15:41	BMB

TRIP BLANK L1036062-09 GW

Collected by	Collected date/time	Received date/time
Ben Hecht	10/16/18 00:00	10/18/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1184957	1	10/23/18 14:34	10/23/18 14:34	BMB
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1185371	1	10/25/18 11:02	10/25/18 11:02	ACG

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 13:23	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 13:23	WG1183421
Benzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromoform	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 13:23	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 13:23	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 13:23	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 13:23	WG1183421
Chloroform	ND		0.500	1	10/19/2018 13:23	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 13:23	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 13:23	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 13:23	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 13:23	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 13:23	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 13:23	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 13:23	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 13:23	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 13:23	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 13:23	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 13:23	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 13:23	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 13:23	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 13:23	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Styrene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
Toluene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 13:23	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 13:23	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 13:23	WG1183421
(S) Toluene-d8	*99.7*		*80.0-120*		*10/19/2018 13:23*	WG1183421
(S) Dibromofluoromethane	*102*		*75.0-120*		*10/19/2018 13:23*	WG1183421
(S) 4-Bromofluorobenzene	*97.6*		*77.0-126*		*10/19/2018 13:23*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 13:42	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 13:42	WG1183421
Benzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Bromoform	ND		0.500	1	10/19/2018 13:42	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 13:42	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 13:42	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 13:42	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 13:42	WG1183421
Chloroform	ND		0.500	1	10/19/2018 13:42	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 13:42	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 13:42	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 13:42	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 13:42	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 13:42	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 13:42	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 13:42	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 13:42	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 13:42	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 13:42	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 13:42	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 13:42	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 13:42	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 13:42	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 13:42	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 13:42	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Styrene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
Toluene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 13:42	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 13:42	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 13:42	WG1183421
(S) Toluene-d8	*96.2*		*80.0-120*		*10/19/2018 13:42*	WG1183421
(S) Dibromofluoromethane	*100*		*75.0-120*		*10/19/2018 13:42*	WG1183421
(S) 4-Bromofluorobenzene	*95.2*		*77.0-126*		*10/19/2018 13:42*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:02	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:02	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:02	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:02	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:02	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:02	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:02	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:02	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:02	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:02	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 14:02	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:02	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:02	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:02	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:02	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:02	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:02	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:02	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:02	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:02	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:02	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
Toluene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 14:02	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 14:02	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 14:02	WG1183421
(S) Toluene-d8	*97.4*		*80.0-120*		*10/19/2018 14:02*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:02*	WG1183421
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*10/19/2018 14:02*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:22	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:22	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:22	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:22	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:22	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:22	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:22	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:22	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:22	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:22	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 14:22	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:22	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:22	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:22	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:22	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:22	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:22	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:22	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:22	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:22	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:22	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
Toluene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 14:22	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 14:22	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 14:22	WG1183421
(S) Toluene-d8	*98.1*		*80.0-120*		*10/19/2018 14:22*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:22*	WG1183421
(S) 4-Bromofluorobenzene	*94.9*		*77.0-126*		*10/19/2018 14:22*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:42	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:42	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:42	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:42	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:42	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:42	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:42	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:42	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:42	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:42	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 14:42	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:42	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:42	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:42	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:42	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:42	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:42	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:42	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:42	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:42	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:42	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
Toluene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 14:42	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 14:42	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 14:42	WG1183421
(S) Toluene-d8	*102*		*80.0-120*		*10/19/2018 14:42*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:42*	WG1183421
(S) 4-Bromofluorobenzene	*95.9*		*77.0-126*		*10/19/2018 14:42*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 15:02	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 15:02	WG1183421
Benzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Bromoform	ND		0.500	1	10/19/2018 15:02	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 15:02	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 15:02	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:02	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 15:02	WG1183421
Chloroform	ND		0.500	1	10/19/2018 15:02	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 15:02	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:02	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:02	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:02	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 15:02	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:02	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:02	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 15:02	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 15:02	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 15:02	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:02	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:02	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 15:02	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:02	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:02	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 15:02	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Styrene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:02	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:02	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:02	WG1183421
(S) Toluene-d8	*97.6*		*80.0-120*		*10/19/2018 15:02*	WG1183421
(S) Dibromofluoromethane	*102*		*75.0-120*		*10/19/2018 15:02*	WG1183421
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*10/19/2018 15:02*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 15:22	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 15:22	WG1183421
Benzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromoform	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 15:22	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 15:22	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:22	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 15:22	WG1183421
Chloroform	ND		0.500	1	10/19/2018 15:22	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 15:22	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:22	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:22	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 15:22	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:22	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:22	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 15:22	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 15:22	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 15:22	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:22	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 15:22	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:22	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:22	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 15:22	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Styrene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:22	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:22	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:22	WG1183421
(S) Toluene-d8	*98.7*		*80.0-120*		*10/19/2018 15:22*	WG1183421
(S) Dibromofluoromethane	*101*		*75.0-120*		*10/19/2018 15:22*	WG1183421
(S) 4-Bromofluorobenzene	*93.5*		*77.0-126*		*10/19/2018 15:22*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 15:41	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 15:41	WG1183421
Benzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromoform	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 15:41	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 15:41	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:41	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 15:41	WG1183421
Chloroform	ND		0.500	1	10/19/2018 15:41	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 15:41	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:41	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:41	WG1183421
2,2-Dichloropropane	ND	J4	0.500	1	10/19/2018 15:41	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:41	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:41	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 15:41	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 15:41	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 15:41	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:41	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 15:41	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:41	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:41	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 15:41	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Styrene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:41	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:41	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:41	WG1183421
(S) Toluene-d8	*98.3*		*80.0-120*		*10/19/2018 15:41*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 15:41*	WG1183421
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*10/19/2018 15:41*	WG1183421

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND	J0	25.0	1	10/23/2018 14:34	WG1184957
Acrylonitrile	ND		5.00	1	10/23/2018 14:34	WG1184957
Benzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromodichloromethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromochloromethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromoform	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromomethane	ND		2.50	1	10/23/2018 14:34	WG1184957
n-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
sec-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
tert-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Carbon disulfide	ND		0.500	1	10/23/2018 14:34	WG1184957
Carbon tetrachloride	ND		0.500	1	10/23/2018 14:34	WG1184957
Chlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Chlorodibromomethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Chloroethane	ND		2.50	1	10/23/2018 14:34	WG1184957
Chloroform	ND		0.500	1	10/23/2018 14:34	WG1184957
Chloromethane	ND	J0	1.25	1	10/23/2018 14:34	WG1184957
2-Chlorotoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
4-Chlorotoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2-Dibromoethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Dibromomethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,4-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Dichlorodifluoromethane	ND	J0	2.50	1	10/23/2018 14:34	WG1184957
1,1-Dichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
cis-1,2-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,2-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichloropropane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3-Dichloropropane	ND		1.00	1	10/23/2018 14:34	WG1184957
cis-1,3-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,3-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 11:02	WG1185371
2,2-Dichloropropane	ND		0.500	1	10/23/2018 14:34	WG1184957
Di-isopropyl ether	ND		0.500	1	10/23/2018 14:34	WG1184957
Ethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Hexachloro-1,3-butadiene	ND		1.00	1	10/23/2018 14:34	WG1184957
2-Hexanone	ND		5.00	1	10/23/2018 14:34	WG1184957
n-Hexane	ND		5.00	1	10/23/2018 14:34	WG1184957
Iodomethane	ND		10.0	1	10/23/2018 14:34	WG1184957
Isopropylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
p-Isopropyltoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
2-Butanone (MEK)	ND	J0	5.00	1	10/23/2018 14:34	WG1184957
Methylene Chloride	ND		2.50	1	10/23/2018 14:34	WG1184957
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/23/2018 14:34	WG1184957
Methyl tert-butyl ether	ND		0.500	1	10/23/2018 14:34	WG1184957
Naphthalene	ND		2.50	1	10/23/2018 14:34	WG1184957
n-Propylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Styrene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Tetrachloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
Toluene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,3-Trichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,4-Trichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,1-Trichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,2-Trichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Trichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
Trichlorofluoromethane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2,3-Trichloropropane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2,4-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,3-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3,5-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Vinyl acetate	ND	J0	5.00	1	10/23/2018 14:34	WG1184957
Vinyl chloride	ND		0.500	1	10/23/2018 14:34	WG1184957
Xylenes, Total	ND		1.50	1	10/23/2018 14:34	WG1184957
(S) Toluene-d8	*102*		*80.0-120*		*10/23/2018 14:34*	WG1184957
(S) Toluene-d8	*95.8*		*80.0-120*		*10/25/2018 11:02*	WG1185371
(S) Dibromofluoromethane	*92.2*		*75.0-120*		*10/23/2018 14:34*	WG1184957
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 11:02*	WG1185371
(S) 4-Bromofluorobenzene	*97.6*		*77.0-126*		*10/23/2018 14:34*	WG1184957
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*10/25/2018 11:02*	WG1185371

Method Blank (MB)

(MB) R3352238-4 10/19/18 10:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3352238-4 10/19/18 10:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*99.0*			*80.0-120*
(S) Dibromofluoromethane	*101*			*75.0-120*
(S) 4-Bromofluorobenzene	*97.4*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352238-1 10/19/18 09:37 • (LCSD) R3352238-2 10/19/18 09:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	106	102	84.5	81.6	19.0-160			3.46	27
Acrylonitrile	125	126	127	101	101	55.0-149			0.565	20
Benzene	25.0	25.6	25.6	102	102	70.0-123			0.0546	20
Bromobenzene	25.0	23.9	25.0	95.7	100	73.0-121			4.36	20
Bromodichloromethane	25.0	25.7	26.1	103	105	75.0-120			1.51	20
Bromochloromethane	25.0	27.1	26.1	108	104	76.0-122			3.86	20
Bromoform	25.0	25.0	26.0	99.8	104	68.0-132			4.13	20
Bromomethane	25.0	28.1	27.2	112	109	10.0-160			3.02	25
n-Butylbenzene	25.0	25.2	26.1	101	104	73.0-125			3.49	20
sec-Butylbenzene	25.0	24.1	25.6	96.3	102	75.0-125			6.20	20
tert-Butylbenzene	25.0	23.9	25.3	95.5	101	76.0-124			5.94	20
Carbon disulfide	25.0	24.5	24.2	97.8	97.0	61.0-128			0.863	20
Carbon tetrachloride	25.0	25.6	25.4	102	102	68.0-126			0.820	20
Chlorobenzene	25.0	24.4	24.7	97.5	98.9	80.0-121			1.35	20
Chlorodibromomethane	25.0	25.1	25.4	101	102	77.0-125			1.19	20
Chloroethane	25.0	24.2	24.7	96.9	98.6	47.0-150			1.79	20
Chloroform	25.0	25.7	25.9	103	103	73.0-120			0.726	20
Chloromethane	25.0	25.8	25.8	103	103	41.0-142			0.166	20
2-Chlorotoluene	25.0	23.7	25.4	94.6	102	76.0-123			7.18	20
4-Chlorotoluene	25.0	24.5	25.7	98.0	103	75.0-122			4.61	20
1,2-Dibromo-3-Chloropropane	25.0	23.7	24.3	94.9	97.2	58.0-134			2.40	20
1,2-Dibromoethane	25.0	22.7	23.3	90.8	93.3	80.0-122			2.71	20
Dibromomethane	25.0	27.6	27.7	110	111	80.0-120			0.523	20
1,2-Dichlorobenzene	25.0	24.7	26.1	98.8	104	79.0-121			5.50	20
1,3-Dichlorobenzene	25.0	25.7	26.7	103	107	79.0-120			3.97	20
1,4-Dichlorobenzene	25.0	23.4	25.1	93.6	100	79.0-120			7.09	20
Dichlorodifluoromethane	25.0	30.7	28.1	123	112	51.0-149			9.10	20
1,1-Dichloroethane	25.0	26.8	26.5	107	106	70.0-126			1.04	20
1,2-Dichloroethane	25.0	26.4	26.4	106	106	70.0-128			0.0383	20
1,1-Dichloroethene	25.0	25.3	24.6	101	98.3	71.0-124			2.78	20
cis-1,2-Dichloroethene	25.0	25.0	25.0	100	100	73.0-120			0.0400	20
trans-1,2-Dichloroethene	25.0	25.7	25.8	103	103	73.0-120			0.208	20
1,2-Dichloropropane	25.0	27.3	26.4	109	105	77.0-125			3.48	20
1,1-Dichloropropene	25.0	26.9	27.2	108	109	74.0-126			0.954	20
1,3-Dichloropropane	25.0	24.6	25.8	98.3	103	80.0-120			4.79	20
cis-1,3-Dichloropropene	25.0	25.9	26.3	104	105	80.0-123			1.65	20
trans-1,3-Dichloropropene	25.0	25.1	26.2	101	105	78.0-124			4.02	20
trans-1,4-Dichloro-2-butene	25.0	22.9	23.4	91.4	93.6	33.0-144			2.35	20
2,2-Dichloropropane	25.0	34.1	35.8	137	143	58.0-130	J4	J4	4.61	20
Di-isopropyl ether	25.0	25.7	25.1	103	101	58.0-138			2.20	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3352238-1 10/19/18 09:37 • (LCSD) R3352238-2 10/19/18 09:56

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.2	24.7	96.9	98.9	79.0-123			1.99	20
Hexachloro-1,3-butadiene	25.0	23.5	25.1	94.0	100	54.0-138			6.60	20
2-Hexanone	125	124	126	98.8	101	67.0-149			1.97	20
n-Hexane	25.0	28.3	27.9	113	111	57.0-133			1.55	20
Iodomethane	125	137	136	110	109	33.0-147			0.754	26
Isopropylbenzene	25.0	23.6	25.5	94.3	102	76.0-127			7.99	20
p-Isopropyltoluene	25.0	23.8	25.6	95.3	103	76.0-125			7.33	20
2-Butanone (MEK)	125	125	125	100	100	44.0-160			0.324	20
Methylene Chloride	25.0	25.8	24.9	103	99.6	67.0-120			3.42	20
4-Methyl-2-pentanone (MIBK)	125	125	124	99.8	99.5	68.0-142			0.371	20
Methyl tert-butyl ether	25.0	24.1	24.6	96.4	98.4	68.0-125			2.09	20
Naphthalene	25.0	23.2	24.8	92.7	99.4	54.0-135			6.91	20
n-Propylbenzene	25.0	24.0	25.0	95.9	99.9	77.0-124			4.16	20
Styrene	25.0	23.9	24.3	95.8	97.2	73.0-130			1.50	20
1,1,1,2-Tetrachloroethane	25.0	25.4	25.3	102	101	75.0-125			0.551	20
1,1,2,2-Tetrachloroethane	25.0	24.5	25.9	98.0	104	65.0-130			5.51	20
1,1,2-Trichlorotrifluoroethane	25.0	20.3	20.7	81.3	82.7	69.0-132			1.69	20
Tetrachloroethene	25.0	25.1	26.0	100	104	72.0-132			3.76	20
Toluene	25.0	24.4	25.2	97.5	101	79.0-120			3.47	20
1,2,3-Trichlorobenzene	25.0	23.2	24.1	92.7	96.4	50.0-138			3.95	20
1,2,4-Trichlorobenzene	25.0	25.3	26.5	101	106	57.0-137			4.90	20
1,1,1-Trichloroethane	25.0	26.3	25.9	105	104	73.0-124			1.52	20
1,1,2-Trichloroethane	25.0	23.9	23.6	95.7	94.6	80.0-120			1.11	20
Trichloroethene	25.0	23.8	24.1	95.2	96.3	78.0-124			1.09	20
Trichlorofluoromethane	25.0	24.9	23.3	99.4	93.1	59.0-147			6.61	20
1,2,3-Trichloropropane	25.0	23.1	25.2	92.5	101	73.0-130			8.50	20
1,2,4-Trimethylbenzene	25.0	23.8	25.1	95.2	100	76.0-121			5.22	20
1,2,3-Trimethylbenzene	25.0	23.6	24.8	94.5	99.2	77.0-120			4.86	20
1,3,5-Trimethylbenzene	25.0	23.9	25.3	95.5	101	76.0-122			5.78	20
Vinyl acetate	125	163	162	130	130	11.0-160			0.0925	20
Vinyl chloride	25.0	27.4	27.3	110	109	67.0-131			0.583	20
Xylenes, Total	75.0	74.6	76.7	99.5	102	79.0-123			2.78	20
(S) Toluene-d8				*96.3*	*98.1*	*80.0-120*				
(S) Dibromofluoromethane				*103*	*100*	*75.0-120*				
(S) 4-Bromofluorobenzene				*96.0*	*98.4*	*77.0-126*				

Method Blank (MB)

(MB) R3353099-4 10/23/18 11:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500
Ethylbenzene	U		0.158	0.500

Method Blank (MB)

(MB) R3353099-4 10/23/18 11:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*102*			*80.0-120*
(S) Dibromofluoromethane	*93.3*			*75.0-120*
(S) 4-Bromofluorobenzene	*95.5*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353099-1 10/23/18 09:59 • (LCSD) R3353099-2 10/23/18 10:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	88.7	88.4	71.0	70.7	19.0-160			0.440	27
Acrylonitrile	125	104	102	83.4	81.8	55.0-149			1.89	20
Benzene	25.0	22.7	22.8	90.7	91.2	70.0-123			0.579	20
Bromobenzene	25.0	24.2	24.0	96.8	96.0	73.0-121			0.807	20
Bromodichloromethane	25.0	23.3	23.2	93.2	92.7	75.0-120			0.515	20
Bromochloromethane	25.0	24.5	24.3	97.8	97.2	76.0-122			0.647	20
Bromoform	25.0	28.9	29.1	116	116	68.0-132			0.692	20
Bromomethane	25.0	22.4	20.6	89.4	82.6	10.0-160			7.97	25
n-Butylbenzene	25.0	20.9	21.2	83.4	84.7	73.0-125			1.54	20
sec-Butylbenzene	25.0	23.2	23.6	92.9	94.5	75.0-125			1.69	20
tert-Butylbenzene	25.0	24.8	25.1	99.3	100	76.0-124			0.982	20
Carbon disulfide	25.0	24.5	22.1	98.1	88.4	61.0-128			10.3	20
Carbon tetrachloride	25.0	22.8	22.2	91.2	88.6	68.0-126			2.85	20
Chlorobenzene	25.0	26.1	26.7	105	107	80.0-121			1.98	20
Chlorodibromomethane	25.0	26.9	27.0	108	108	77.0-125			0.384	20
Chloroethane	25.0	19.8	19.0	79.3	75.8	47.0-150			4.45	20
Chloroform	25.0	22.7	22.5	91.0	89.8	73.0-120			1.31	20
Chloromethane	25.0	16.6	15.6	66.4	62.6	41.0-142			5.91	20
2-Chlorotoluene	25.0	25.2	25.2	101	101	76.0-123			0.327	20
4-Chlorotoluene	25.0	24.8	25.1	99.2	100	75.0-122			1.25	20
1,2-Dibromo-3-Chloropropane	25.0	23.5	23.6	93.9	94.4	58.0-134			0.562	20
1,2-Dibromoethane	25.0	25.1	25.7	101	103	80.0-122			2.15	20
Dibromomethane	25.0	23.4	23.8	93.6	95.2	80.0-120			1.75	20
1,2-Dichlorobenzene	25.0	23.3	24.1	93.3	96.4	79.0-121			3.34	20
1,3-Dichlorobenzene	25.0	25.1	25.2	100	101	79.0-120			0.656	20
1,4-Dichlorobenzene	25.0	24.2	24.8	96.7	99.0	79.0-120			2.40	20
Dichlorodifluoromethane	25.0	20.9	19.1	83.7	76.4	51.0-149			9.11	20
1,1-Dichloroethane	25.0	22.2	22.0	88.7	88.0	70.0-126			0.816	20
1,2-Dichloroethane	25.0	20.3	20.2	81.2	80.7	70.0-128			0.534	20
1,1-Dichloroethene	25.0	25.3	23.2	101	93.0	71.0-124			8.42	20
cis-1,2-Dichloroethene	25.0	24.5	24.5	98.1	98.1	73.0-120			0.0258	20
trans-1,2-Dichloroethene	25.0	23.9	23.7	95.5	94.7	73.0-120			0.830	20
1,2-Dichloropropane	25.0	23.1	23.6	92.3	94.5	77.0-125			2.28	20
1,1-Dichloropropene	25.0	22.2	22.2	88.9	89.0	74.0-126			0.109	20
1,3-Dichloropropane	25.0	24.4	24.6	97.5	98.6	80.0-120			1.04	20
cis-1,3-Dichloropropene	25.0	25.3	26.0	101	104	80.0-123			2.76	20
trans-1,3-Dichloropropene	25.0	25.4	25.4	102	101	78.0-124			0.158	20
2,2-Dichloropropane	25.0	22.6	21.9	90.3	87.5	58.0-130			3.12	20
Di-isopropyl ether	25.0	21.2	20.8	84.7	83.2	58.0-138			1.89	20
Ethylbenzene	25.0	25.3	26.3	101	105	79.0-123			4.05	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353099-1 10/23/18 09:59 • (LCSD) R3353099-2 10/23/18 10:19

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	25.0	22.4	23.1	89.4	92.3	54.0-138			3.17	20
2-Hexanone	125	115	115	91.8	91.9	67.0-149			0.0605	20
n-Hexane	25.0	21.7	21.4	86.6	85.8	57.0-133			0.984	20
Iodomethane	125	133	122	107	97.4	33.0-147			8.93	26
Isopropylbenzene	25.0	25.2	25.5	101	102	76.0-127			1.05	20
p-Isopropyltoluene	25.0	23.4	23.7	93.7	94.8	76.0-125			1.25	20
2-Butanone (MEK)	125	94.2	93.8	75.3	75.0	44.0-160			0.381	20
Methylene Chloride	25.0	23.8	22.1	95.0	88.3	67.0-120			7.36	20
4-Methyl-2-pentanone (MIBK)	125	106	106	84.4	85.2	68.0-142			0.868	20
Methyl tert-butyl ether	25.0	22.6	21.7	90.5	86.9	68.0-125			4.07	20
Naphthalene	25.0	21.3	21.7	85.1	86.9	54.0-135			2.08	20
n-Propylbenzene	25.0	24.5	24.9	98.0	99.5	77.0-124			1.45	20
Styrene	25.0	26.6	27.0	106	108	73.0-130			1.63	20
1,1,1,2-Tetrachloroethane	25.0	27.4	27.9	110	112	75.0-125			1.87	20
1,1,2,2-Tetrachloroethane	25.0	26.2	26.2	105	105	65.0-130			0.0231	20
1,1,2-Trichlorotrifluoroethane	25.0	25.6	25.4	102	102	69.0-132			0.912	20
Tetrachloroethene	25.0	27.1	27.7	109	111	72.0-132			2.08	20
Toluene	25.0	24.6	25.0	98.5	100	79.0-120			1.59	20
1,2,3-Trichlorobenzene	25.0	21.9	22.7	87.8	90.8	50.0-138			3.34	20
1,2,4-Trichlorobenzene	25.0	22.4	22.8	89.7	91.0	57.0-137			1.53	20
1,1,1-Trichloroethane	25.0	23.1	22.4	92.6	89.7	73.0-124			3.09	20
1,1,2-Trichloroethane	25.0	25.6	26.0	103	104	80.0-120			1.48	20
Trichloroethene	25.0	25.2	25.4	101	101	78.0-124			0.629	20
Trichlorofluoromethane	25.0	22.4	20.9	89.7	83.6	59.0-147			6.97	20
1,2,3-Trichloropropane	25.0	26.0	26.0	104	104	73.0-130			0.152	20
1,2,4-Trimethylbenzene	25.0	24.8	24.9	99.4	99.8	76.0-121			0.420	20
1,2,3-Trimethylbenzene	25.0	23.1	23.1	92.4	92.4	77.0-120			0.0426	20
1,3,5-Trimethylbenzene	25.0	25.3	25.5	101	102	76.0-122			0.744	20
Vinyl acetate	125	151	144	120	115	11.0-160			4.62	20
Vinyl chloride	25.0	20.7	20.0	82.9	79.8	67.0-131			3.79	20
Xylenes, Total	75.0	75.9	78.3	101	104	79.0-123			3.11	20
(S) Toluene-d8				*101*	*102*	*80.0-120*				
(S) Dibromofluoromethane				*91.6*	*90.5*	*75.0-120*				
(S) 4-Bromofluorobenzene				*95.7*	*95.9*	*77.0-126*				

Method Blank (MB)

(MB) R3353884-3 10/25/18 10:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
trans-1,4-Dichloro-2-butene	U		0.257	5.00
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*112*			*75.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353884-1 10/25/18 09:13 • (LCSD) R3353884-2 10/25/18 09:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
trans-1,4-Dichloro-2-butene	25.0	29.1	30.3	116	121	33.0-144			4.17	20
(S) Toluene-d8				*97.8*	*97.2*	*80.0-120*				
(S) Dibromofluoromethane				*109*	*108*	*75.0-120*				
(S) 4-Bromofluorobenzene				*102*	*102*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.
J4	The associated batch QC was outside the established quality control range for accuracy.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
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* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

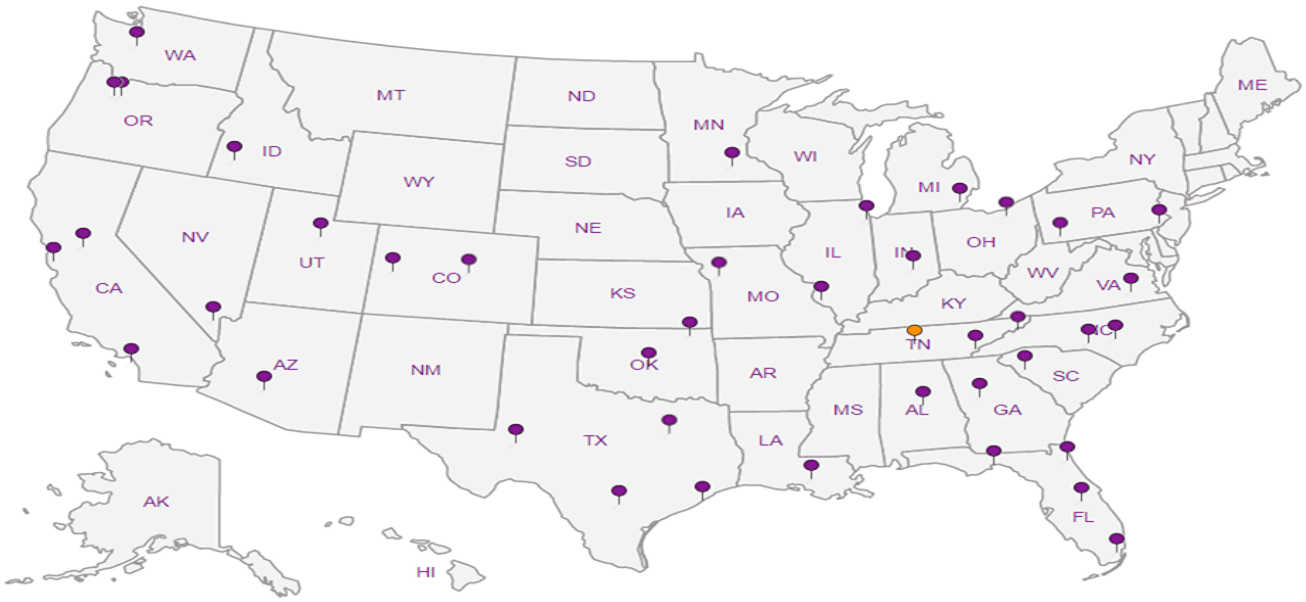
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected:

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Ben Hecht

Site/Facility ID # MVSC

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Remarks	Sample # (lab only)
KMW-2-101618	Grab	GW	37	10/16/18	11:15	3	X		01
MW-12-101618		GW	42	10/16/18	12:50	3	X		02
MW-3-101618		GW	41		14:05	3	X		03
MW-4-101618		GW	40		15:55	3	X		04
MW-13-101618		GW	38		17:10	3	X		05
MW-9-101718		GW	34	10/17/18	09:30	3	X		06
DC-4-101718			44	10/17/18	14:00	3	X		07
DC-3-101718			45	10/17/18	15:20	3	X		08
Trip Blank						1			

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: Contact Matt Dahl for questions at MDAHL@PESENV.COM

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier __ _____

Tracking # 4624 2995 7139

Trip Blank Received: Yes / No HCl / MeoH TBR

Temp: 4.3 °C +1 4.4 Bottles Received: 24

Condition: NCF / OK

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10/17/18	16:25	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)
			10/18/18 0845

If preservation required by Login: Date/Time

Hold:

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD SCREEN: <0.5 mR/hr

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1036062
B063

Acctnum: PESENVSWA
Template: T131700
Prelogin: P675999
TSR: 110 - Brian Ford
PB: TB 10-5-18
Shipped Via: FedEx Ground

Kathryn L. Cason

Pace Analytical®
National Center for Testing & Innovation

Login #:1036062	Client:PESENVSWA	Date:10/18/18	Evaluated by:K Cason

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time	X	Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: No analysis marked for Trip Blank listed on COC.

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials:bjf	Client Contact:								

Login Instructions:

Place trip blank on hold

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

MEMORANDUM

TO: Project File **DATE:** November 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: **1358.001.01.003**

TASK: October 16-17, 2018 Groundwater Samples

LAB: Pace Analytical Sample Delivery Group (SDG): L1036062

Eight (8) groundwater samples and one (1) trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on October 16-17, 2018. Samples associated with SDG L1036062 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Pace Analytical (Pace) of Mt. Juliet, Tennessee.

The monitoring event occurred between October 16 and 23, 2018 and data are also reported in SDGs L1037755 and L1037759. The quality assurance review of the laboratory data for SDG L1036062 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

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

- The trip blank was listed on the COC but no analysis was requested. PES later clarified the request submitted the trip blank for analysis.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 4.3 degrees Centigrade (°C). The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications are warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Pace's notes indicate the following:

- *USEPA Method 8260C:* Continuing calibration verification (CCV) issue is noted by Pace for several compounds associated with analytical batch WG1184957 (analyzed on October 23, 2018). No action is taken other than to note the no samples and only the trip blank is associated with this batch. No further action is needed.

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

A trip blank was collected and submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at a concentration at or above the reporting detection limits (RDLs).

Equipment Blank Results

Equipment blank was not collected as planned during this sampling event due to an oversight in the field. No action is taken other than to note that corrective action has been implemented and equipment blanks will be collected in future sampling events.

Field Duplicate Analyses

Field duplicate samples were not collected. Refer to SDG L1037759 for field duplicate data or laboratory control sample results associated with this SDG for precision data.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results and/or laboratory control sample results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, trip blank, method blanks, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) %R's and relative percent differences (RPDs) for analytical batch (WG1183421) are within the laboratory control limits with one exception:

- LCS/LCSD recoveries for 2,2-dichloropropane are above laboratory acceptance criteria. Compound 2,2-dichloropropane is not detected in the associated samples. **2,2-dichloropropane is considered not detected (U) in associated samples due to the elevated LCS recoveries.**

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS/LCSD and field duplicate results for accuracy and precision data.

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 SDGs were provided by the laboratory and data validator qualifiers were entered into the EDDs.

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

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.

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 13:23	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 13:23	WG1183421
Benzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromoform	ND		0.500	1	10/19/2018 13:23	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 13:23	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 13:23	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 13:23	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 13:23	WG1183421
Chloroform	ND		0.500	1	10/19/2018 13:23	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 13:23	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 13:23	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:23	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 13:23	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 13:23	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 13:23	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 13:23	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 13:23	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 13:23	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 13:23	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 13:23	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 13:23	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 13:23	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 13:23	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 13:23	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 13:23	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Styrene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421

JC 11/17/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
Toluene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 13:23	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 13:23	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 13:23	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 13:23	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 13:23	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 13:23	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 13:23	WG1183421
(S) Toluene-d8	*99.7*		*80.0-120*		*10/19/2018 13:23*	WG1183421
(S) Dibromofluoromethane	*102*		*75.0-120*		*10/19/2018 13:23*	WG1183421
(S) 4-Bromofluorobenzene	*97.6*		*77.0-126*		*10/19/2018 13:23*	WG1183421

JC 11/17/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	10/19/2018 13:42	WG1183421	
Acrylonitrile	ND		5.00	1	10/19/2018 13:42	WG1183421	
Benzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Bromobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Bromodichloromethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
Bromochloromethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
Bromoform	ND		0.500	1	10/19/2018 13:42	WG1183421	
Bromomethane	ND		2.50	1	10/19/2018 13:42	WG1183421	
n-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
sec-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
tert-Butylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Carbon disulfide	ND		0.500	1	10/19/2018 13:42	WG1183421	
Carbon tetrachloride	ND		0.500	1	10/19/2018 13:42	WG1183421	
Chlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Chlorodibromomethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
Chloroethane	ND		2.50	1	10/19/2018 13:42	WG1183421	
Chloroform	ND		0.500	1	10/19/2018 13:42	WG1183421	
Chloromethane	ND		1.25	1	10/19/2018 13:42	WG1183421	
2-Chlorotoluene	ND		0.500	1	10/19/2018 13:42	WG1183421	
4-Chlorotoluene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 13:42	WG1183421	
1,2-Dibromoethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
Dibromomethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 13:42	WG1183421	
1,1-Dichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,2-Dichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421	JC 11/17/18
1,1-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421	
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421	
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,2-Dichloropropane	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,1-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,3-Dichloropropane	ND		1.00	1	10/19/2018 13:42	WG1183421	
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421	
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 13:42	WG1183421	
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 13:42	WG1183421	
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 13:42	WG1183421	
Di-isopropyl ether	ND		0.500	1	10/19/2018 13:42	WG1183421	
Ethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 13:42	WG1183421	
2-Hexanone	ND		5.00	1	10/19/2018 13:42	WG1183421	
n-Hexane	ND		5.00	1	10/19/2018 13:42	WG1183421	
Iodomethane	ND		10.0	1	10/19/2018 13:42	WG1183421	
Isopropylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
p-Isopropyltoluene	ND		0.500	1	10/19/2018 13:42	WG1183421	
2-Butanone (MEK)	ND		5.00	1	10/19/2018 13:42	WG1183421	
Methylene Chloride	ND		2.50	1	10/19/2018 13:42	WG1183421	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 13:42	WG1183421	
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 13:42	WG1183421	
Naphthalene	ND		2.50	1	10/19/2018 13:42	WG1183421	
n-Propylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421	
Styrene	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421	
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
Toluene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 13:42	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 13:42	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 13:42	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 13:42	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 13:42	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 13:42	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 13:42	WG1183421
(S) Toluene-d8	*96.2*		*80.0-120*		*10/19/2018 13:42*	WG1183421
(S) Dibromofluoromethane	*100*		*75.0-120*		*10/19/2018 13:42*	WG1183421
(S) 4-Bromofluorobenzene	*95.2*		*77.0-126*		*10/19/2018 13:42*	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:02	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:02	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:02	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:02	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:02	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:02	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:02	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:02	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:02	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:02	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:02	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:02	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 14:02	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:02	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:02	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:02	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:02	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:02	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:02	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:02	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:02	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:02	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:02	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:02	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421

JC 11/17/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
Toluene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:02	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 14:02	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:02	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:02	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 14:02	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 14:02	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 14:02	WG1183421
(S) Toluene-d8	*97.4*		*80.0-120*		*10/19/2018 14:02*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:02*	WG1183421
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*10/19/2018 14:02*	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:22	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:22	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:22	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:22	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:22	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:22	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:22	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:22	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:22	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:22	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:22	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:22	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:22	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:22	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 14:22	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:22	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:22	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:22	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:22	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:22	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:22	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:22	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:22	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:22	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:22	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:22	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:22	WG1183421	
Tetrachloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421	
Toluene	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:22	WG1183421	
Trichloroethene	ND		0.500	1	10/19/2018 14:22	WG1183421	
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:22	WG1183421	
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:22	WG1183421	
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421	
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:22	WG1183421	
Vinyl acetate	ND		5.00	1	10/19/2018 14:22	WG1183421	
Vinyl chloride	ND		0.500	1	10/19/2018 14:22	WG1183421	
Xylenes, Total	ND		1.50	1	10/19/2018 14:22	WG1183421	JC 11/17/18
(S) Toluene-d8	*98.1*		*80.0-120*		*10/19/2018 14:22*	WG1183421	
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:22*	WG1183421	
(S) 4-Bromofluorobenzene	*94.9*		*77.0-126*		*10/19/2018 14:22*	WG1183421	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 14:42	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 14:42	WG1183421
Benzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromoform	ND		0.500	1	10/19/2018 14:42	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 14:42	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 14:42	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 14:42	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 14:42	WG1183421
Chloroform	ND		0.500	1	10/19/2018 14:42	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 14:42	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 14:42	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 14:42	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 14:42	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 14:42	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 14:42	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 14:42	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 14:42	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 14:42	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 14:42	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 14:42	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 14:42	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 14:42	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 14:42	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 14:42	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 14:42	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Styrene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421

JC 11/17/18

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
Toluene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 14:42	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 14:42	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 14:42	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 14:42	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 14:42	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 14:42	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 14:42	WG1183421
(S) Toluene-d8	*102*		*80.0-120*		*10/19/2018 14:42*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 14:42*	WG1183421
(S) 4-Bromofluorobenzene	*95.9*		*77.0-126*		*10/19/2018 14:42*	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch	
Acetone	ND		25.0	1	10/19/2018 15:02	WG1183421	
Acrylonitrile	ND		5.00	1	10/19/2018 15:02	WG1183421	
Benzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Bromobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Bromodichloromethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
Bromochloromethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
Bromoform	ND		0.500	1	10/19/2018 15:02	WG1183421	
Bromomethane	ND		2.50	1	10/19/2018 15:02	WG1183421	
n-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Carbon disulfide	ND		0.500	1	10/19/2018 15:02	WG1183421	
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:02	WG1183421	
Chlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
Chloroethane	ND		2.50	1	10/19/2018 15:02	WG1183421	
Chloroform	ND		0.500	1	10/19/2018 15:02	WG1183421	
Chloromethane	ND		1.25	1	10/19/2018 15:02	WG1183421	
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:02	WG1183421	
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:02	WG1183421	
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
Dibromomethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:02	WG1183421	
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421	
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421	
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:02	WG1183421	JC 11/17/18
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:02	WG1183421	
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421	
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:02	WG1183421	
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:02	WG1183421	
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 15:02	WG1183421	
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:02	WG1183421	
Ethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:02	WG1183421	
2-Hexanone	ND		5.00	1	10/19/2018 15:02	WG1183421	
n-Hexane	ND		5.00	1	10/19/2018 15:02	WG1183421	
Iodomethane	ND		10.0	1	10/19/2018 15:02	WG1183421	
Isopropylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:02	WG1183421	
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:02	WG1183421	
Methylene Chloride	ND		2.50	1	10/19/2018 15:02	WG1183421	
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:02	WG1183421	
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:02	WG1183421	
Naphthalene	ND		2.50	1	10/19/2018 15:02	WG1183421	
n-Propylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421	
Styrene	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421	
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421	

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:02	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:02	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:02	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:02	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:02	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:02	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:02	WG1183421
(S) Toluene-d8	*97.6*		*80.0-120*		*10/19/2018 15:02*	WG1183421
(S) Dibromofluoromethane	*102*		*75.0-120*		*10/19/2018 15:02*	WG1183421
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*10/19/2018 15:02*	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 15:22	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 15:22	WG1183421
Benzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromoform	ND		0.500	1	10/19/2018 15:22	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 15:22	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 15:22	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:22	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 15:22	WG1183421
Chloroform	ND		0.500	1	10/19/2018 15:22	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 15:22	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:22	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:22	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:22	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 15:22	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:22	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:22	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 15:22	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 15:22	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 15:22	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:22	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:22	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 15:22	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:22	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:22	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 15:22	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Styrene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:22	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:22	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:22	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:22	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:22	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:22	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:22	WG1183421
(S) Toluene-d8	*98.7*		*80.0-120*		*10/19/2018 15:22*	WG1183421
(S) Dibromofluoromethane	*101*		*75.0-120*		*10/19/2018 15:22*	WG1183421
(S) 4-Bromofluorobenzene	*93.5*		*77.0-126*		*10/19/2018 15:22*	WG1183421

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Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/19/2018 15:41	WG1183421
Acrylonitrile	ND		5.00	1	10/19/2018 15:41	WG1183421
Benzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromodichloromethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromochloromethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromoform	ND		0.500	1	10/19/2018 15:41	WG1183421
Bromomethane	ND		2.50	1	10/19/2018 15:41	WG1183421
n-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
sec-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
tert-Butylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Carbon disulfide	ND		0.500	1	10/19/2018 15:41	WG1183421
Carbon tetrachloride	ND		0.500	1	10/19/2018 15:41	WG1183421
Chlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Chlorodibromomethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Chloroethane	ND		2.50	1	10/19/2018 15:41	WG1183421
Chloroform	ND		0.500	1	10/19/2018 15:41	WG1183421
Chloromethane	ND		1.25	1	10/19/2018 15:41	WG1183421
2-Chlorotoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
4-Chlorotoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2-Dibromoethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Dibromomethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,4-Dichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Dichlorodifluoromethane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,1-Dichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
cis-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,2-Dichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2-Dichloropropane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3-Dichloropropane	ND		1.00	1	10/19/2018 15:41	WG1183421
cis-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,3-Dichloropropene	ND		0.500	1	10/19/2018 15:41	WG1183421
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/19/2018 15:41	WG1183421
2,2-Dichloropropane	ND	U ~~J4~~	0.500	1	10/19/2018 15:41	WG1183421
Di-isopropyl ether	ND		0.500	1	10/19/2018 15:41	WG1183421
Ethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Hexachloro-1,3-butadiene	ND		1.00	1	10/19/2018 15:41	WG1183421
2-Hexanone	ND		5.00	1	10/19/2018 15:41	WG1183421
n-Hexane	ND		5.00	1	10/19/2018 15:41	WG1183421
Iodomethane	ND		10.0	1	10/19/2018 15:41	WG1183421
Isopropylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
p-Isopropyltoluene	ND		0.500	1	10/19/2018 15:41	WG1183421
2-Butanone (MEK)	ND		5.00	1	10/19/2018 15:41	WG1183421
Methylene Chloride	ND		2.50	1	10/19/2018 15:41	WG1183421
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/19/2018 15:41	WG1183421
Methyl tert-butyl ether	ND		0.500	1	10/19/2018 15:41	WG1183421
Naphthalene	ND		2.50	1	10/19/2018 15:41	WG1183421
n-Propylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Styrene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421

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1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Tetrachloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
Toluene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,3-Trichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,4-Trichlorobenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,1-Trichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
1,1,2-Trichloroethane	ND		0.500	1	10/19/2018 15:41	WG1183421
Trichloroethene	ND		0.500	1	10/19/2018 15:41	WG1183421
Trichlorofluoromethane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2,3-Trichloropropane	ND		2.50	1	10/19/2018 15:41	WG1183421
1,2,4-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,2,3-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
1,3,5-Trimethylbenzene	ND		0.500	1	10/19/2018 15:41	WG1183421
Vinyl acetate	ND		5.00	1	10/19/2018 15:41	WG1183421
Vinyl chloride	ND		0.500	1	10/19/2018 15:41	WG1183421
Xylenes, Total	ND		1.50	1	10/19/2018 15:41	WG1183421
(S) Toluene-d8	*98.3*		*80.0-120*		*10/19/2018 15:41*	WG1183421
(S) Dibromofluoromethane	*103*		*75.0-120*		*10/19/2018 15:41*	WG1183421
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*10/19/2018 15:41*	WG1183421

JC 11/17/18

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND	J0	25.0	1	10/23/2018 14:34	WG1184957
Acrylonitrile	ND		5.00	1	10/23/2018 14:34	WG1184957
Benzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromodichloromethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromochloromethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromoform	ND		0.500	1	10/23/2018 14:34	WG1184957
Bromomethane	ND		2.50	1	10/23/2018 14:34	WG1184957
n-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
sec-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
tert-Butylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Carbon disulfide	ND		0.500	1	10/23/2018 14:34	WG1184957
Carbon tetrachloride	ND		0.500	1	10/23/2018 14:34	WG1184957
Chlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Chlorodibromomethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Chloroethane	ND		2.50	1	10/23/2018 14:34	WG1184957
Chloroform	ND		0.500	1	10/23/2018 14:34	WG1184957
Chloromethane	ND	J0	1.25	1	10/23/2018 14:34	WG1184957
2-Chlorotoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
4-Chlorotoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2-Dibromoethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Dibromomethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,4-Dichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Dichlorodifluoromethane	ND	J0	2.50	1	10/23/2018 14:34	WG1184957
1,1-Dichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
cis-1,2-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,2-Dichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2-Dichloropropane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3-Dichloropropane	ND		1.00	1	10/23/2018 14:34	WG1184957
cis-1,3-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,3-Dichloropropene	ND		0.500	1	10/23/2018 14:34	WG1184957
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 11:02	WG1185371
2,2-Dichloropropane	ND		0.500	1	10/23/2018 14:34	WG1184957
Di-isopropyl ether	ND		0.500	1	10/23/2018 14:34	WG1184957
Ethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957 JC 11/17/18
Hexachloro-1,3-butadiene	ND		1.00	1	10/23/2018 14:34	WG1184957
2-Hexanone	ND		5.00	1	10/23/2018 14:34	WG1184957
n-Hexane	ND		5.00	1	10/23/2018 14:34	WG1184957
Iodomethane	ND		10.0	1	10/23/2018 14:34	WG1184957
Isopropylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
p-Isopropyltoluene	ND		0.500	1	10/23/2018 14:34	WG1184957
2-Butanone (MEK)	ND	J0	5.00	1	10/23/2018 14:34	WG1184957
Methylene Chloride	ND		2.50	1	10/23/2018 14:34	WG1184957
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/23/2018 14:34	WG1184957
Methyl tert-butyl ether	ND		0.500	1	10/23/2018 14:34	WG1184957
Naphthalene	ND		2.50	1	10/23/2018 14:34	WG1184957
n-Propylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Styrene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Tetrachloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
Toluene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,3-Trichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,4-Trichlorobenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,1-Trichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
1,1,2-Trichloroethane	ND		0.500	1	10/23/2018 14:34	WG1184957
Trichloroethene	ND		0.500	1	10/23/2018 14:34	WG1184957
Trichlorofluoromethane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2,3-Trichloropropane	ND		2.50	1	10/23/2018 14:34	WG1184957
1,2,4-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,2,3-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
1,3,5-Trimethylbenzene	ND		0.500	1	10/23/2018 14:34	WG1184957
Vinyl acetate	ND	J0	5.00	1	10/23/2018 14:34	WG1184957
Vinyl chloride	ND		0.500	1	10/23/2018 14:34	WG1184957
Xylenes, Total	ND		1.50	1	10/23/2018 14:34	WG1184957
(S) Toluene-d8	*102*		*80.0-120*		*10/23/2018 14:34*	WG1184957
(S) Toluene-d8	*95.8*		*80.0-120*		*10/25/2018 11:02*	WG1185371
(S) Dibromofluoromethane	*92.2*		*75.0-120*		*10/23/2018 14:34*	WG1184957
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 11:02*	WG1185371
(S) 4-Bromofluorobenzene	*97.6*		*77.0-126*		*10/23/2018 14:34*	WG1184957
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*10/25/2018 11:02*	WG1185371

JC 11/17/18

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

October 31, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L1037755
Samples Received:	10/24/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	MVSC
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By:

Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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MW-2-101818 L1037755-01 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 16:25 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/24/18 22:50	10/24/18 22:50	JCP

MW-10-101818 L1037755-02 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 12:45 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/24/18 23:12	10/24/18 23:12	JCP

MW-15-101818 L1037755-03 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 15:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/24/18 23:34	10/24/18 23:34	JCP

MW-16-101818 L1037755-04 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 14:10 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/24/18 23:56	10/24/18 23:56	JCP

MW-11-101918 L1037755-05 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 13:50 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 00:18	10/25/18 00:18	JCP

DC-8-101818 L1037755-06 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 10:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 00:40	10/25/18 00:40	JCP

DC-11-101818 L1037755-07 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 11:35 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 01:02	10/25/18 01:02	JCP

DC-15-101818 L1037755-08 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 09:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 01:24	10/25/18 01:24	JCP

DC-17-101918 L1037755-09 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 17:30 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 01:46	10/25/18 01:46	JCP

DC-12-101918 L1037755-10 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 10:45 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 02:08	10/25/18 02:08	JCP

DC-13-101918 L1037755-11 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 16:05 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 02:29	10/25/18 02:29	JCP

DC-18-101918 L1037755-12 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 15:00 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 02:51	10/25/18 02:51	JCP

DC-20-101918 L1037755-13 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 12:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186267	1	10/25/18 18:39	10/25/18 18:39	JCP

TRIP BLANK L1037755-14 GW

Collected by: Ben Hecht | Collected date/time: 10/19/18 00:00 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186267	1	10/25/18 12:08	10/25/18 12:08	ACG

KMW-9-101818 L1037755-15 GW

Collected by: Ben Hecht | Collected date/time: 10/18/18 17:30 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186267	1	10/25/18 19:01	10/25/18 19:01	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/24/2018 22:50	WG1186087
Acrylonitrile	ND		5.00	1	10/24/2018 22:50	WG1186087
Benzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Bromobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Bromodichloromethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Bromochloromethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Bromoform	ND		0.500	1	10/24/2018 22:50	WG1186087
Bromomethane	ND		2.50	1	10/24/2018 22:50	WG1186087
n-Butylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
sec-Butylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
tert-Butylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Carbon disulfide	ND		0.500	1	10/24/2018 22:50	WG1186087
Carbon tetrachloride	ND		0.500	1	10/24/2018 22:50	WG1186087
Chlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Chlorodibromomethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Chloroethane	ND		2.50	1	10/24/2018 22:50	WG1186087
Chloroform	0.843		0.500	1	10/24/2018 22:50	WG1186087
Chloromethane	ND		1.25	1	10/24/2018 22:50	WG1186087
2-Chlorotoluene	ND		0.500	1	10/24/2018 22:50	WG1186087
4-Chlorotoluene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/24/2018 22:50	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Dibromomethane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/24/2018 22:50	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/24/2018 22:50	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/24/2018 22:50	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/24/2018 22:50	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/24/2018 22:50	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/24/2018 22:50	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/24/2018 22:50	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/24/2018 22:50	WG1186087
Di-isopropyl ether	ND		0.500	1	10/24/2018 22:50	WG1186087
Ethylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/24/2018 22:50	WG1186087
2-Hexanone	ND		5.00	1	10/24/2018 22:50	WG1186087
n-Hexane	ND		5.00	1	10/24/2018 22:50	WG1186087
Iodomethane	ND		10.0	1	10/24/2018 22:50	WG1186087
Isopropylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/24/2018 22:50	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/24/2018 22:50	WG1186087
Methylene Chloride	ND		2.50	1	10/24/2018 22:50	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/24/2018 22:50	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/24/2018 22:50	WG1186087
Naphthalene	ND		2.50	1	10/24/2018 22:50	WG1186087
n-Propylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Styrene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Tetrachloroethene	1.17		0.500	1	10/24/2018 22:50	WG1186087
Toluene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/24/2018 22:50	WG1186087
Trichloroethene	ND		0.500	1	10/24/2018 22:50	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/24/2018 22:50	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/24/2018 22:50	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/24/2018 22:50	WG1186087
Vinyl acetate	ND		5.00	1	10/24/2018 22:50	WG1186087
Vinyl chloride	ND		0.500	1	10/24/2018 22:50	WG1186087
Xylenes, Total	ND		1.50	1	10/24/2018 22:50	WG1186087
(S) Toluene-d8	*96.5*		*80.0-120*		*10/24/2018 22:50*	WG1186087
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/24/2018 22:50*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/24/2018 22:50*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/24/2018 23:12	WG1186087
Acrylonitrile	ND		5.00	1	10/24/2018 23:12	WG1186087
Benzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Bromobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Bromodichloromethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Bromochloromethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Bromoform	ND		0.500	1	10/24/2018 23:12	WG1186087
Bromomethane	ND		2.50	1	10/24/2018 23:12	WG1186087
n-Butylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
sec-Butylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
tert-Butylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Carbon disulfide	ND		0.500	1	10/24/2018 23:12	WG1186087
Carbon tetrachloride	ND		0.500	1	10/24/2018 23:12	WG1186087
Chlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Chlorodibromomethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Chloroethane	ND		2.50	1	10/24/2018 23:12	WG1186087
Chloroform	ND		0.500	1	10/24/2018 23:12	WG1186087
Chloromethane	ND		1.25	1	10/24/2018 23:12	WG1186087
2-Chlorotoluene	ND		0.500	1	10/24/2018 23:12	WG1186087
4-Chlorotoluene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/24/2018 23:12	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Dibromomethane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/24/2018 23:12	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/24/2018 23:12	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:12	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/24/2018 23:12	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:12	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:12	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/24/2018 23:12	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/24/2018 23:12	WG1186087
Di-isopropyl ether	ND		0.500	1	10/24/2018 23:12	WG1186087
Ethylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/24/2018 23:12	WG1186087
2-Hexanone	ND		5.00	1	10/24/2018 23:12	WG1186087
n-Hexane	ND		5.00	1	10/24/2018 23:12	WG1186087
Iodomethane	ND		10.0	1	10/24/2018 23:12	WG1186087
Isopropylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/24/2018 23:12	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/24/2018 23:12	WG1186087
Methylene Chloride	ND		2.50	1	10/24/2018 23:12	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/24/2018 23:12	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/24/2018 23:12	WG1186087
Naphthalene	ND		2.50	1	10/24/2018 23:12	WG1186087
n-Propylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Styrene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Tetrachloroethene	ND		0.500	1	10/24/2018 23:12	WG1186087
Toluene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/24/2018 23:12	WG1186087
Trichloroethene	ND		0.500	1	10/24/2018 23:12	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/24/2018 23:12	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/24/2018 23:12	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/24/2018 23:12	WG1186087
Vinyl acetate	ND		5.00	1	10/24/2018 23:12	WG1186087
Vinyl chloride	ND		0.500	1	10/24/2018 23:12	WG1186087
Xylenes, Total	ND		1.50	1	10/24/2018 23:12	WG1186087
(S) Toluene-d8	*95.0*		*80.0-120*		*10/24/2018 23:12*	WG1186087
(S) Dibromofluoromethane	*112*		*75.0-120*		*10/24/2018 23:12*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/24/2018 23:12*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/24/2018 23:34	WG1186087
Acrylonitrile	ND		5.00	1	10/24/2018 23:34	WG1186087
Benzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Bromobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Bromodichloromethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Bromochloromethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Bromoform	ND		0.500	1	10/24/2018 23:34	WG1186087
Bromomethane	ND		2.50	1	10/24/2018 23:34	WG1186087
n-Butylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
sec-Butylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
tert-Butylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Carbon disulfide	ND		0.500	1	10/24/2018 23:34	WG1186087
Carbon tetrachloride	ND		0.500	1	10/24/2018 23:34	WG1186087
Chlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Chlorodibromomethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Chloroethane	ND		2.50	1	10/24/2018 23:34	WG1186087
Chloroform	ND		0.500	1	10/24/2018 23:34	WG1186087
Chloromethane	ND		1.25	1	10/24/2018 23:34	WG1186087
2-Chlorotoluene	ND		0.500	1	10/24/2018 23:34	WG1186087
4-Chlorotoluene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/24/2018 23:34	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Dibromomethane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/24/2018 23:34	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/24/2018 23:34	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:34	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/24/2018 23:34	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:34	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:34	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/24/2018 23:34	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/24/2018 23:34	WG1186087
Di-isopropyl ether	ND		0.500	1	10/24/2018 23:34	WG1186087
Ethylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/24/2018 23:34	WG1186087
2-Hexanone	ND		5.00	1	10/24/2018 23:34	WG1186087
n-Hexane	ND		5.00	1	10/24/2018 23:34	WG1186087
Iodomethane	ND		10.0	1	10/24/2018 23:34	WG1186087
Isopropylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/24/2018 23:34	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/24/2018 23:34	WG1186087
Methylene Chloride	ND		2.50	1	10/24/2018 23:34	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/24/2018 23:34	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/24/2018 23:34	WG1186087
Naphthalene	ND		2.50	1	10/24/2018 23:34	WG1186087
n-Propylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Styrene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Tetrachloroethene	ND		0.500	1	10/24/2018 23:34	WG1186087
Toluene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/24/2018 23:34	WG1186087
Trichloroethene	ND		0.500	1	10/24/2018 23:34	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/24/2018 23:34	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/24/2018 23:34	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/24/2018 23:34	WG1186087
Vinyl acetate	ND		5.00	1	10/24/2018 23:34	WG1186087
Vinyl chloride	ND		0.500	1	10/24/2018 23:34	WG1186087
Xylenes, Total	ND		1.50	1	10/24/2018 23:34	WG1186087
(S) Toluene-d8	*95.9*		*80.0-120*		*10/24/2018 23:34*	WG1186087
(S) Dibromofluoromethane	*112*		*75.0-120*		*10/24/2018 23:34*	WG1186087
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*10/24/2018 23:34*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/24/2018 23:56	WG1186087
Acrylonitrile	ND		5.00	1	10/24/2018 23:56	WG1186087
Benzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Bromobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Bromodichloromethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Bromochloromethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Bromoform	ND		0.500	1	10/24/2018 23:56	WG1186087
Bromomethane	ND		2.50	1	10/24/2018 23:56	WG1186087
n-Butylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
sec-Butylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
tert-Butylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Carbon disulfide	ND		0.500	1	10/24/2018 23:56	WG1186087
Carbon tetrachloride	ND		0.500	1	10/24/2018 23:56	WG1186087
Chlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Chlorodibromomethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Chloroethane	ND		2.50	1	10/24/2018 23:56	WG1186087
Chloroform	0.539		0.500	1	10/24/2018 23:56	WG1186087
Chloromethane	ND		1.25	1	10/24/2018 23:56	WG1186087
2-Chlorotoluene	ND		0.500	1	10/24/2018 23:56	WG1186087
4-Chlorotoluene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/24/2018 23:56	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Dibromomethane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/24/2018 23:56	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/24/2018 23:56	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:56	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/24/2018 23:56	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:56	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/24/2018 23:56	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/24/2018 23:56	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/24/2018 23:56	WG1186087
Di-isopropyl ether	ND		0.500	1	10/24/2018 23:56	WG1186087
Ethylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/24/2018 23:56	WG1186087
2-Hexanone	ND		5.00	1	10/24/2018 23:56	WG1186087
n-Hexane	ND		5.00	1	10/24/2018 23:56	WG1186087
Iodomethane	ND		10.0	1	10/24/2018 23:56	WG1186087
Isopropylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/24/2018 23:56	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/24/2018 23:56	WG1186087
Methylene Chloride	ND		2.50	1	10/24/2018 23:56	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/24/2018 23:56	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/24/2018 23:56	WG1186087
Naphthalene	ND		2.50	1	10/24/2018 23:56	WG1186087
n-Propylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Styrene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Tetrachloroethene	0.912		0.500	1	10/24/2018 23:56	WG1186087
Toluene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/24/2018 23:56	WG1186087
Trichloroethene	ND		0.500	1	10/24/2018 23:56	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/24/2018 23:56	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/24/2018 23:56	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/24/2018 23:56	WG1186087
Vinyl acetate	ND		5.00	1	10/24/2018 23:56	WG1186087
Vinyl chloride	ND		0.500	1	10/24/2018 23:56	WG1186087
Xylenes, Total	ND		1.50	1	10/24/2018 23:56	WG1186087
(S) Toluene-d8	*97.5*		*80.0-120*		*10/24/2018 23:56*	WG1186087
(S) Dibromofluoromethane	*111*		*75.0-120*		*10/24/2018 23:56*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/24/2018 23:56*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 00:18	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 00:18	WG1186087
Benzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Bromoform	ND		0.500	1	10/25/2018 00:18	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 00:18	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 00:18	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 00:18	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 00:18	WG1186087
Chloroform	ND		0.500	1	10/25/2018 00:18	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 00:18	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 00:18	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 00:18	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 00:18	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 00:18	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 00:18	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 00:18	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 00:18	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 00:18	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 00:18	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 00:18	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 00:18	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 00:18	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 00:18	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 00:18	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 00:18	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 00:18	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 00:18	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 00:18	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 00:18	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 00:18	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 00:18	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Styrene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Tetrachloroethene	2.44		0.500	1	10/25/2018 00:18	WG1186087
Toluene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 00:18	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 00:18	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 00:18	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 00:18	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 00:18	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 00:18	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 00:18	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 00:18	WG1186087
(S) Toluene-d8	*98.4*		*80.0-120*		*10/25/2018 00:18*	WG1186087
(S) Dibromofluoromethane	*110*		*75.0-120*		*10/25/2018 00:18*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 00:18*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 00:40	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 00:40	WG1186087
Benzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Bromoform	ND		0.500	1	10/25/2018 00:40	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 00:40	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 00:40	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 00:40	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 00:40	WG1186087
Chloroform	ND		0.500	1	10/25/2018 00:40	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 00:40	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 00:40	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 00:40	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 00:40	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 00:40	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 00:40	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 00:40	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 00:40	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 00:40	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 00:40	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 00:40	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 00:40	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 00:40	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 00:40	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 00:40	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 00:40	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 00:40	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 00:40	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 00:40	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 00:40	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 00:40	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 00:40	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Styrene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Tetrachloroethene	12.1		0.500	1	10/25/2018 00:40	WG1186087
Toluene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 00:40	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 00:40	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 00:40	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 00:40	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 00:40	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 00:40	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 00:40	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 00:40	WG1186087
(S) Toluene-d8	*95.2*		*80.0-120*		*10/25/2018 00:40*	WG1186087
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 00:40*	WG1186087
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*10/25/2018 00:40*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 01:02	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 01:02	WG1186087
Benzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Bromoform	ND		0.500	1	10/25/2018 01:02	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 01:02	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 01:02	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 01:02	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 01:02	WG1186087
Chloroform	ND		0.500	1	10/25/2018 01:02	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 01:02	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 01:02	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 01:02	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 01:02	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 01:02	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:02	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 01:02	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:02	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:02	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 01:02	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 01:02	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 01:02	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 01:02	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 01:02	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 01:02	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 01:02	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 01:02	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 01:02	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 01:02	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 01:02	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 01:02	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 01:02	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Styrene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Tetrachloroethene	1.25		0.500	1	10/25/2018 01:02	WG1186087
Toluene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 01:02	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 01:02	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 01:02	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 01:02	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 01:02	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 01:02	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 01:02	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 01:02	WG1186087
(S) Toluene-d8	*97.3*		*80.0-120*		*10/25/2018 01:02*	WG1186087
(S) Dibromofluoromethane	*110*		*75.0-120*		*10/25/2018 01:02*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 01:02*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 01:24	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 01:24	WG1186087
Benzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Bromoform	ND		0.500	1	10/25/2018 01:24	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 01:24	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 01:24	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 01:24	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 01:24	WG1186087
Chloroform	ND		0.500	1	10/25/2018 01:24	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 01:24	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 01:24	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 01:24	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 01:24	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 01:24	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:24	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 01:24	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:24	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:24	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 01:24	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 01:24	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 01:24	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 01:24	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 01:24	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 01:24	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 01:24	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 01:24	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 01:24	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 01:24	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 01:24	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 01:24	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 01:24	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Styrene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Tetrachloroethene	7.65		0.500	1	10/25/2018 01:24	WG1186087
Toluene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 01:24	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 01:24	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 01:24	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 01:24	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 01:24	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 01:24	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 01:24	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 01:24	WG1186087
(S) Toluene-d8	*95.8*		*80.0-120*		*10/25/2018 01:24*	WG1186087
(S) Dibromofluoromethane	*112*		*75.0-120*		*10/25/2018 01:24*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 01:24*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 01:46	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 01:46	WG1186087
Benzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Bromoform	ND		0.500	1	10/25/2018 01:46	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 01:46	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 01:46	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 01:46	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 01:46	WG1186087
Chloroform	ND		0.500	1	10/25/2018 01:46	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 01:46	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 01:46	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 01:46	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 01:46	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 01:46	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:46	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 01:46	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:46	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 01:46	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 01:46	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 01:46	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 01:46	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 01:46	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 01:46	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 01:46	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 01:46	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 01:46	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 01:46	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 01:46	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 01:46	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 01:46	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 01:46	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Styrene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Tetrachloroethene	8.24		0.500	1	10/25/2018 01:46	WG1186087
Toluene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 01:46	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 01:46	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 01:46	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 01:46	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 01:46	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 01:46	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 01:46	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 01:46	WG1186087
(S) Toluene-d8	*96.1*		*80.0-120*		*10/25/2018 01:46*	WG1186087
(S) Dibromofluoromethane	*111*		*75.0-120*		*10/25/2018 01:46*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 01:46*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 02:08	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 02:08	WG1186087
Benzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Bromoform	ND		0.500	1	10/25/2018 02:08	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 02:08	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 02:08	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 02:08	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 02:08	WG1186087
Chloroform	ND		0.500	1	10/25/2018 02:08	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 02:08	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 02:08	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 02:08	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 02:08	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 02:08	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:08	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 02:08	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:08	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:08	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 02:08	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 02:08	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 02:08	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 02:08	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 02:08	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 02:08	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 02:08	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 02:08	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 02:08	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 02:08	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 02:08	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 02:08	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 02:08	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Styrene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Tetrachloroethene	1.66		0.500	1	10/25/2018 02:08	WG1186087
Toluene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 02:08	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 02:08	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 02:08	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 02:08	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 02:08	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 02:08	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 02:08	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 02:08	WG1186087
(S) Toluene-d8	*96.0*		*80.0-120*		*10/25/2018 02:08*	WG1186087
(S) Dibromofluoromethane	*115*		*75.0-120*		*10/25/2018 02:08*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 02:08*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 02:29	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 02:29	WG1186087
Benzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Bromoform	ND		0.500	1	10/25/2018 02:29	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 02:29	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 02:29	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 02:29	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 02:29	WG1186087
Chloroform	ND		0.500	1	10/25/2018 02:29	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 02:29	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 02:29	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 02:29	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 02:29	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 02:29	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:29	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 02:29	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:29	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:29	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 02:29	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 02:29	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 02:29	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 02:29	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 02:29	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 02:29	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 02:29	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 02:29	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 02:29	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 02:29	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 02:29	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 02:29	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 02:29	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Styrene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Tetrachloroethene	2.74		0.500	1	10/25/2018 02:29	WG1186087
Toluene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 02:29	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 02:29	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 02:29	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 02:29	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 02:29	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 02:29	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 02:29	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 02:29	WG1186087
(S) Toluene-d8	*95.6*		*80.0-120*		*10/25/2018 02:29*	WG1186087
(S) Dibromofluoromethane	*115*		*75.0-120*		*10/25/2018 02:29*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 02:29*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 02:51	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 02:51	WG1186087
Benzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Bromoform	ND		0.500	1	10/25/2018 02:51	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 02:51	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 02:51	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 02:51	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 02:51	WG1186087
Chloroform	2.36		0.500	1	10/25/2018 02:51	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 02:51	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 02:51	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 02:51	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 02:51	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 02:51	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:51	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 02:51	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:51	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 02:51	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 02:51	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 02:51	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 02:51	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 02:51	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 02:51	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 02:51	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 02:51	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 02:51	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 02:51	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 02:51	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 02:51	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 02:51	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 02:51	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Styrene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Tetrachloroethene	2.79		0.500	1	10/25/2018 02:51	WG1186087
Toluene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 02:51	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 02:51	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 02:51	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 02:51	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 02:51	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 02:51	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 02:51	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 02:51	WG1186087
(S) Toluene-d8	*95.8*		*80.0-120*		*10/25/2018 02:51*	WG1186087
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 02:51*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 02:51*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 18:39	WG1186267
Acrylonitrile	ND		5.00	1	10/25/2018 18:39	WG1186267
Benzene	0.540		0.500	1	10/25/2018 18:39	WG1186267
Bromobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Bromodichloromethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Bromochloromethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Bromoform	ND		0.500	1	10/25/2018 18:39	WG1186267
Bromomethane	ND		2.50	1	10/25/2018 18:39	WG1186267
n-Butylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
sec-Butylbenzene	0.600		0.500	1	10/25/2018 18:39	WG1186267
tert-Butylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Carbon disulfide	ND		0.500	1	10/25/2018 18:39	WG1186267
Carbon tetrachloride	ND		0.500	1	10/25/2018 18:39	WG1186267
Chlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Chlorodibromomethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Chloroethane	ND		2.50	1	10/25/2018 18:39	WG1186267
Chloroform	ND		0.500	1	10/25/2018 18:39	WG1186267
Chloromethane	ND		1.25	1	10/25/2018 18:39	WG1186267
2-Chlorotoluene	ND		0.500	1	10/25/2018 18:39	WG1186267
4-Chlorotoluene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 18:39	WG1186267
1,2-Dibromoethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Dibromomethane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 18:39	WG1186267
1,1-Dichloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2-Dichloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1-Dichloroethene	ND		0.500	1	10/25/2018 18:39	WG1186267
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 18:39	WG1186267
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2-Dichloropropane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1-Dichloropropene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,3-Dichloropropane	ND		1.00	1	10/25/2018 18:39	WG1186267
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 18:39	WG1186267
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 18:39	WG1186267
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 18:39	WG1186267
2,2-Dichloropropane	ND		0.500	1	10/25/2018 18:39	WG1186267
Di-isopropyl ether	ND		0.500	1	10/25/2018 18:39	WG1186267
Ethylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 18:39	WG1186267
2-Hexanone	ND		5.00	1	10/25/2018 18:39	WG1186267
n-Hexane	ND		5.00	1	10/25/2018 18:39	WG1186267
Iodomethane	ND		10.0	1	10/25/2018 18:39	WG1186267
Isopropylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
p-Isopropyltoluene	ND		0.500	1	10/25/2018 18:39	WG1186267
2-Butanone (MEK)	ND		5.00	1	10/25/2018 18:39	WG1186267
Methylene Chloride	ND		2.50	1	10/25/2018 18:39	WG1186267
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 18:39	WG1186267
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 18:39	WG1186267
Naphthalene	ND		2.50	1	10/25/2018 18:39	WG1186267
n-Propylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Styrene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Tetrachloroethene	0.885		0.500	1	10/25/2018 18:39	WG1186267
Toluene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 18:39	WG1186267
Trichloroethene	ND		0.500	1	10/25/2018 18:39	WG1186267
Trichlorofluoromethane	ND		2.50	1	10/25/2018 18:39	WG1186267
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 18:39	WG1186267
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 18:39	WG1186267
Vinyl acetate	ND		5.00	1	10/25/2018 18:39	WG1186267
Vinyl chloride	ND		0.500	1	10/25/2018 18:39	WG1186267
Xylenes, Total	ND		1.50	1	10/25/2018 18:39	WG1186267
(S) Toluene-d8	*94.2*		*80.0-120*		*10/25/2018 18:39*	WG1186267
(S) Dibromofluoromethane	*114*		*75.0-120*		*10/25/2018 18:39*	WG1186267
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 18:39*	WG1186267

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 12:08	WG1186267
Acrylonitrile	ND		5.00	1	10/25/2018 12:08	WG1186267
Benzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Bromobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Bromodichloromethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Bromochloromethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Bromoform	ND		0.500	1	10/25/2018 12:08	WG1186267
Bromomethane	ND		2.50	1	10/25/2018 12:08	WG1186267
n-Butylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
sec-Butylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
tert-Butylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Carbon disulfide	ND		0.500	1	10/25/2018 12:08	WG1186267
Carbon tetrachloride	ND		0.500	1	10/25/2018 12:08	WG1186267
Chlorobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Chlorodibromomethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Chloroethane	ND		2.50	1	10/25/2018 12:08	WG1186267
Chloroform	ND		0.500	1	10/25/2018 12:08	WG1186267
Chloromethane	ND		1.25	1	10/25/2018 12:08	WG1186267
2-Chlorotoluene	ND		0.500	1	10/25/2018 12:08	WG1186267
4-Chlorotoluene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 12:08	WG1186267
1,2-Dibromoethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Dibromomethane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 12:08	WG1186267
1,1-Dichloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2-Dichloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1-Dichloroethene	ND		0.500	1	10/25/2018 12:08	WG1186267
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 12:08	WG1186267
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2-Dichloropropane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1-Dichloropropene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,3-Dichloropropane	ND		1.00	1	10/25/2018 12:08	WG1186267
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 12:08	WG1186267
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 12:08	WG1186267
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 12:08	WG1186267
2,2-Dichloropropane	ND		0.500	1	10/25/2018 12:08	WG1186267
Di-isopropyl ether	ND		0.500	1	10/25/2018 12:08	WG1186267
Ethylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 12:08	WG1186267
2-Hexanone	ND		5.00	1	10/25/2018 12:08	WG1186267
n-Hexane	ND		5.00	1	10/25/2018 12:08	WG1186267
Iodomethane	ND		10.0	1	10/25/2018 12:08	WG1186267
Isopropylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
p-Isopropyltoluene	ND		0.500	1	10/25/2018 12:08	WG1186267
2-Butanone (MEK)	ND		5.00	1	10/25/2018 12:08	WG1186267
Methylene Chloride	ND		2.50	1	10/25/2018 12:08	WG1186267
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 12:08	WG1186267
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 12:08	WG1186267
Naphthalene	ND		2.50	1	10/25/2018 12:08	WG1186267
n-Propylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Styrene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Tetrachloroethene	ND		0.500	1	10/25/2018 12:08	WG1186267
Toluene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2,3-Trichlorobenzene	ND	J0	0.500	1	10/25/2018 12:08	WG1186267
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 12:08	WG1186267
Trichloroethene	ND		0.500	1	10/25/2018 12:08	WG1186267
Trichlorofluoromethane	ND		2.50	1	10/25/2018 12:08	WG1186267
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 12:08	WG1186267
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 12:08	WG1186267
Vinyl acetate	ND		5.00	1	10/25/2018 12:08	WG1186267
Vinyl chloride	ND		0.500	1	10/25/2018 12:08	WG1186267
Xylenes, Total	ND		1.50	1	10/25/2018 12:08	WG1186267
(S) Toluene-d8	*94.3*		*80.0-120*		*10/25/2018 12:08*	WG1186267
(S) Dibromofluoromethane	*112*		*75.0-120*		*10/25/2018 12:08*	WG1186267
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 12:08*	WG1186267

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 19:01	WG1186267
Acrylonitrile	ND		5.00	1	10/25/2018 19:01	WG1186267
Benzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Bromobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Bromodichloromethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Bromochloromethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Bromoform	ND		0.500	1	10/25/2018 19:01	WG1186267
Bromomethane	ND		2.50	1	10/25/2018 19:01	WG1186267
n-Butylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
sec-Butylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
tert-Butylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Carbon disulfide	ND		0.500	1	10/25/2018 19:01	WG1186267
Carbon tetrachloride	ND		0.500	1	10/25/2018 19:01	WG1186267
Chlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Chlorodibromomethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Chloroethane	ND		2.50	1	10/25/2018 19:01	WG1186267
Chloroform	0.699		0.500	1	10/25/2018 19:01	WG1186267
Chloromethane	ND		1.25	1	10/25/2018 19:01	WG1186267
2-Chlorotoluene	ND		0.500	1	10/25/2018 19:01	WG1186267
4-Chlorotoluene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 19:01	WG1186267
1,2-Dibromoethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Dibromomethane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 19:01	WG1186267
1,1-Dichloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2-Dichloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1-Dichloroethene	ND		0.500	1	10/25/2018 19:01	WG1186267
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 19:01	WG1186267
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2-Dichloropropane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1-Dichloropropene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,3-Dichloropropane	ND		1.00	1	10/25/2018 19:01	WG1186267
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 19:01	WG1186267
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 19:01	WG1186267
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 19:01	WG1186267
2,2-Dichloropropane	ND		0.500	1	10/25/2018 19:01	WG1186267
Di-isopropyl ether	ND		0.500	1	10/25/2018 19:01	WG1186267
Ethylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 19:01	WG1186267
2-Hexanone	ND		5.00	1	10/25/2018 19:01	WG1186267
n-Hexane	ND		5.00	1	10/25/2018 19:01	WG1186267
Iodomethane	ND		10.0	1	10/25/2018 19:01	WG1186267
Isopropylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
p-Isopropyltoluene	ND		0.500	1	10/25/2018 19:01	WG1186267
2-Butanone (MEK)	ND		5.00	1	10/25/2018 19:01	WG1186267
Methylene Chloride	ND		2.50	1	10/25/2018 19:01	WG1186267
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 19:01	WG1186267
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 19:01	WG1186267
Naphthalene	ND		2.50	1	10/25/2018 19:01	WG1186267
n-Propylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Styrene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Tetrachloroethene	ND		0.500	1	10/25/2018 19:01	WG1186267
Toluene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 19:01	WG1186267
Trichloroethene	ND		0.500	1	10/25/2018 19:01	WG1186267
Trichlorofluoromethane	ND		2.50	1	10/25/2018 19:01	WG1186267
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 19:01	WG1186267
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 19:01	WG1186267
Vinyl acetate	ND		5.00	1	10/25/2018 19:01	WG1186267
Vinyl chloride	ND		0.500	1	10/25/2018 19:01	WG1186267
Xylenes, Total	ND		1.50	1	10/25/2018 19:01	WG1186267
(S) Toluene-d8	*95.3*		*80.0-120*		*10/25/2018 19:01*	WG1186267
(S) Dibromofluoromethane	*115*		*75.0-120*		*10/25/2018 19:01*	WG1186267
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 19:01*	WG1186267

Method Blank (MB)

(MB) R3354840-3 10/24/18 22:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3354840-3 10/24/18 22:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*110*			*75.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3354840-1 10/24/18 21:01 • (LCSD) R3354840-2 10/24/18 21:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	175	161	140	128	19.0-160			8.37	27
Acrylonitrile	125	151	146	121	117	55.0-149			3.12	20
Benzene	25.0	26.0	26.0	104	104	70.0-123			0.118	20
Bromobenzene	25.0	25.5	26.3	102	105	73.0-121			3.03	20
Bromodichloromethane	25.0	27.6	28.4	110	114	75.0-120			2.94	20
Bromochloromethane	25.0	26.0	25.9	104	104	76.0-122			0.365	20
Bromoform	25.0	26.3	27.6	105	110	68.0-132			5.02	20
Bromomethane	25.0	24.0	24.1	95.8	96.5	10.0-160			0.746	25
n-Butylbenzene	25.0	24.7	26.4	99.0	106	73.0-125			6.42	20
sec-Butylbenzene	25.0	25.3	26.2	101	105	75.0-125			3.69	20
tert-Butylbenzene	25.0	24.9	26.2	99.7	105	76.0-124			5.09	20
Carbon disulfide	25.0	23.7	20.6	94.8	82.3	61.0-128			14.1	20
Carbon tetrachloride	25.0	28.3	29.0	113	116	68.0-126			2.65	20
Chlorobenzene	25.0	24.7	24.6	98.9	98.3	80.0-121			0.606	20
Chlorodibromomethane	25.0	26.1	26.3	104	105	77.0-125			0.553	20
Chloroethane	25.0	25.7	25.5	103	102	47.0-150			0.731	20
Chloroform	25.0	27.7	27.7	111	111	73.0-120			0.0369	20
Chloromethane	25.0	26.3	27.8	105	111	41.0-142			5.54	20
2-Chlorotoluene	25.0	25.8	26.7	103	107	76.0-123			3.29	20
4-Chlorotoluene	25.0	26.0	26.8	104	107	75.0-122			3.08	20
1,2-Dibromo-3-Chloropropane	25.0	22.3	23.9	89.1	95.7	58.0-134			7.15	20
1,2-Dibromoethane	25.0	25.1	24.8	101	99.1	80.0-122			1.38	20
Dibromomethane	25.0	27.4	27.5	110	110	80.0-120			0.519	20
1,2-Dichlorobenzene	25.0	23.5	24.9	94.0	99.7	79.0-121			5.84	20
1,3-Dichlorobenzene	25.0	24.0	24.5	95.8	98.0	79.0-120			2.20	20
1,4-Dichlorobenzene	25.0	23.5	24.6	94.0	98.5	79.0-120			4.71	20
Dichlorodifluoromethane	25.0	25.1	24.8	100	99.3	51.0-149			1.01	20
1,1-Dichloroethane	25.0	28.3	28.3	113	113	70.0-126			0.175	20
1,2-Dichloroethane	25.0	29.8	29.8	119	119	70.0-128			0.00701	20
1,1-Dichloroethene	25.0	25.1	24.9	101	99.5	71.0-124			1.04	20
cis-1,2-Dichloroethene	25.0	25.6	25.8	102	103	73.0-120			0.927	20
trans-1,2-Dichloroethene	25.0	27.0	26.9	108	107	73.0-120			0.464	20
1,2-Dichloropropane	25.0	25.6	26.1	103	105	77.0-125			1.89	20
1,1-Dichloropropene	25.0	27.4	27.3	110	109	74.0-126			0.437	20
1,3-Dichloropropane	25.0	24.8	24.4	99.0	97.7	80.0-120			1.28	20
cis-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.6	80.0-123			0.713	20
trans-1,3-Dichloropropene	25.0	25.1	25.3	101	101	78.0-124			0.790	20
trans-1,4-Dichloro-2-butene	25.0	28.6	29.6	114	118	33.0-144			3.45	20
2,2-Dichloropropane	25.0	28.3	29.6	113	118	58.0-130			4.40	20
Di-isopropyl ether	25.0	28.9	29.1	116	117	58.0-138			0.832	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3354840-1 10/24/18 21:01 • (LCSD) R3354840-2 10/24/18 21:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.8	24.9	99.2	99.4	79.0-123			0.260	20
Hexachloro-1,3-butadiene	25.0	21.6	23.7	86.4	94.9	54.0-138			9.45	20
2-Hexanone	125	136	134	108	107	67.0-149			1.47	20
n-Hexane	25.0	26.6	26.2	106	105	57.0-133			1.57	20
Iodomethane	125	132	131	106	105	33.0-147			1.13	26
Isopropylbenzene	25.0	25.8	26.9	103	108	76.0-127			4.04	20
p-Isopropyltoluene	25.0	25.5	26.7	102	107	76.0-125			4.92	20
2-Butanone (MEK)	125	154	151	123	121	44.0-160			1.62	20
Methylene Chloride	25.0	25.3	25.6	101	102	67.0-120			1.04	20
4-Methyl-2-pentanone (MIBK)	125	144	143	115	115	68.0-142			0.605	20
Methyl tert-butyl ether	25.0	27.3	27.6	109	110	68.0-125			1.16	20
Naphthalene	25.0	20.5	23.3	81.8	93.3	54.0-135			13.0	20
n-Propylbenzene	25.0	25.7	26.6	103	106	77.0-124			3.54	20
Styrene	25.0	26.0	26.9	104	108	73.0-130			3.43	20
1,1,1,2-Tetrachloroethane	25.0	26.2	26.2	105	105	75.0-125			0.0749	20
1,1,2,2-Tetrachloroethane	25.0	24.1	25.0	96.5	100	65.0-130			3.70	20
1,1,2-Trichlorotrifluoroethane	25.0	26.5	25.0	106	100	69.0-132			5.71	20
Tetrachloroethene	25.0	22.9	23.0	91.5	91.8	72.0-132			0.388	20
Toluene	25.0	24.4	24.3	97.8	97.0	79.0-120			0.792	20
1,2,3-Trichlorobenzene	25.0	20.5	23.4	81.9	93.5	50.0-138			13.2	20
1,2,4-Trichlorobenzene	25.0	22.2	23.8	88.9	95.1	57.0-137			6.72	20
1,1,1-Trichloroethane	25.0	29.1	30.0	116	120	73.0-124			2.91	20
1,1,2-Trichloroethane	25.0	24.4	24.0	97.7	96.2	80.0-120			1.62	20
Trichloroethene	25.0	26.3	26.9	105	107	78.0-124			2.25	20
Trichlorofluoromethane	25.0	30.4	30.5	122	122	59.0-147			0.0702	20
1,2,3-Trichloropropane	25.0	27.3	28.0	109	112	73.0-130			2.65	20
1,2,4-Trimethylbenzene	25.0	25.5	26.5	102	106	76.0-121			3.79	20
1,2,3-Trimethylbenzene	25.0	24.8	26.4	99.2	105	77.0-120			6.13	20
1,3,5-Trimethylbenzene	25.0	26.4	27.6	106	110	76.0-122			4.29	20
Vinyl acetate	125	97.3	93.0	77.8	74.4	11.0-160			4.53	20
Vinyl chloride	25.0	26.5	26.2	106	105	67.0-131			0.886	20
Xylenes, Total	75.0	74.1	73.5	98.8	98.0	79.0-123			0.813	20
(S) Toluene-d8				*98.5*	*95.5*	*80.0-120*				
(S) Dibromofluoromethane				*110*	*107*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*103*	*77.0-126*				

Method Blank (MB)

(MB) R3353885-3 10/25/18 10:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3353885-3 10/25/18 10:19

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	0.532	J	0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	0.255	J	0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	0.564		0.164	0.500
1,2,4-Trichlorobenzene	0.365	J	0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*112*			*75.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353885-1 10/25/18 09:13 • (LCSD) R3353885-2 10/25/18 09:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	141	131	113	105	19.0-160			7.18	27
Acrylonitrile	125	143	143	114	115	55.0-149			0.226	20
Benzene	25.0	23.7	24.4	94.7	97.6	70.0-123			3.00	20
Bromobenzene	25.0	24.3	25.2	97.2	101	73.0-121			3.45	20
Bromodichloromethane	25.0	26.3	26.6	105	107	75.0-120			1.18	20
Bromochloromethane	25.0	24.1	24.8	96.2	99.4	76.0-122			3.19	20
Bromoform	25.0	25.4	25.9	102	104	68.0-132			1.92	20
Bromomethane	25.0	22.4	22.9	89.5	91.6	10.0-160			2.30	25
n-Butylbenzene	25.0	24.2	25.3	97.0	101	73.0-125			4.21	20
sec-Butylbenzene	25.0	23.7	24.7	94.8	98.6	75.0-125			3.95	20
tert-Butylbenzene	25.0	23.5	24.6	93.8	98.2	76.0-124			4.58	20
Carbon disulfide	25.0	23.1	21.8	92.6	87.1	61.0-128			6.13	20
Carbon tetrachloride	25.0	26.2	26.8	105	107	68.0-126			2.14	20
Chlorobenzene	25.0	22.8	23.3	91.1	93.1	80.0-121			2.18	20
Chlorodibromomethane	25.0	25.1	25.4	100	102	77.0-125			1.31	20
Chloroethane	25.0	24.0	24.3	95.9	97.3	47.0-150			1.41	20
Chloroform	25.0	25.7	26.1	103	104	73.0-120			1.64	20
Chloromethane	25.0	25.5	26.8	102	107	41.0-142			4.85	20
2-Chlorotoluene	25.0	24.3	25.2	97.3	101	76.0-123			3.65	20
4-Chlorotoluene	25.0	24.6	25.6	98.5	102	75.0-122			3.90	20
1,2-Dibromo-3-Chloropropane	25.0	21.7	23.9	86.7	95.8	58.0-134			9.92	20
1,2-Dibromoethane	25.0	23.4	23.8	93.6	95.1	80.0-122			1.57	20
Dibromomethane	25.0	25.5	26.3	102	105	80.0-120			3.11	20
1,2-Dichlorobenzene	25.0	22.5	23.5	90.1	94.2	79.0-121			4.45	20
1,3-Dichlorobenzene	25.0	23.2	23.5	92.7	94.1	79.0-120			1.53	20
1,4-Dichlorobenzene	25.0	22.2	23.6	88.9	94.2	79.0-120			5.85	20
Dichlorodifluoromethane	25.0	25.0	25.6	100	103	51.0-149			2.56	20
1,1-Dichloroethane	25.0	25.7	26.2	103	105	70.0-126			2.18	20
1,2-Dichloroethane	25.0	28.2	28.8	113	115	70.0-128			2.06	20
1,1-Dichloroethene	25.0	23.3	23.0	93.3	92.2	71.0-124			1.25	20
cis-1,2-Dichloroethene	25.0	23.4	24.1	93.5	96.6	73.0-120			3.20	20
trans-1,2-Dichloroethene	25.0	24.4	25.2	97.7	101	73.0-120			3.14	20
1,2-Dichloropropane	25.0	23.6	24.1	94.2	96.4	77.0-125			2.32	20
1,1-Dichloropropene	25.0	24.8	25.5	99.1	102	74.0-126			2.76	20
1,3-Dichloropropane	25.0	23.0	23.7	92.1	94.8	80.0-120			2.84	20
cis-1,3-Dichloropropene	25.0	23.7	24.2	95.0	97.0	80.0-123			2.09	20
trans-1,3-Dichloropropene	25.0	24.6	25.0	98.3	100	78.0-124			1.68	20
trans-1,4-Dichloro-2-butene	25.0	29.1	30.3	116	121	33.0-144			4.17	20
2,2-Dichloropropane	25.0	28.1	28.7	112	115	58.0-130			2.33	20
Di-isopropyl ether	25.0	26.9	27.7	108	111	58.0-138			2.92	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3353885-1 10/25/18 09:13 • (LCSD) R3353885-2 10/25/18 09:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	22.8	23.0	91.0	92.0	79.0-123			1.08	20
Hexachloro-1,3-butadiene	25.0	21.3	24.5	85.1	97.9	54.0-138			14.0	20
2-Hexanone	125	128	131	102	105	67.0-149			2.62	20
n-Hexane	25.0	26.7	26.6	107	106	57.0-133			0.182	20
Iodomethane	125	120	122	96.2	97.6	33.0-147			1.52	26
Isopropylbenzene	25.0	24.2	25.2	96.8	101	76.0-127			3.95	20
p-Isopropyltoluene	25.0	24.0	25.1	96.2	100	76.0-125			4.35	20
2-Butanone (MEK)	125	143	148	114	119	44.0-160			3.92	20
Methylene Chloride	25.0	23.1	24.0	92.3	96.1	67.0-120			4.06	20
4-Methyl-2-pentanone (MIBK)	125	138	140	110	112	68.0-142			1.45	20
Methyl tert-butyl ether	25.0	25.6	26.0	102	104	68.0-125			1.46	20
Naphthalene	25.0	20.2	22.9	80.7	91.5	54.0-135			12.5	20
n-Propylbenzene	25.0	24.4	25.3	97.6	101	77.0-124			3.43	20
Styrene	25.0	24.8	25.6	99.1	103	73.0-130			3.46	20
1,1,1,2-Tetrachloroethane	25.0	24.6	24.7	98.2	98.9	75.0-125			0.649	20
1,1,2,2-Tetrachloroethane	25.0	25.0	25.6	99.8	103	65.0-130			2.72	20
1,1,2-Trichlorotrifluoroethane	25.0	25.6	24.4	103	97.5	69.0-132			5.06	20
Tetrachloroethene	25.0	20.8	21.5	83.2	86.0	72.0-132			3.38	20
Toluene	25.0	22.5	22.7	90.0	90.8	79.0-120			0.909	20
1,2,3-Trichlorobenzene	25.0	19.8	23.3	79.1	93.3	50.0-138			16.5	20
1,2,4-Trichlorobenzene	25.0	21.7	24.2	86.7	96.9	57.0-137			11.1	20
1,1,1-Trichloroethane	25.0	27.4	27.7	110	111	73.0-124			1.02	20
1,1,2-Trichloroethane	25.0	22.9	23.2	91.6	92.7	80.0-120			1.15	20
Trichloroethene	25.0	23.0	23.6	91.8	94.5	78.0-124			2.91	20
Trichlorofluoromethane	25.0	28.4	29.3	114	117	59.0-147			3.00	20
1,2,3-Trichloropropane	25.0	26.7	27.7	107	111	73.0-130			3.76	20
1,2,4-Trimethylbenzene	25.0	24.4	25.2	97.7	101	76.0-121			3.04	20
1,2,3-Trimethylbenzene	25.0	23.7	24.9	94.9	99.6	77.0-120			4.87	20
1,3,5-Trimethylbenzene	25.0	24.9	26.0	99.4	104	76.0-122			4.29	20
Vinyl acetate	125	146	149	117	119	11.0-160			1.87	20
Vinyl chloride	25.0	24.3	25.0	97.0	100	67.0-131			3.08	20
Xylenes, Total	75.0	68.0	69.3	90.7	92.4	79.0-123			1.89	20
(S) Toluene-d8				*97.8*	*97.2*	*80.0-120*				
(S) Dibromofluoromethane				*109*	*108*	*75.0-120*				
(S) 4-Bromofluorobenzene				*102*	*102*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: Calibration verification outside of acceptance limits. Result is estimated.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

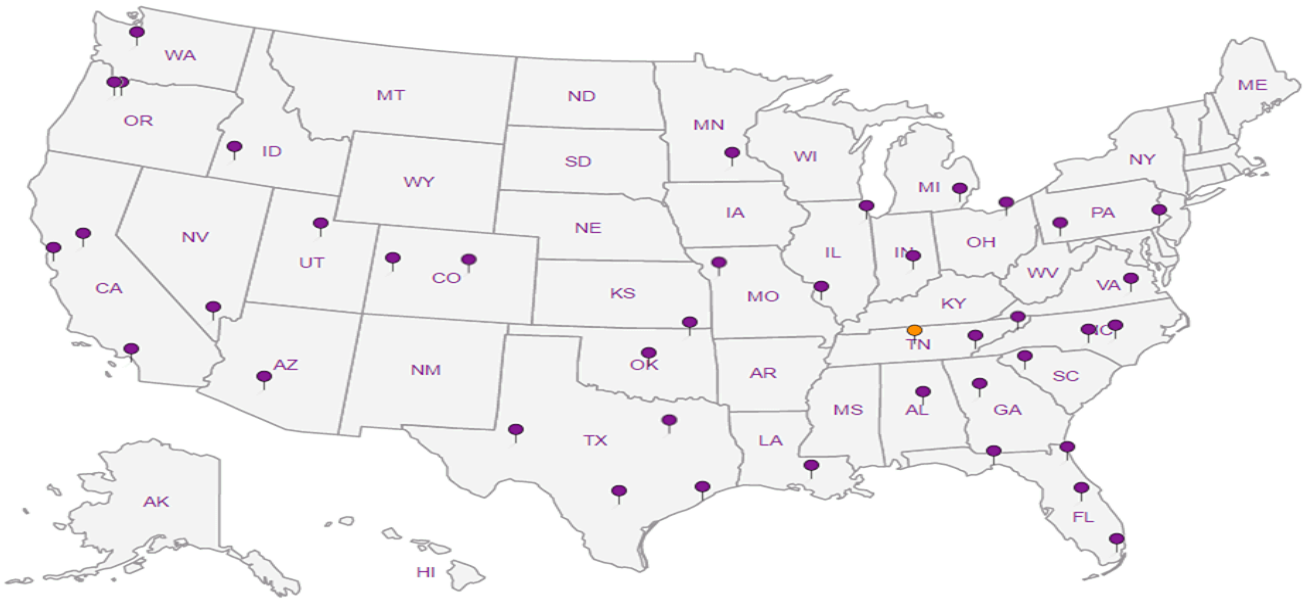
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Pres Chk

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Normandy Park, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Ben Hecht

Site/Facility ID # MVSC

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1037755
A156

Acctnum: PESENVSWA
Template: T131700
Prelogin: P675999
TSR: 110 - Brian Ford
PB: TB 10-5-18
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntr	Remarks	Sample # (lab only)
MW-2-101818		GW	38	10/18/18	16:25	3		-01
MW-10-101818		GW	37	10/18/18	12:45	3		-02
MW-15-101818		GW	43		15:15	3		-03
MW-16-101818		GW	40		14:10	3		-04
MW-11-101918		GW	38	10/19/18	13:50	3		-05
DC-8-101818		GW	39	10/18/18	10:15	3		-06
DC-11-101818		GW	41	10/18/18	11:35	3		-07
DC-15-101818		GW	38	10/18/18	09:15	3		-08
DC-17-101918		GW	36	10/19/18	17:30	3		-09
DC-12-101918		GW	40	10/19/18	10:45	3		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: JH

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4624 2995 7140

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD SCREEN <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	10/19/18	18:50		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.0 °C Bottles Received: 4 0 1 1
	10/22/18	21:00		If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/24/18 Time: 8:45 Hold: Condition: NCF / OK
	10/23/18	16:15		

PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected: Normandy Park, WA

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Ben Hecht

Site/Facility ID # MVSC

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative
DC-13-101918		GW	40	10/19/18	16:05	2	X
DC-18-101918		GW	40	↓	15:00	2	X
DC-20-101918		GW	41	↓	12:15	3	X
Trip Blank		GW				1	X
KMW-9-101818		GW	39.9	10/18/18	17:30	3	X
		GW					
		GW					
		GW					
		GW					
		GW					

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

JH

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 4624 2995 7140

Chain of Custody Page 2 of 2

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1037755

Table #

Acctnum: PESENVSWA

Template: T131700

Prelogin: P675999

TSR: 110 - Brian Ford

PB: TB 10-5-18

Shipped Via: FedEx Ground

Remarks	Sample # (lab only)
	-11
	-12
	-13
	-14
	-15

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	10/19/18	18:50	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	10/22/18	21:00	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
	10/23/18	16:15	Multiple Tracks

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 2.0 °C Bottles Received: 4 + 3

Date: 10/25 Time: 4:45

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

MEMORANDUM

TO: Project File **DATE:** November 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: **1358.001.01.003**

TASK: October 18-19, 2018 Groundwater Samples

LAB: Pace Analytical Sample Delivery Group (SDG): L1037755

Fourteen (14) groundwater samples and one (1) trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on October 18-19, 2018. Samples associated with SDG L1037755 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Pace Analytical (Pace) of Mt. Juliet, Tennessee.

The monitoring event occurred between October 16 and 23, 2018 and data are also reported in SDGs L1036062 and L1037759. The quality assurance review of the laboratory data for SDG L1037755 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 2.0 degrees Centigrade (°C). Chain of custody notes are hard to read. The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Pace's notes indicate the following:

- *USEPA Method 8260C:* Continuing calibration verification (CCV) issue is noted by Pace for several compounds associated with analytical batch WG1186267 (analyzed on October 25, 2018). No action is taken other than to note that just the trip blank appears be associated with the CCV and associated samples are not impacted.

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs) with the following exceptions:

- Low levels of hexachloro-1,3-butadiene, naphthalene, and 1,2,4-trichlorobenzene are detected in the method blank associated with samples DC-20-101918, KMW-9-101818, and the trip blank. No action was taken since these compounds are not detected in the associated samples.

Trip Blank Results

A trip blank was collected and submitted for analysis. The target analytes (VOCs) were not detected in the trip blank at a concentration at or above the reporting detection limits (RDLs).

Equipment Blank Results

Equipment blank was not collected as planned during this sampling event due to an oversight in the field. No action is taken other than to note that corrective action has been implemented and equipment blanks will be collected in future sampling events.

Field Duplicate Analyses

Field duplicate samples were not collected. Refer to SDG L1037759 for field duplicate data or laboratory control sample results associated with this SDG for precision data.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results and/or laboratory control sample results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, trip blank, method blanks, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) %R's and relative percent differences (RPDs) for analytical batch are within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS/LCSD and field duplicate results for accuracy and precision data.

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 SDGs were provided by the laboratory and data validator qualifiers were entered into the EDDs.

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs 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.

Pace Analytical®
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ANALYTICAL REPORT

October 30, 2018

PES Environmental, Inc.- WA

Sample Delivery Group:	L1037759
Samples Received:	10/24/2018
Project Number:	1358.001.01.003
Description:	MVSC
Site:	MVSC
Report To:	Karsten Springstead 1215 Fourth Ave., Suite 1350 Seattle, WA 98161

Entire Report Reviewed By: Brian Ford

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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DC-7-102318 L1037759-01 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 14:45 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 03:13	10/25/18 03:13	JCP

MW-14-102318 L1037759-02 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 13:30 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 04:01	10/25/18 04:01	JCP

MW-7-102318 L1037759-03 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 16:20 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 04:23	10/25/18 04:23	JCP

MW-7-101010 L1037759-04 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 16:30 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 04:45	10/25/18 04:45	JCP

KMW-3-102318 L1037759-05 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 17:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 05:07	10/25/18 05:07	JCP

KMW-3-101010 L1037759-06 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 17:20 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 05:29	10/25/18 05:29	JCP

KMW-7-102318 L1037759-07 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 10:50 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 05:51	10/25/18 05:51	JCP

KMW-8-102318 L1037759-08 GW

Collected by: Ben Hecht | Collected date/time: 10/23/18 12:15 | Received date/time: 10/24/18 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1186087	1	10/25/18 06:13	10/25/18 06:13	JCP

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 03:13	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 03:13	WG1186087
Benzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Bromoform	ND		0.500	1	10/25/2018 03:13	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 03:13	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 03:13	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 03:13	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 03:13	WG1186087
Chloroform	ND		0.500	1	10/25/2018 03:13	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 03:13	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 03:13	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 03:13	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 03:13	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 03:13	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 03:13	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 03:13	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 03:13	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 03:13	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 03:13	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 03:13	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 03:13	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 03:13	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 03:13	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 03:13	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 03:13	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 03:13	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 03:13	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 03:13	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 03:13	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 03:13	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 03:13	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Styrene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Tetrachloroethene	11.6		0.500	1	10/25/2018 03:13	WG1186087
Toluene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 03:13	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 03:13	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 03:13	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 03:13	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 03:13	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 03:13	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 03:13	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 03:13	WG1186087
(S) Toluene-d8	*93.9*		*80.0-120*		*10/25/2018 03:13*	WG1186087
(S) Dibromofluoromethane	*115*		*75.0-120*		*10/25/2018 03:13*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 03:13*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 04:01	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 04:01	WG1186087
Benzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Bromoform	ND		0.500	1	10/25/2018 04:01	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 04:01	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 04:01	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 04:01	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 04:01	WG1186087
Chloroform	ND		0.500	1	10/25/2018 04:01	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 04:01	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 04:01	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 04:01	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 04:01	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 04:01	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:01	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 04:01	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:01	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:01	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 04:01	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 04:01	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 04:01	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 04:01	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 04:01	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 04:01	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 04:01	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 04:01	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 04:01	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 04:01	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 04:01	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 04:01	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 04:01	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Styrene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Tetrachloroethene	ND		0.500	1	10/25/2018 04:01	WG1186087
Toluene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 04:01	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 04:01	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 04:01	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 04:01	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 04:01	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 04:01	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 04:01	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 04:01	WG1186087
(S) Toluene-d8	*95.1*		*80.0-120*		*10/25/2018 04:01*	WG1186087
(S) Dibromofluoromethane	*110*		*75.0-120*		*10/25/2018 04:01*	WG1186087
(S) 4-Bromofluorobenzene	*99.1*		*77.0-126*		*10/25/2018 04:01*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 04:23	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 04:23	WG1186087
Benzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Bromoform	ND		0.500	1	10/25/2018 04:23	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 04:23	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 04:23	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 04:23	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 04:23	WG1186087
Chloroform	ND		0.500	1	10/25/2018 04:23	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 04:23	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 04:23	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 04:23	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 04:23	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 04:23	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:23	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 04:23	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:23	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:23	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 04:23	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 04:23	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 04:23	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 04:23	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 04:23	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 04:23	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 04:23	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 04:23	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 04:23	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 04:23	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 04:23	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 04:23	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 04:23	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Styrene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Tetrachloroethene	5.79		0.500	1	10/25/2018 04:23	WG1186087
Toluene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 04:23	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 04:23	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 04:23	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 04:23	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 04:23	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 04:23	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 04:23	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 04:23	WG1186087
(S) Toluene-d8	*94.8*		*80.0-120*		*10/25/2018 04:23*	WG1186087
(S) Dibromofluoromethane	*111*		*75.0-120*		*10/25/2018 04:23*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 04:23*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 04:45	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 04:45	WG1186087
Benzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Bromoform	ND		0.500	1	10/25/2018 04:45	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 04:45	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 04:45	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 04:45	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 04:45	WG1186087
Chloroform	ND		0.500	1	10/25/2018 04:45	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 04:45	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 04:45	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 04:45	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 04:45	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 04:45	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:45	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 04:45	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:45	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 04:45	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 04:45	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 04:45	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 04:45	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 04:45	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 04:45	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 04:45	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 04:45	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 04:45	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 04:45	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 04:45	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 04:45	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 04:45	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 04:45	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Styrene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Tetrachloroethene	6.66		0.500	1	10/25/2018 04:45	WG1186087
Toluene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 04:45	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 04:45	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 04:45	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 04:45	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 04:45	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 04:45	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 04:45	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 04:45	WG1186087
(S) Toluene-d8	*98.0*		*80.0-120*		*10/25/2018 04:45*	WG1186087
(S) Dibromofluoromethane	*114*		*75.0-120*		*10/25/2018 04:45*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 04:45*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 05:07	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 05:07	WG1186087
Benzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Bromoform	ND		0.500	1	10/25/2018 05:07	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 05:07	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 05:07	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 05:07	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 05:07	WG1186087
Chloroform	ND		0.500	1	10/25/2018 05:07	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 05:07	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 05:07	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 05:07	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 05:07	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 05:07	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:07	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 05:07	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:07	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:07	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 05:07	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 05:07	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 05:07	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 05:07	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 05:07	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 05:07	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 05:07	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 05:07	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 05:07	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 05:07	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 05:07	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 05:07	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 05:07	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Styrene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Tetrachloroethene	5.41		0.500	1	10/25/2018 05:07	WG1186087
Toluene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 05:07	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 05:07	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 05:07	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 05:07	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 05:07	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 05:07	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 05:07	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 05:07	WG1186087
(S) Toluene-d8	*96.1*		*80.0-120*		*10/25/2018 05:07*	WG1186087
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 05:07*	WG1186087
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*10/25/2018 05:07*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 05:29	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 05:29	WG1186087
Benzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Bromoform	ND		0.500	1	10/25/2018 05:29	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 05:29	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 05:29	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 05:29	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 05:29	WG1186087
Chloroform	ND		0.500	1	10/25/2018 05:29	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 05:29	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 05:29	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 05:29	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 05:29	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 05:29	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:29	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 05:29	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:29	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:29	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 05:29	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 05:29	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 05:29	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 05:29	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 05:29	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 05:29	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 05:29	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 05:29	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 05:29	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 05:29	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 05:29	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 05:29	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 05:29	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Styrene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Tetrachloroethene	5.26		0.500	1	10/25/2018 05:29	WG1186087
Toluene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 05:29	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 05:29	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 05:29	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 05:29	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 05:29	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 05:29	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 05:29	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 05:29	WG1186087
(S) Toluene-d8	*95.9*		*80.0-120*		*10/25/2018 05:29*	WG1186087
(S) Dibromofluoromethane	*113*		*75.0-120*		*10/25/2018 05:29*	WG1186087
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*10/25/2018 05:29*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 05:51	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 05:51	WG1186087
Benzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Bromoform	ND		0.500	1	10/25/2018 05:51	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 05:51	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 05:51	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 05:51	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 05:51	WG1186087
Chloroform	ND		0.500	1	10/25/2018 05:51	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 05:51	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 05:51	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 05:51	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 05:51	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 05:51	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:51	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 05:51	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:51	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 05:51	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 05:51	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 05:51	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 05:51	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 05:51	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 05:51	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 05:51	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 05:51	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 05:51	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 05:51	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 05:51	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 05:51	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 05:51	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 05:51	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Styrene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Tetrachloroethene	0.711		0.500	1	10/25/2018 05:51	WG1186087
Toluene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 05:51	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 05:51	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 05:51	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 05:51	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 05:51	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 05:51	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 05:51	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 05:51	WG1186087
(S) Toluene-d8	*95.8*		*80.0-120*		*10/25/2018 05:51*	WG1186087
(S) Dibromofluoromethane	*112*		*75.0-120*		*10/25/2018 05:51*	WG1186087
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*10/25/2018 05:51*	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	ND		25.0	1	10/25/2018 06:13	WG1186087
Acrylonitrile	ND		5.00	1	10/25/2018 06:13	WG1186087
Benzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Bromobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Bromodichloromethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Bromochloromethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Bromoform	ND		0.500	1	10/25/2018 06:13	WG1186087
Bromomethane	ND		2.50	1	10/25/2018 06:13	WG1186087
n-Butylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
sec-Butylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
tert-Butylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Carbon disulfide	ND		0.500	1	10/25/2018 06:13	WG1186087
Carbon tetrachloride	ND		0.500	1	10/25/2018 06:13	WG1186087
Chlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Chlorodibromomethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Chloroethane	ND		2.50	1	10/25/2018 06:13	WG1186087
Chloroform	1.16		0.500	1	10/25/2018 06:13	WG1186087
Chloromethane	ND		1.25	1	10/25/2018 06:13	WG1186087
2-Chlorotoluene	ND		0.500	1	10/25/2018 06:13	WG1186087
4-Chlorotoluene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2-Dibromo-3-Chloropropane	ND		2.50	1	10/25/2018 06:13	WG1186087
1,2-Dibromoethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Dibromomethane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2-Dichlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,3-Dichlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,4-Dichlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Dichlorodifluoromethane	ND		2.50	1	10/25/2018 06:13	WG1186087
1,1-Dichloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2-Dichloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1-Dichloroethene	ND		0.500	1	10/25/2018 06:13	WG1186087
cis-1,2-Dichloroethene	ND		0.500	1	10/25/2018 06:13	WG1186087
trans-1,2-Dichloroethene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2-Dichloropropane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1-Dichloropropene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,3-Dichloropropane	ND		1.00	1	10/25/2018 06:13	WG1186087
cis-1,3-Dichloropropene	ND		0.500	1	10/25/2018 06:13	WG1186087
trans-1,3-Dichloropropene	ND		0.500	1	10/25/2018 06:13	WG1186087
trans-1,4-Dichloro-2-butene	ND		5.00	1	10/25/2018 06:13	WG1186087
2,2-Dichloropropane	ND		0.500	1	10/25/2018 06:13	WG1186087
Di-isopropyl ether	ND		0.500	1	10/25/2018 06:13	WG1186087
Ethylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Hexachloro-1,3-butadiene	ND		1.00	1	10/25/2018 06:13	WG1186087
2-Hexanone	ND		5.00	1	10/25/2018 06:13	WG1186087
n-Hexane	ND		5.00	1	10/25/2018 06:13	WG1186087
Iodomethane	ND		10.0	1	10/25/2018 06:13	WG1186087
Isopropylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
p-Isopropyltoluene	ND		0.500	1	10/25/2018 06:13	WG1186087
2-Butanone (MEK)	ND		5.00	1	10/25/2018 06:13	WG1186087
Methylene Chloride	ND		2.50	1	10/25/2018 06:13	WG1186087
4-Methyl-2-pentanone (MIBK)	ND		5.00	1	10/25/2018 06:13	WG1186087
Methyl tert-butyl ether	ND		0.500	1	10/25/2018 06:13	WG1186087
Naphthalene	ND		2.50	1	10/25/2018 06:13	WG1186087
n-Propylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Styrene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1,1,2-Tetrachloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1,2,2-Tetrachloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087

Volatile Organic Compounds (GC/MS) by Method 8260C

Analyte	Result ug/l	Qualifier	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Tetrachloroethene	5.26		0.500	1	10/25/2018 06:13	WG1186087
Toluene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2,3-Trichlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2,4-Trichlorobenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1,1-Trichloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
1,1,2-Trichloroethane	ND		0.500	1	10/25/2018 06:13	WG1186087
Trichloroethene	ND		0.500	1	10/25/2018 06:13	WG1186087
Trichlorofluoromethane	ND		2.50	1	10/25/2018 06:13	WG1186087
1,2,3-Trichloropropane	ND		2.50	1	10/25/2018 06:13	WG1186087
1,2,4-Trimethylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,2,3-Trimethylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
1,3,5-Trimethylbenzene	ND		0.500	1	10/25/2018 06:13	WG1186087
Vinyl acetate	ND		5.00	1	10/25/2018 06:13	WG1186087
Vinyl chloride	ND		0.500	1	10/25/2018 06:13	WG1186087
Xylenes, Total	ND		1.50	1	10/25/2018 06:13	WG1186087
(S) Toluene-d8	*94.5*		*80.0-120*		*10/25/2018 06:13*	WG1186087
(S) Dibromofluoromethane	*115*		*75.0-120*		*10/25/2018 06:13*	WG1186087
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*10/25/2018 06:13*	WG1186087

Method Blank (MB)

(MB) R3354840-3 10/24/18 22:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		1.05	25.0
Acrylonitrile	U		0.873	5.00
Benzene	U		0.0896	0.500
Bromobenzene	U		0.133	0.500
Bromodichloromethane	U		0.0800	0.500
Bromochloromethane	U		0.145	0.500
Bromoform	U		0.186	0.500
Bromomethane	U		0.157	2.50
n-Butylbenzene	U		0.143	0.500
sec-Butylbenzene	U		0.134	0.500
tert-Butylbenzene	U		0.183	0.500
Carbon disulfide	U		0.101	0.500
Carbon tetrachloride	U		0.159	0.500
Chlorobenzene	U		0.140	0.500
Chlorodibromomethane	U		0.128	0.500
Chloroethane	U		0.141	2.50
Chloroform	U		0.0860	0.500
Chloromethane	U		0.153	1.25
2-Chlorotoluene	U		0.111	0.500
4-Chlorotoluene	U		0.0972	0.500
1,2-Dibromo-3-Chloropropane	U		0.325	2.50
1,2-Dibromoethane	U		0.193	0.500
Dibromomethane	U		0.117	0.500
1,2-Dichlorobenzene	U		0.101	0.500
1,3-Dichlorobenzene	U		0.130	0.500
1,4-Dichlorobenzene	U		0.121	0.500
Dichlorodifluoromethane	U		0.127	2.50
1,1-Dichloroethane	U		0.114	0.500
1,2-Dichloroethane	U		0.108	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.0933	0.500
trans-1,2-Dichloroethene	U		0.152	0.500
1,2-Dichloropropane	U		0.190	0.500
1,1-Dichloropropene	U		0.128	0.500
1,3-Dichloropropane	U		0.147	1.00
cis-1,3-Dichloropropene	U		0.0976	0.500
trans-1,3-Dichloropropene	U		0.222	0.500
trans-1,4-Dichloro-2-butene	U		0.257	5.00
2,2-Dichloropropane	U		0.0929	0.500
Di-isopropyl ether	U		0.0924	0.500

Method Blank (MB)

(MB) R3354840-3 10/24/18 22:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Ethylbenzene	U		0.158	0.500
Hexachloro-1,3-butadiene	U		0.157	1.00
2-Hexanone	U		0.757	5.00
n-Hexane	U		0.305	5.00
Iodomethane	U		0.377	10.0
Isopropylbenzene	U		0.126	0.500
p-Isopropyltoluene	U		0.138	0.500
2-Butanone (MEK)	U		1.28	5.00
Methylene Chloride	U		1.07	2.50
4-Methyl-2-pentanone (MIBK)	U		0.823	5.00
Methyl tert-butyl ether	U		0.102	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.162	0.500
Styrene	U		0.117	0.500
1,1,1,2-Tetrachloroethane	U		0.120	0.500
1,1,2,2-Tetrachloroethane	U		0.130	0.500
1,1,2-Trichlorotrifluoroethane	U		0.164	0.500
Tetrachloroethene	U		0.199	0.500
Toluene	U		0.412	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.355	0.500
1,1,1-Trichloroethane	U		0.0940	0.500
1,1,2-Trichloroethane	U		0.186	0.500
Trichloroethene	U		0.153	0.500
Trichlorofluoromethane	U		0.130	2.50
1,2,3-Trichloropropane	U		0.247	2.50
1,2,4-Trimethylbenzene	U		0.123	0.500
1,2,3-Trimethylbenzene	U		0.0739	0.500
1,3,5-Trimethylbenzene	U		0.124	0.500
Vinyl acetate	U		0.645	5.00
Vinyl chloride	U		0.118	0.500
Xylenes, Total	U		0.316	1.50
(S) Toluene-d8	*96.7*			*80.0-120*
(S) Dibromofluoromethane	*110*			*75.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3354840-1 10/24/18 21:01 • (LCSD) R3354840-2 10/24/18 21:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	175	161	140	128	19.0-160			8.37	27
Acrylonitrile	125	151	146	121	117	55.0-149			3.12	20
Benzene	25.0	26.0	26.0	104	104	70.0-123			0.118	20
Bromobenzene	25.0	25.5	26.3	102	105	73.0-121			3.03	20
Bromodichloromethane	25.0	27.6	28.4	110	114	75.0-120			2.94	20
Bromochloromethane	25.0	26.0	25.9	104	104	76.0-122			0.365	20
Bromoform	25.0	26.3	27.6	105	110	68.0-132			5.02	20
Bromomethane	25.0	24.0	24.1	95.8	96.5	10.0-160			0.746	25
n-Butylbenzene	25.0	24.7	26.4	99.0	106	73.0-125			6.42	20
sec-Butylbenzene	25.0	25.3	26.2	101	105	75.0-125			3.69	20
tert-Butylbenzene	25.0	24.9	26.2	99.7	105	76.0-124			5.09	20
Carbon disulfide	25.0	23.7	20.6	94.8	82.3	61.0-128			14.1	20
Carbon tetrachloride	25.0	28.3	29.0	113	116	68.0-126			2.65	20
Chlorobenzene	25.0	24.7	24.6	98.9	98.3	80.0-121			0.606	20
Chlorodibromomethane	25.0	26.1	26.3	104	105	77.0-125			0.553	20
Chloroethane	25.0	25.7	25.5	103	102	47.0-150			0.731	20
Chloroform	25.0	27.7	27.7	111	111	73.0-120			0.0369	20
Chloromethane	25.0	26.3	27.8	105	111	41.0-142			5.54	20
2-Chlorotoluene	25.0	25.8	26.7	103	107	76.0-123			3.29	20
4-Chlorotoluene	25.0	26.0	26.8	104	107	75.0-122			3.08	20
1,2-Dibromo-3-Chloropropane	25.0	22.3	23.9	89.1	95.7	58.0-134			7.15	20
1,2-Dibromoethane	25.0	25.1	24.8	101	99.1	80.0-122			1.38	20
Dibromomethane	25.0	27.4	27.5	110	110	80.0-120			0.519	20
1,2-Dichlorobenzene	25.0	23.5	24.9	94.0	99.7	79.0-121			5.84	20
1,3-Dichlorobenzene	25.0	24.0	24.5	95.8	98.0	79.0-120			2.20	20
1,4-Dichlorobenzene	25.0	23.5	24.6	94.0	98.5	79.0-120			4.71	20
Dichlorodifluoromethane	25.0	25.1	24.8	100	99.3	51.0-149			1.01	20
1,1-Dichloroethane	25.0	28.3	28.3	113	113	70.0-126			0.175	20
1,2-Dichloroethane	25.0	29.8	29.8	119	119	70.0-128			0.00701	20
1,1-Dichloroethene	25.0	25.1	24.9	101	99.5	71.0-124			1.04	20
cis-1,2-Dichloroethene	25.0	25.6	25.8	102	103	73.0-120			0.927	20
trans-1,2-Dichloroethene	25.0	27.0	26.9	108	107	73.0-120			0.464	20
1,2-Dichloropropane	25.0	25.6	26.1	103	105	77.0-125			1.89	20
1,1-Dichloropropene	25.0	27.4	27.3	110	109	74.0-126			0.437	20
1,3-Dichloropropane	25.0	24.8	24.4	99.0	97.7	80.0-120			1.28	20
cis-1,3-Dichloropropene	25.0	24.7	24.9	98.9	99.6	80.0-123			0.713	20
trans-1,3-Dichloropropene	25.0	25.1	25.3	101	101	78.0-124			0.790	20
trans-1,4-Dichloro-2-butene	25.0	28.6	29.6	114	118	33.0-144			3.45	20
2,2-Dichloropropane	25.0	28.3	29.6	113	118	58.0-130			4.40	20
Di-isopropyl ether	25.0	28.9	29.1	116	117	58.0-138			0.832	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3354840-1 10/24/18 21:01 • (LCSD) R3354840-2 10/24/18 21:23

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	24.8	24.9	99.2	99.4	79.0-123			0.260	20
Hexachloro-1,3-butadiene	25.0	21.6	23.7	86.4	94.9	54.0-138			9.45	20
2-Hexanone	125	136	134	108	107	67.0-149			1.47	20
n-Hexane	25.0	26.6	26.2	106	105	57.0-133			1.57	20
Iodomethane	125	132	131	106	105	33.0-147			1.13	26
Isopropylbenzene	25.0	25.8	26.9	103	108	76.0-127			4.04	20
p-Isopropyltoluene	25.0	25.5	26.7	102	107	76.0-125			4.92	20
2-Butanone (MEK)	125	154	151	123	121	44.0-160			1.62	20
Methylene Chloride	25.0	25.3	25.6	101	102	67.0-120			1.04	20
4-Methyl-2-pentanone (MIBK)	125	144	143	115	115	68.0-142			0.605	20
Methyl tert-butyl ether	25.0	27.3	27.6	109	110	68.0-125			1.16	20
Naphthalene	25.0	20.5	23.3	81.8	93.3	54.0-135			13.0	20
n-Propylbenzene	25.0	25.7	26.6	103	106	77.0-124			3.54	20
Styrene	25.0	26.0	26.9	104	108	73.0-130			3.43	20
1,1,1,2-Tetrachloroethane	25.0	26.2	26.2	105	105	75.0-125			0.0749	20
1,1,2,2-Tetrachloroethane	25.0	24.1	25.0	96.5	100	65.0-130			3.70	20
1,1,2-Trichlorotrifluoroethane	25.0	26.5	25.0	106	100	69.0-132			5.71	20
Tetrachloroethene	25.0	22.9	23.0	91.5	91.8	72.0-132			0.388	20
Toluene	25.0	24.4	24.3	97.8	97.0	79.0-120			0.792	20
1,2,3-Trichlorobenzene	25.0	20.5	23.4	81.9	93.5	50.0-138			13.2	20
1,2,4-Trichlorobenzene	25.0	22.2	23.8	88.9	95.1	57.0-137			6.72	20
1,1,1-Trichloroethane	25.0	29.1	30.0	116	120	73.0-124			2.91	20
1,1,2-Trichloroethane	25.0	24.4	24.0	97.7	96.2	80.0-120			1.62	20
Trichloroethene	25.0	26.3	26.9	105	107	78.0-124			2.25	20
Trichlorofluoromethane	25.0	30.4	30.5	122	122	59.0-147			0.0702	20
1,2,3-Trichloropropane	25.0	27.3	28.0	109	112	73.0-130			2.65	20
1,2,4-Trimethylbenzene	25.0	25.5	26.5	102	106	76.0-121			3.79	20
1,2,3-Trimethylbenzene	25.0	24.8	26.4	99.2	105	77.0-120			6.13	20
1,3,5-Trimethylbenzene	25.0	26.4	27.6	106	110	76.0-122			4.29	20
Vinyl acetate	125	97.3	93.0	77.8	74.4	11.0-160			4.53	20
Vinyl chloride	25.0	26.5	26.2	106	105	67.0-131			0.886	20
Xylenes, Total	75.0	74.1	73.5	98.8	98.0	79.0-123			0.813	20
(S) Toluene-d8				*98.5*	*95.5*	*80.0-120*				
(S) Dibromofluoromethane				*110*	*107*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*103*	*77.0-126*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

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* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

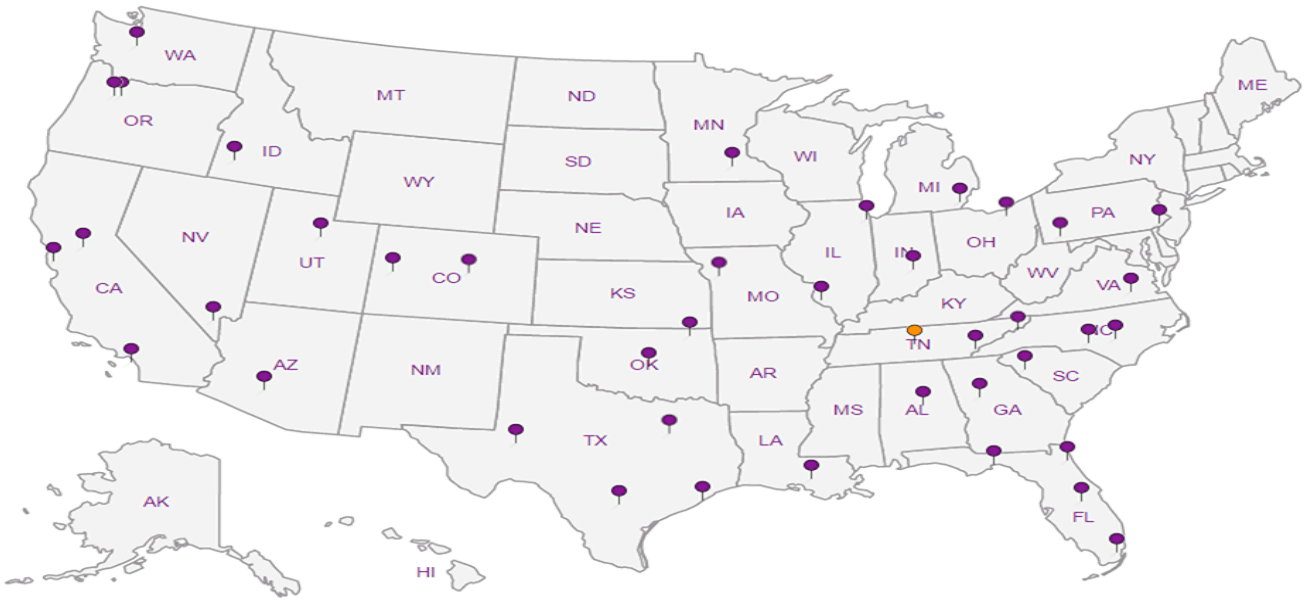
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



PES Environmental, Inc.- WA

1215 Fourth Ave., Suite 1350
Seattle, WA 98161

Billing Information:
Attn: Accounts Payable
1215 Fourth Ave., Ste. 1350
Seattle, WA 98161

Report to: Karsten Springstead

Email To: kspringstead@pesenv.com; mdahl@pesenv.com

Project Description: MVSC

City/State Collected:

Phone: 206-529-3980
Fax: 206-529-3985

Client Project # 1358.001.01.003

Lab Project # PESENVSWA-MVSC

Collected by (print): Ben Hecht

Site/Facility ID # MVSC

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative
DC-7-102318		GW	36.5	10/23/18	14:45	3	X
~~MW-7-102318~~		GW	40.6				X
MW-14-102318		GW	35		13:30	3	X
MW-7-102318		GW	40.6	~~10/23/18~~	16:20	3	X
MW-7-101010		GW	40.6		16:30	3	X
~~KMW-810~~		GW					X
KMW-3-102318		GW	29		17:15	3	X
KMW-3-101010		GW	29		17:20	3	X
KMW-7-102318		GW	33.5		10:50	3	X
KMW-8-102318		GW	40		12:15	3	X

Additional VOA Containers Required

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:
For questions contact Kspringstead@pesenv.com or mdahl@pesenv.com

pH ___ Temp ___ Flow ___ Other ___

Samples returned via:
__ UPS __ FedEx __ Courier ___

Tracking # 4624 2995 7140

Relinquished by : (Signature)
Date: 10/23/18 Time: 16:15
Received by: (Signature)

Relinquished by : (Signature)
Date: Time:
Received by: (Signature)

Relinquished by : (Signature)
Date: Time:
Received for lab by: (Signature)
Date: 10/24/18 Time: 8:45

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.0 °C Bottles Received: 24

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

RAD SCREEN: <0.5 mR/hr

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1037759

A157

Acctnum: PESENVSWA
Template: T131700
Prelogin: P675999
TSR: 110 - Brian Ford
PB: TB 10-5-18
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08

MEMORANDUM

TO: Project File **DATE:** November 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: **1358.001.01.003**

TASK: October 23, 2018 Groundwater Samples

LAB: Pace Analytical Sample Delivery Group (SDG): L1037759

Eight (8) groundwater samples including two field duplicates were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on October 23, 2018. Samples associated with SDG L1037755 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Pace Analytical (Pace) of Mt. Juliet, Tennessee.

The monitoring event occurred between October 16 and 23, 2018 and data are also reported in SDGs L1036062 and L1037755. The quality assurance review of the laboratory data for SDG L1037759 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler temperature at the time of receipt was measured at 2.0 degrees Centigrade (°C). The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. No data qualifications were warranted.

Holding Times

All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved water). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable and Pace's notes do not indicate any issues with calibration.

Method Blank Results

A laboratory method blank was included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at a concentration at or above the reporting detection limits (RDLs).

Trip Blank Results

A trip blank was not collected. Refer to SDGs L1036062 and L1037755 for trip blank results.

Equipment Blank Results

Equipment blank was not collected as planned during this sampling event due to an oversight in the field. No action is taken other than to note that corrective action has been implemented and equipment blanks will be collected in future sampling events.

Field Duplicate Analyses

Field duplicate sample pairs are as follows:

- Samples MW-7-102318 and MW-7-101010
- Samples KMW-3-102318 and KMW-3-101010

Field duplicate pairs were submitted and analyzed for VOCs. VOC target analyte results are comparable and within a relative percent difference (RPD) of 30% (or $\pm$ 1x RDL for water results <5X the RDL) for the field duplicates.

Laboratory Duplicate Analyses

Laboratory duplicate analysis was not performed. Refer to field duplicate results and/or laboratory control sample results for precision data.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample and laboratory control sample duplicate (LCS/LCSD) %R's and relative percent differences (RPDs) for analytical batch are within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were not performed. Refer to LCS/LCSD and field duplicate results for accuracy and precision data.

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 SDGs were provided by the laboratory and data validator qualifiers were entered into the EDDs.

Quantitation Limits

Results of the USEPA 8260 VOC analyses were reported based on laboratory RDLs. The RDLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RDLs 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: MVSC
Work Order Number: 1811001

November 07, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 2 sample(s) on 10/31/2018 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: *11/07/2018*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1811001

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1811001-001	W-DRUM-103118	10/31/2018 12:30 PM	10/31/2018 5:20 PM
1811001-002	Trip Blank	10/31/2018 12:00 AM	10/31/2018 5:20 PM

Case Narrative

WO#: **1811001**
Date: **11/7/2018**

CLIENT: PES Environmental, Inc.
Project: MVSC

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:** 10/31/2018 12:30:00 PM
Project: MVSC
Lab ID: 1811001-001 **Matrix:** Groundwater
Client Sample ID: **W-DRUM-103118**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 22488 Analyst: CR

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Chloromethane	ND	2.00		µg/L	1	11/1/2018 4:06:47 PM
Vinyl chloride	ND	0.200		µg/L	1	11/1/2018 4:06:47 PM
Bromomethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Chloroethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Methylene chloride	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	11/1/2018 4:06:47 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Chloroform	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Carbon tetrachloride	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Benzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	11/1/2018 4:06:47 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Bromodichloromethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Dibromomethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Toluene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Dibromochloromethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	11/1/2018 4:06:47 PM
Chlorobenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Ethylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
m,p-Xylene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
o-Xylene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Styrene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Isopropylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Bromoform	ND	2.00		µg/L	1	11/1/2018 4:06:47 PM

Analytical Report

Work Order: **1811001**
Date Reported: **11/7/2018**

Client: PES Environmental, Inc.
Collection Date: 10/31/2018 12:30:00 PM
Project: MVSC
Lab ID: 1811001-001
Matrix: Groundwater
Client Sample ID: **W-DRUM-103118**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 22488		Analyst: CR
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
n-Propylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Bromobenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
2-Chlorotoluene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
4-Chlorotoluene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
tert-Butylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	11/1/2018 4:06:47 PM
sec-Butylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
n-Butylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	11/1/2018 4:06:47 PM
Naphthalene	ND	1.00		µg/L	1	11/1/2018 4:06:47 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	11/1/2018 4:06:47 PM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	11/1/2018 4:06:47 PM
Surr: Toluene-d8	97.4	40.1 - 139		%Rec	1	11/1/2018 4:06:47 PM
Surr: 1-Bromo-4-fluorobenzene	106	64.2 - 128		%Rec	1	11/1/2018 4:06:47 PM

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-22488** SampType: **LCS** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **LCSW** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922339**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	24.9	1.00	20.00	0	124	18.7	171				
Chloromethane	22.3	2.00	20.00	0	111	38.5	171				
Vinyl chloride	21.2	0.200	20.00	0	106	48	145				
Bromomethane	23.3	1.00	20.00	0	117	32.5	184				
Trichlorofluoromethane (CFC-11)	18.7	1.00	20.00	0	93.4	43.5	149				
Chloroethane	21.0	1.00	20.00	0	105	43.8	168				
1,1-Dichloroethene	19.3	1.00	20.00	0	96.4	57.5	150				
Methylene chloride	19.7	1.00	20.00	0	98.4	67.1	131				
trans-1,2-Dichloroethene	19.6	1.00	20.00	0	98.1	71.7	129				
Methyl tert-butyl ether (MTBE)	19.4	1.00	20.00	0	97.2	58	138				
1,1-Dichloroethane	19.4	1.00	20.00	0	96.8	67.9	134				
2,2-Dichloropropane	20.5	2.00	20.00	0	103	26.5	185				
cis-1,2-Dichloroethene	19.5	1.00	20.00	0	97.4	70.2	139				
Chloroform	19.6	1.00	20.00	0	97.9	66.3	131				
1,1,1-Trichloroethane (TCA)	19.0	1.00	20.00	0	95.2	63	140				
1,1-Dichloropropene	19.4	1.00	20.00	0	97.0	69.9	124				
Carbon tetrachloride	18.7	1.00	20.00	0	93.5	66.2	134				
1,2-Dichloroethane (EDC)	19.7	1.00	20.00	0	98.5	67	126				
Benzene	19.3	1.00	20.00	0	96.6	69.3	132				
Trichloroethene (TCE)	19.2	0.500	20.00	0	96.2	65.2	136				
1,2-Dichloropropane	19.7	1.00	20.00	0	98.5	70.5	130				
Bromodichloromethane	19.4	1.00	20.00	0	97.0	67.2	137				
Dibromomethane	19.2	1.00	20.00	0	95.9	69.3	143				
cis-1,3-Dichloropropene	19.2	1.00	20.00	0	95.8	62.6	137				
Toluene	19.0	1.00	20.00	0	95.0	61.3	145				
trans-1,3-Dichloropropylene	18.5	1.00	20.00	0	92.6	56.5	163				
1,1,2-Trichloroethane	19.1	1.00	20.00	0	95.7	71.7	131				
1,3-Dichloropropane	19.2	1.00	20.00	0	96.1	73.5	127				
Tetrachloroethene (PCE)	18.6	1.00	20.00	0	92.9	47.5	147				
Dibromochloromethane	18.8	1.00	20.00	0	93.8	67.2	134				
1,2-Dibromoethane (EDB)	18.7	0.250	20.00	0	93.3	73.6	125				

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-22488** SampType: **LCS** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **LCSW** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922339**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.0	1.00	20.00	0	94.8	73.9	126				
1,1,1,2-Tetrachloroethane	18.6	1.00	20.00	0	93.1	76.8	124				
Ethylbenzene	19.7	1.00	20.00	0	98.5	72	130				
m,p-Xylene	37.9	1.00	40.00	0	94.7	70.3	134				
o-Xylene	19.2	1.00	20.00	0	96.0	72.1	131				
Styrene	18.7	1.00	20.00	0	93.5	64.3	140				
Isopropylbenzene	19.1	1.00	20.00	0	95.4	73.9	128				
Bromoform	18.1	2.00	20.00	0	90.6	55.3	141				
1,1,2,2-Tetrachloroethane	19.4	1.00	20.00	0	96.9	62.9	132				
n-Propylbenzene	18.6	1.00	20.00	0	92.8	74.5	127				
Bromobenzene	18.5	1.00	20.00	0	92.7	71	131				
1,3,5-Trimethylbenzene	18.9	1.00	20.00	0	94.6	73.1	128				
2-Chlorotoluene	19.0	1.00	20.00	0	94.8	70.8	130				
4-Chlorotoluene	19.2	1.00	20.00	0	96.1	70.1	131				
tert-Butylbenzene	18.5	1.00	20.00	0	92.7	68.2	131				
1,2,3-Trichloropropane	18.1	1.00	20.00	0	90.4	67.7	131				
1,2,4-Trichlorobenzene	19.9	2.00	20.00	0	99.4	41	139				
sec-Butylbenzene	18.7	1.00	20.00	0	93.7	72	129				
4-Isopropyltoluene	18.8	1.00	20.00	0	94.2	69.2	130				
1,3-Dichlorobenzene	19.5	1.00	20.00	0	97.3	69.5	128				
1,4-Dichlorobenzene	19.8	1.00	20.00	0	98.8	66.8	119				
n-Butylbenzene	20.5	1.00	20.00	0	102	73.8	127				
1,2-Dichlorobenzene	19.8	1.00	20.00	0	99.1	69.7	119				
1,2-Dibromo-3-chloropropane	20.9	1.00	20.00	0	104	63.1	136				
1,2,4-Trimethylbenzene	19.1	1.00	20.00	0	95.6	73.4	127				
Hexachloro-1,3-butadiene	19.1	4.00	20.00	0	95.5	58.6	138				
Naphthalene	19.4	1.00	20.00	0	96.9	41.8	165				
1,2,3-Trichlorobenzene	19.6	4.00	20.00	0	98.0	35.8	155				
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	25.1		25.00		100	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.9	64.2	128				

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-22488**	SampType:	**LCS**		Units:	**µg/L**	Prep Date:	**11/1/2018**	RunNo:	**47361**
Client ID:	**LCSW**	Batch ID:	**22488**				Analysis Date:	**11/1/2018**	SeqNo:	**922339**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-22488**	SampType:	**MBLK**		Units:	**µg/L**	Prep Date:	**11/1/2018**	RunNo:	**47361**
Client ID:	**MBLKW**	Batch ID:	**22488**				Analysis Date:	**11/1/2018**	SeqNo:	**922340**

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									
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									

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-22488**	SampType: **MBLK**		Units: **µg/L**	Prep Date: **11/1/2018**		RunNo: **47361**	
Client ID: **MBLKW**	Batch ID: **22488**			Analysis Date: **11/1/2018**		SeqNo: **922340**	

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	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									

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-22488** SampType: **MBLK** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **MBLKW** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922340**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.6		25.00		98.4	45.4	152				
Surr: Toluene-d8	25.3		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128				

Sample ID **1810507-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922325**

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	
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: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1810507-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922325**

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: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1810507-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922325**

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	24.8		25.00		99.2	45.4	152		0		
Surr: Toluene-d8	25.5		25.00		102	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128		0		

Sample ID **LCSD-22488** SampType: **LCSD** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **LCSW02** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922338**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	25.1	1.00	20.00	0	126	18.7	171	24.87	0.978	20	
Chloromethane	22.5	2.00	20.00	0	113	38.5	171	22.27	1.20	20	
Vinyl chloride	22.9	0.200	20.00	0	114	48	145	21.21	7.53	20	
Bromomethane	28.3	1.00	20.00	0	142	32.5	184	23.34	19.3	20	
Trichlorofluoromethane (CFC-11)	20.3	1.00	20.00	0	102	43.5	149	18.67	8.48	20	
Chloroethane	22.6	1.00	20.00	0	113	43.8	168	20.99	7.20	20	
1,1-Dichloroethene	21.1	1.00	20.00	0	105	57.5	150	19.29	8.95	20	
Methylene chloride	22.2	1.00	20.00	0	111	67.1	131	19.68	12.0	20	
trans-1,2-Dichloroethene	21.6	1.00	20.00	0	108	71.7	129	19.62	9.78	20	
Methyl tert-butyl ether (MTBE)	22.9	1.00	20.00	0	114	58	138	19.43	16.3	20	
1,1-Dichloroethane	21.8	1.00	20.00	0	109	67.9	134	19.36	11.8	20	
2,2-Dichloropropane	21.3	2.00	20.00	0	106	26.5	185	20.55	3.47	20	
cis-1,2-Dichloroethene	21.6	1.00	20.00	0	108	70.2	139	19.47	10.4	20	

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-22488** SampType: **LCSD** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **LCSW02** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922338**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	22.3	1.00	20.00	0	112	66.3	131	19.59	13.0	20	
1,1,1-Trichloroethane (TCA)	20.8	1.00	20.00	0	104	63	140	19.03	8.81	20	
1,1-Dichloropropene	21.1	1.00	20.00	0	106	69.9	124	19.40	8.61	20	
Carbon tetrachloride	20.2	1.00	20.00	0	101	66.2	134	18.71	7.84	20	
1,2-Dichloroethane (EDC)	23.3	1.00	20.00	0	117	68.8	123	19.70	16.9	20	
Benzene	21.7	1.00	20.00	0	109	69.3	132	19.33	11.7	20	
Trichloroethene (TCE)	20.9	0.500	20.00	0	105	65.2	136	19.24	8.48	20	
1,2-Dichloropropane	22.5	1.00	20.00	0	113	70.5	130	19.70	13.3	20	
Bromodichloromethane	22.3	1.00	20.00	0	111	74.6	127	19.40	13.8	20	
Dibromomethane	23.1	1.00	20.00	0	116	69.3	143	19.19	18.6	20	
cis-1,3-Dichloropropene	21.7	1.00	20.00	0	108	62.6	137	19.17	12.2	20	
Toluene	21.1	1.00	20.00	0	105	61.3	145	19.00	10.5	20	
trans-1,3-Dichloropropylene	21.3	1.00	20.00	0	107	56.5	163	18.51	14.2	20	
1,1,2-Trichloroethane	22.4	1.00	20.00	0	112	71.7	131	19.14	15.7	20	
1,3-Dichloropropane	22.7	1.00	20.00	0	114	73.5	127	19.22	16.8	20	
Tetrachloroethene (PCE)	19.9	1.00	20.00	0	99.4	47.5	147	18.58	6.77	20	
Dibromochloromethane	21.2	1.00	20.00	0	106	67.2	134	18.76	12.4	20	
1,2-Dibromoethane (EDB)	22.1	0.250	20.00	0	111	73.6	125	18.67	17.0	20	
Chlorobenzene	20.9	1.00	20.00	0	104	73.9	126	18.97	9.67	20	
1,1,1,2-Tetrachloroethane	20.8	1.00	20.00	0	104	76.8	124	18.63	10.8	20	
Ethylbenzene	21.3	1.00	20.00	0	106	72	130	19.69	7.81	20	
m,p-Xylene	40.8	1.00	40.00	0	102	70.3	134	37.88	7.35	20	
o-Xylene	20.8	1.00	20.00	0	104	72.1	131	19.19	8.17	20	
Styrene	20.9	1.00	20.00	0	104	64.3	140	18.71	10.9	20	
Isopropylbenzene	20.6	1.00	20.00	0	103	73.9	128	19.08	7.45	20	
Bromoform	21.6	2.00	20.00	0	108	55.3	141	18.11	17.6	20	
1,1,2,2-Tetrachloroethane	25.1	1.00	20.00	0	125	62.9	132	19.39	25.6	20	R
n-Propylbenzene	20.8	1.00	20.00	0	104	74.5	127	18.57	11.4	20	
Bromobenzene	21.1	1.00	20.00	0	106	71	131	18.55	13.0	20	
1,3,5-Trimethylbenzene	20.5	1.00	20.00	0	103	73.1	128	18.91	8.27	20	
2-Chlorotoluene	21.8	1.00	20.00	0	109	70.8	130	18.96	14.0	20	

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-22488** SampType: **LCSD** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **LCSW02** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922338**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	19.9	1.00	20.00	0	99.4	70.1	131	19.21	3.46	20	
tert-Butylbenzene	19.7	1.00	20.00	0	98.4	68.2	131	18.54	5.97	20	
1,2,3-Trichloropropane	23.2	1.00	20.00	0	116	67.7	131	18.08	25.0	20	R
1,2,4-Trichlorobenzene	21.1	2.00	20.00	0	105	41	139	19.88	5.92	20	
sec-Butylbenzene	20.3	1.00	20.00	0	102	72	129	18.75	8.00	20	
4-Isopropyltoluene	20.3	1.00	20.00	0	102	69.2	130	18.84	7.66	20	
1,3-Dichlorobenzene	20.9	1.00	20.00	0	104	69.5	128	19.45	6.96	20	
1,4-Dichlorobenzene	21.4	1.00	20.00	0	107	66.8	119	19.76	8.03	20	
n-Butylbenzene	20.7	1.00	20.00	0	103	73.8	127	20.47	0.908	20	
1,2-Dichlorobenzene	21.7	1.00	20.00	0	109	69.7	119	19.83	9.15	20	
1,2-Dibromo-3-chloropropane	25.8	1.00	20.00	0	129	63.1	136	20.88	21.0	20	R
1,2,4-Trimethylbenzene	20.9	1.00	20.00	0	105	73.4	127	19.11	9.01	20	
Hexachloro-1,3-butadiene	18.7	4.00	20.00	0	93.3	58.6	138	19.11	2.35	20	
Naphthalene	22.5	1.00	20.00	0	113	41.8	165	19.37	15.1	20	
1,2,3-Trichlorobenzene	21.1	4.00	20.00	0	105	35.8	155	19.59	7.41	20	
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152		0		
Surr: Toluene-d8	25.5		25.00		102	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		99.9	64.2	128		0		

NOTES:
R - High RPD observed, spike recoveries are within range.

Sample ID **1811016-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922334**

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	

Work Order: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1811016-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922334**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	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: 1811001
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1811016-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/1/2018** RunNo: **47361**
Client ID: **BATCH** Batch ID: **22488** Analysis Date: **11/1/2018** SeqNo: **922334**

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	25.7		25.00		103	45.4	152		0		
Surr: Toluene-d8	25.6		25.00		103	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128		0		

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1811001**
Logged by:	**Brianna Barnes**	Date Received:	**10/31/2018 5:20:00 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 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	3.2
Sample	6.1

* 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: 10-31-18 Page: 1 of: 1

Laboratory Project No (internal): 1811001

Project Name: MUSC

Special Remarks:

Project No: 1358.000.01.003

Collected by: K. Sprakstead

Location: Normandy Park, WA

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Report To (PM): Matt Dahl

PM Email: MDahl@pbsenv.com

Client: PBS ENVIRONMENTAL

Address: 1215 4th Ave Ste 1350

City, State, Zip: SEATTLE, WA 98161

Telephone: 206-529-3980

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	W-DBNM-103118	10-31-18	1230	GW	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 x	Date/Time 10-31-18/1235	Received x	Date/Time 10-31-18/12:35
Relinquished x	Date/Time 10/31/18-17:22	Received x	Date/Time 10/31/18 1720

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: MVSC
Work Order Number: 1804291

April 27, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 23 sample(s) on 4/18/2018 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

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1804291

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1804291-001	SB-10-6	04/16/2018 9:05 AM	04/18/2018 8:42 AM
1804291-002	SB-10-10	04/16/2018 9:10 AM	04/18/2018 8:42 AM
1804291-003	SB-11-8	04/16/2018 9:40 AM	04/18/2018 8:42 AM
1804291-004	SB-11-15	04/16/2018 9:50 AM	04/18/2018 8:42 AM
1804291-005	SB-12-1	04/16/2018 10:10 AM	04/18/2018 8:42 AM
1804291-006	SB-12-5	04/16/2018 10:20 AM	04/18/2018 8:42 AM
1804291-007	SB-12-10	04/16/2018 10:30 AM	04/18/2018 8:42 AM
1804291-008	SB-13-5	04/16/2018 12:25 PM	04/18/2018 8:42 AM
1804291-009	SB-13-10	04/16/2018 12:30 PM	04/18/2018 8:42 AM
1804291-010	SB-13-20	04/16/2018 12:45 PM	04/18/2018 8:42 AM
1804291-011	SB-13-29	04/16/2018 1:05 PM	04/18/2018 8:42 AM
1804291-012	SB-14-5	04/16/2018 1:30 PM	04/18/2018 8:42 AM
1804291-013	SB-14-10	04/16/2018 1:40 PM	04/18/2018 8:42 AM
1804291-014	SB-14-20	04/16/2018 1:50 PM	04/18/2018 8:42 AM
1804291-015	SB-14-30	04/16/2018 2:20 PM	04/18/2018 8:42 AM
1804291-016	SB-15-10	04/17/2018 8:20 AM	04/18/2018 8:42 AM
1804291-017	SB-15-20	04/17/2018 8:30 AM	04/18/2018 8:42 AM
1804291-018	SB-15-30	04/17/2018 8:45 AM	04/18/2018 8:42 AM
1804291-019	SB-15-40	04/17/2018 9:20 AM	04/18/2018 8:42 AM
1804291-020	TRIP BLANK	04/11/2018 4:39 PM	04/18/2018 8:42 AM
1804291-021	SB-16-20	04/17/2018 10:38 AM	04/18/2018 8:42 AM
1804291-022	SB-16-30	04/17/2018 11:15 AM	04/18/2018 8:42 AM
1804291-023	SB-16-40	04/17/2018 12:05 PM	04/18/2018 8:42 AM

Case Narrative

WO#: **1804291**
Date: **4/27/2018**

CLIENT: PES Environmental, Inc.
Project: MVSC

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: 4/16/2018 9:05:00 AM
Project: MVSC
Lab ID: 1804291-001
Matrix: Soil
Client Sample ID: **SB-10-6**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0237	Q-	mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloromethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Vinyl chloride	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromomethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloroethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Methylene chloride	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
trans-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
2,2-Dichloropropane	ND	0.119		mg/Kg-dry	1	4/24/2018 8:06:22 AM
cis-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloroform	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloropropene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Carbon tetrachloride	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichloroethane (EDC)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Benzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Trichloroethene (TCE)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichloropropane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromodichloromethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Dibromomethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
cis-1,3-Dichloropropene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Toluene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
trans-1,3-Dichloropropylene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,2-Trichloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3-Dichloropropane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Tetrachloroethene (PCE)	0.193	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Dibromochloromethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dibromoethane (EDB)	ND	0.00593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Ethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
m,p-Xylene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
o-Xylene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Styrene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Isopropylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromoform	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:05:00 AM
Project: MVSC
Lab ID: 1804291-001
Matrix: Soil
Client Sample ID: **SB-10-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
n-Propylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3,5-Trimethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
2-Chlorotoluene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
4-Chlorotoluene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
tert-Butylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,3-Trichloropropane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,4-Trichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
sec-Butylbenzene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
4-Isopropyltoluene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,4-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
n-Butylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dibromo-3-chloropropane	ND	0.593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,4-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Hexachlorobutadiene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Naphthalene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,3-Trichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Surr: Dibromofluoromethane	89.9	56.5 - 129		%Rec	1	4/24/2018 8:06:22 AM
Surr: Toluene-d8	79.7	64.5 - 151		%Rec	1	4/24/2018 8:06:22 AM
Surr: 1-Bromo-4-fluorobenzene	91.3	43.2 - 143		%Rec	1	4/24/2018 8:06:22 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: R42972		Analyst: CG
Percent Moisture	7.36	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 9:10:00 AM
Project: MVSC
Lab ID: 1804291-002 **Matrix:** Soil
Client Sample ID: **SB-10-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0287	Q-	mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloromethane	ND	0.0718	Q-	mg/Kg-dry	1	4/24/2018 12:46:48 PM
Vinyl chloride	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromomethane	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloroethane	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Methylene chloride	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
trans-1,2-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
2,2-Dichloropropane	ND	0.144		mg/Kg-dry	1	4/24/2018 12:46:48 PM
cis-1,2-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloroform	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloropropene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Carbon tetrachloride	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichloroethane (EDC)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Benzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Trichloroethene (TCE)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichloropropane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromodichloromethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Dibromomethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
cis-1,3-Dichloropropene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Toluene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
trans-1,3-Dichloropropylene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,2-Trichloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3-Dichloropropane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Tetrachloroethene (PCE)	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Dibromochloromethane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dibromoethane (EDB)	ND	0.00718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chlorobenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Ethylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
m,p-Xylene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
o-Xylene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Styrene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Isopropylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromoform	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:10:00 AM
Project: MVSC
Lab ID: 1804291-002
Matrix: Soil
Client Sample ID: **SB-10-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
n-Propylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3,5-Trimethylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
2-Chlorotoluene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
4-Chlorotoluene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
tert-Butylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,3-Trichloropropane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,4-Trichlorobenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
sec-Butylbenzene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
4-Isopropyltoluene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,4-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
n-Butylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dibromo-3-chloropropane	ND	0.718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,4-Trimethylbenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Hexachlorobutadiene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Naphthalene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,3-Trichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Surr: Dibromofluoromethane	94.1	56.5 - 129		%Rec	1	4/24/2018 12:46:48 PM
Surr: Toluene-d8	84.0	64.5 - 151		%Rec	1	4/24/2018 12:46:48 PM
Surr: 1-Bromo-4-fluorobenzene	91.7	43.2 - 143		%Rec	1	4/24/2018 12:46:48 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: R42972		Analyst: CG
Percent Moisture	12.7	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 9:40:00 AM
Project: MVSC
Lab ID: 1804291-003 **Matrix:** Soil
Client Sample ID: **SB-11-8**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0278	Q-	mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloromethane	ND	0.0695	Q-	mg/Kg-dry	1	4/24/2018 1:17:54 PM
Vinyl chloride	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromomethane	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Trichlorofluoromethane (CFC-11)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloroethane	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Methylene chloride	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
trans-1,2-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Methyl tert-butyl ether (MTBE)	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
2,2-Dichloropropane	ND	0.139		mg/Kg-dry	1	4/24/2018 1:17:54 PM
cis-1,2-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloroform	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,1-Trichloroethane (TCA)	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloropropene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Carbon tetrachloride	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichloroethane (EDC)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Benzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Trichloroethene (TCE)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichloropropane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromodichloromethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Dibromomethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
cis-1,3-Dichloropropene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Toluene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
trans-1,3-Dichloropropylene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,2-Trichloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3-Dichloropropane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Tetrachloroethene (PCE)	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Dibromochloromethane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dibromoethane (EDB)	ND	0.00695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chlorobenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,1,2-Tetrachloroethane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Ethylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
m,p-Xylene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
o-Xylene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Styrene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Isopropylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromoform	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:40:00 AM
Project: MVSC
Lab ID: 1804291-003
Matrix: Soil
Client Sample ID: **SB-11-8**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
n-Propylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3,5-Trimethylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
2-Chlorotoluene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
4-Chlorotoluene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
tert-Butylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,3-Trichloropropane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,4-Trichlorobenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
sec-Butylbenzene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
4-Isopropyltoluene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,4-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
n-Butylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dibromo-3-chloropropane	ND	0.695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,4-Trimethylbenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Hexachlorobutadiene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Naphthalene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,3-Trichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Surr: Dibromofluoromethane	96.5	56.5 - 129		%Rec	1	4/24/2018 1:17:54 PM
Surr: Toluene-d8	91.1	64.5 - 151		%Rec	1	4/24/2018 1:17:54 PM
Surr: 1-Bromo-4-fluorobenzene	92.4	43.2 - 143		%Rec	1	4/24/2018 1:17:54 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: R42972		Analyst: CG
Percent Moisture	14.8	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:50:00 AM
Project: MVSC
Lab ID: 1804291-004
Matrix: Soil
Client Sample ID: **SB-11-15**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0282	Q-	mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloromethane	ND	0.0705	Q-	mg/Kg-dry	1	4/24/2018 2:20:03 PM
Vinyl chloride	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromomethane	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Trichlorofluoromethane (CFC-11)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloroethane	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Methylene chloride	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
trans-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Methyl tert-butyl ether (MTBE)	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
2,2-Dichloropropane	ND	0.141		mg/Kg-dry	1	4/24/2018 2:20:03 PM
cis-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloroform	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,1-Trichloroethane (TCA)	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloropropene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Carbon tetrachloride	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichloroethane (EDC)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Benzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Trichloroethene (TCE)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichloropropane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromodichloromethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Dibromomethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
cis-1,3-Dichloropropene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Toluene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
trans-1,3-Dichloropropylene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,2-Trichloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3-Dichloropropane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Tetrachloroethene (PCE)	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Dibromochloromethane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dibromoethane (EDB)	ND	0.00705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chlorobenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,1,2-Tetrachloroethane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Ethylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
m,p-Xylene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
o-Xylene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Styrene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Isopropylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromoform	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:50:00 AM
Project: MVSC
Lab ID: 1804291-004
Matrix: Soil
Client Sample ID: **SB-11-15**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
n-Propylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3,5-Trimethylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
2-Chlorotoluene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
4-Chlorotoluene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
tert-Butylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,3-Trichloropropane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,4-Trichlorobenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
sec-Butylbenzene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
4-Isopropyltoluene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,4-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
n-Butylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dibromo-3-chloropropane	ND	0.705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,4-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Hexachlorobutadiene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Naphthalene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,3-Trichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Surr: Dibromofluoromethane	104	56.5 - 129		%Rec	1	4/24/2018 2:20:03 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 2:20:03 PM
Surr: 1-Bromo-4-fluorobenzene	95.3	43.2 - 143		%Rec	1	4/24/2018 2:20:03 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: R42972		Analyst: CG
Percent Moisture	10.6	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:10:00 AM
Project: MVSC
Lab ID: 1804291-005
Matrix: Soil
Client Sample ID: **SB-12-1**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0279	Q-	mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloromethane	ND	0.0696	Q-	mg/Kg-dry	1	4/24/2018 2:51:15 PM
Vinyl chloride	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromomethane	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Trichlorofluoromethane (CFC-11)	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloroethane	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloroethene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Methylene chloride	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
trans-1,2-Dichloroethene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Methyl tert-butyl ether (MTBE)	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloroethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
2,2-Dichloropropane	ND	0.139		mg/Kg-dry	1	4/24/2018 2:51:15 PM
cis-1,2-Dichloroethene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloroform	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,1-Trichloroethane (TCA)	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloropropene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Carbon tetrachloride	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichloroethane (EDC)	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Benzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Trichloroethene (TCE)	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichloropropane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromodichloromethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Dibromomethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
cis-1,3-Dichloropropene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Toluene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
trans-1,3-Dichloropropylene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,2-Trichloroethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3-Dichloropropane	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Tetrachloroethene (PCE)	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Dibromochloromethane	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dibromoethane (EDB)	ND	0.00696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chlorobenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,1,2-Tetrachloroethane	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Ethylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
m,p-Xylene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
o-Xylene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Styrene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Isopropylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromoform	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 10:10:00 AM
Project: MVSC
Lab ID: 1804291-005 **Matrix:** Soil
Client Sample ID: **SB-12-1**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
n-Propylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3,5-Trimethylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
2-Chlorotoluene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
4-Chlorotoluene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
tert-Butylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,3-Trichloropropane	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,4-Trichlorobenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
sec-Butylbenzene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
4-Isopropyltoluene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,4-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
n-Butylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dibromo-3-chloropropane	ND	0.696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,4-Trimethylbenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Hexachlorobutadiene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Naphthalene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,3-Trichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Surr: Dibromofluoromethane	94.3	56.5 - 129		%Rec	1	4/24/2018 2:51:15 PM
Surr: Toluene-d8	95.4	64.5 - 151		%Rec	1	4/24/2018 2:51:15 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	43.2 - 143		%Rec	1	4/24/2018 2:51:15 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: R42972 Analyst: CG

Percent Moisture	26.1	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:20:00 AM
Project: MVSC
Lab ID: 1804291-006
Matrix: Soil
Client Sample ID: **SB-12-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0280	Q-	mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloromethane	ND	0.0700	Q-	mg/Kg-dry	1	4/24/2018 3:22:27 PM
Vinyl chloride	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromomethane	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Trichlorofluoromethane (CFC-11)	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloroethane	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Methylene chloride	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
trans-1,2-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
2,2-Dichloropropane	ND	0.140		mg/Kg-dry	1	4/24/2018 3:22:27 PM
cis-1,2-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloroform	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,1-Trichloroethane (TCA)	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloropropene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Carbon tetrachloride	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichloroethane (EDC)	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Benzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Trichloroethene (TCE)	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichloropropane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromodichloromethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Dibromomethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
cis-1,3-Dichloropropene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Toluene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
trans-1,3-Dichloropropylene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,2-Trichloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3-Dichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Tetrachloroethene (PCE)	0.138	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Dibromochloromethane	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dibromoethane (EDB)	ND	0.00700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,1,2-Tetrachloroethane	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Ethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
m,p-Xylene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
o-Xylene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Styrene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Isopropylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromoform	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:20:00 AM
Project: MVSC
Lab ID: 1804291-006
Matrix: Soil
Client Sample ID: **SB-12-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
n-Propylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3,5-Trimethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
2-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
4-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
tert-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,3-Trichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,4-Trichlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
sec-Butylbenzene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
4-Isopropyltoluene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,4-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
n-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dibromo-3-chloropropane	ND	0.700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,4-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Hexachlorobutadiene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Naphthalene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,3-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Surr: Dibromofluoromethane	113	56.5 - 129		%Rec	1	4/24/2018 3:22:27 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 3:22:27 PM
Surr: 1-Bromo-4-fluorobenzene	94.2	43.2 - 143		%Rec	1	4/24/2018 3:22:27 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: R42972		Analyst: CG
Percent Moisture	7.11	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804291-007 **Matrix:** Soil
Client Sample ID: **SB-12-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0260	Q-	mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloromethane	ND	0.0650	Q-	mg/Kg-dry	1	4/24/2018 3:53:29 PM
Vinyl chloride	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromomethane	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloroethane	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Methylene chloride	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
trans-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
2,2-Dichloropropane	ND	0.130		mg/Kg-dry	1	4/24/2018 3:53:29 PM
cis-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloroform	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloropropene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Carbon tetrachloride	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichloroethane (EDC)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Benzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Trichloroethene (TCE)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichloropropane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromodichloromethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Dibromomethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
cis-1,3-Dichloropropene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Toluene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
trans-1,3-Dichloropropylene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,2-Trichloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3-Dichloropropane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Tetrachloroethene (PCE)	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Dibromochloromethane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dibromoethane (EDB)	ND	0.00650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chlorobenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Ethylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
m,p-Xylene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
o-Xylene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Styrene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Isopropylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromoform	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804291-007
Matrix: Soil
Client Sample ID: **SB-12-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
n-Propylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3,5-Trimethylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
2-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
4-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
tert-Butylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,3-Trichloropropane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,4-Trichlorobenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
sec-Butylbenzene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
4-Isopropyltoluene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,4-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
n-Butylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dibromo-3-chloropropane	ND	0.650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,4-Trimethylbenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Hexachlorobutadiene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Naphthalene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,3-Trichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Surr: Dibromofluoromethane	115	56.5 - 129		%Rec	1	4/24/2018 3:53:29 PM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/24/2018 3:53:29 PM
Surr: 1-Bromo-4-fluorobenzene	95.7	43.2 - 143		%Rec	1	4/24/2018 3:53:29 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: R42972		Analyst: CG
Percent Moisture	2.55	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 12:25:00 PM
Project: MVSC
Lab ID: 1804291-008 **Matrix:** Soil
Client Sample ID: **SB-13-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0280	Q-	mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloromethane	ND	0.0700	Q-	mg/Kg-dry	1	4/24/2018 4:24:36 PM
Vinyl chloride	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromomethane	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Trichlorofluoromethane (CFC-11)	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloroethane	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Methylene chloride	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
trans-1,2-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
2,2-Dichloropropane	ND	0.140		mg/Kg-dry	1	4/24/2018 4:24:36 PM
cis-1,2-Dichloroethene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloroform	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,1-Trichloroethane (TCA)	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloropropene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Carbon tetrachloride	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichloroethane (EDC)	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Benzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Trichloroethene (TCE)	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichloropropane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromodichloromethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Dibromomethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
cis-1,3-Dichloropropene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Toluene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
trans-1,3-Dichloropropylene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,2-Trichloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3-Dichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Tetrachloroethene (PCE)	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Dibromochloromethane	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dibromoethane (EDB)	ND	0.00700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,1,2-Tetrachloroethane	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Ethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
m,p-Xylene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
o-Xylene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Styrene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Isopropylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromoform	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 12:25:00 PM
Project: MVSC
Lab ID: 1804291-008 **Matrix:** Soil
Client Sample ID: **SB-13-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
n-Propylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3,5-Trimethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
2-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
4-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
tert-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,3-Trichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,4-Trichlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
sec-Butylbenzene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
4-Isopropyltoluene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,4-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
n-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dibromo-3-chloropropane	ND	0.700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,4-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Hexachlorobutadiene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Naphthalene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,3-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Surr: Dibromofluoromethane	109	56.5 - 129		%Rec	1	4/24/2018 4:24:36 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/24/2018 4:24:36 PM
Surr: 1-Bromo-4-fluorobenzene	96.2	43.2 - 143		%Rec	1	4/24/2018 4:24:36 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: R42972 Analyst: CG

Percent Moisture	21.4	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804291-009
Matrix: Soil
Client Sample ID: **SB-13-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0297	Q-	mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloromethane	ND	0.0742	Q-	mg/Kg-dry	1	4/24/2018 4:55:41 PM
Vinyl chloride	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromomethane	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Trichlorofluoromethane (CFC-11)	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloroethane	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloroethene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Methylene chloride	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
trans-1,2-Dichloroethene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Methyl tert-butyl ether (MTBE)	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
2,2-Dichloropropane	ND	0.148		mg/Kg-dry	1	4/24/2018 4:55:41 PM
cis-1,2-Dichloroethene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloroform	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,1-Trichloroethane (TCA)	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloropropene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Carbon tetrachloride	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichloroethane (EDC)	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Benzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Trichloroethene (TCE)	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichloropropane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromodichloromethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Dibromomethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
cis-1,3-Dichloropropene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Toluene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
trans-1,3-Dichloropropylene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,2-Trichloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3-Dichloropropane	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Tetrachloroethene (PCE)	0.128	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Dibromochloromethane	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dibromoethane (EDB)	ND	0.00742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chlorobenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,1,2-Tetrachloroethane	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Ethylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
m,p-Xylene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
o-Xylene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Styrene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Isopropylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromoform	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804291-009
Matrix: Soil
Client Sample ID: **SB-13-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
n-Propylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3,5-Trimethylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
2-Chlorotoluene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
4-Chlorotoluene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
tert-Butylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,3-Trichloropropane	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,4-Trichlorobenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
sec-Butylbenzene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
4-Isopropyltoluene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,4-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
n-Butylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dibromo-3-chloropropane	ND	0.742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,4-Trimethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Hexachlorobutadiene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Naphthalene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,3-Trichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Surr: Dibromofluoromethane	114	56.5 - 129		%Rec	1	4/24/2018 4:55:41 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 4:55:41 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	43.2 - 143		%Rec	1	4/24/2018 4:55:41 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: R42972		Analyst: CG
Percent Moisture	15.0	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 12:45:00 PM
Project: MVSC
Lab ID: 1804291-010 **Matrix:** Soil
Client Sample ID: **SB-13-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0230	Q-	mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloromethane	ND	0.0576	Q-	mg/Kg-dry	1	4/24/2018 6:28:48 PM
Vinyl chloride	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromomethane	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloroethane	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Methylene chloride	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
trans-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
2,2-Dichloropropane	ND	0.115		mg/Kg-dry	1	4/24/2018 6:28:48 PM
cis-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloroform	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloropropene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Carbon tetrachloride	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichloroethane (EDC)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Benzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Trichloroethene (TCE)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichloropropane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromodichloromethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Dibromomethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
cis-1,3-Dichloropropene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Toluene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
trans-1,3-Dichloropropylene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,2-Trichloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3-Dichloropropane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Tetrachloroethene (PCE)	6.03	0.288	D	mg/Kg-dry	10	4/24/2018 5:26:49 PM
Dibromochloromethane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dibromoethane (EDB)	ND	0.00576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chlorobenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Ethylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
m,p-Xylene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
o-Xylene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Styrene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Isopropylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromoform	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:45:00 PM
Project: MVSC
Lab ID: 1804291-010
Matrix: Soil
Client Sample ID: **SB-13-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
n-Propylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3,5-Trimethylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
2-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
4-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
tert-Butylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,3-Trichloropropane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,4-Trichlorobenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
sec-Butylbenzene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
4-Isopropyltoluene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,4-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
n-Butylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dibromo-3-chloropropane	ND	0.576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,4-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Hexachlorobutadiene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Naphthalene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,3-Trichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Surr: Dibromofluoromethane	106	56.5 - 129		%Rec	1	4/24/2018 6:28:48 PM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/24/2018 6:28:48 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	43.2 - 143		%Rec	1	4/24/2018 6:28:48 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: R42972		Analyst: CG
Percent Moisture	7.93	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:05:00 PM
Project: MVSC
Lab ID: 1804291-011
Matrix: Soil
Client Sample ID: **SB-13-29**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0238	Q-	mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloromethane	ND	0.0596	Q-	mg/Kg-dry	1	4/24/2018 5:57:51 PM
Vinyl chloride	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromomethane	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Trichlorofluoromethane (CFC-11)	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloroethane	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Methylene chloride	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
trans-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Methyl tert-butyl ether (MTBE)	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloroethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
2,2-Dichloropropane	ND	0.119		mg/Kg-dry	1	4/24/2018 5:57:51 PM
cis-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloroform	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,1-Trichloroethane (TCA)	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Carbon tetrachloride	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichloroethane (EDC)	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Benzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Trichloroethene (TCE)	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichloropropane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromodichloromethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Dibromomethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
cis-1,3-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Toluene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
trans-1,3-Dichloropropylene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,2-Trichloroethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3-Dichloropropane	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Tetrachloroethene (PCE)	0.110	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Dibromochloromethane	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dibromoethane (EDB)	ND	0.00596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chlorobenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,1,2-Tetrachloroethane	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Ethylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
m,p-Xylene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
o-Xylene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Styrene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Isopropylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromoform	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:05:00 PM
Project: MVSC
Lab ID: 1804291-011
Matrix: Soil
Client Sample ID: **SB-13-29**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
n-Propylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3,5-Trimethylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
2-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
4-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
tert-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,3-Trichloropropane	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,4-Trichlorobenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
sec-Butylbenzene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
4-Isopropyltoluene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,4-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
n-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dibromo-3-chloropropane	ND	0.596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,4-Trimethylbenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Hexachlorobutadiene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Naphthalene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,3-Trichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Surr: Dibromofluoromethane	114	56.5 - 129		%Rec	1	4/24/2018 5:57:51 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/24/2018 5:57:51 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	43.2 - 143		%Rec	1	4/24/2018 5:57:51 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: R42972		Analyst: CG
Percent Moisture	5.69	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 1:30:00 PM
Project: MVSC
Lab ID: 1804291-012 **Matrix:** Soil
Client Sample ID: **SB-14-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloromethane	ND	0.0633	Q-	mg/Kg-dry	1	4/25/2018 3:05:10 AM
Vinyl chloride	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromomethane	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Trichlorofluoromethane (CFC-11)	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloroethane	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloroethene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Methylene chloride	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
trans-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Methyl tert-butyl ether (MTBE)	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloroethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
2,2-Dichloropropane	ND	0.127		mg/Kg-dry	1	4/25/2018 3:05:10 AM
cis-1,2-Dichloroethene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloroform	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,1-Trichloroethane (TCA)	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloropropene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Carbon tetrachloride	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichloroethane (EDC)	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Benzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Trichloroethene (TCE)	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichloropropane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromodichloromethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Dibromomethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
cis-1,3-Dichloropropene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Toluene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
trans-1,3-Dichloropropylene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,2-Trichloroethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3-Dichloropropane	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Tetrachloroethene (PCE)	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Dibromochloromethane	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dibromoethane (EDB)	ND	0.00633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chlorobenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,1,2-Tetrachloroethane	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Ethylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
m,p-Xylene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
o-Xylene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Styrene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Isopropylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromoform	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:30:00 PM
Project: MVSC
Lab ID: 1804291-012
Matrix: Soil
Client Sample ID: **SB-14-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
n-Propylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3,5-Trimethylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
2-Chlorotoluene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
4-Chlorotoluene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
tert-Butylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,3-Trichloropropane	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,4-Trichlorobenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
sec-Butylbenzene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
4-Isopropyltoluene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,4-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
n-Butylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dibromo-3-chloropropane	ND	0.633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,4-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Hexachlorobutadiene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Naphthalene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,3-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Surr: Dibromofluoromethane	91.8	56.5 - 129		%Rec	1	4/25/2018 3:05:10 AM
Surr: Toluene-d8	85.0	64.5 - 151		%Rec	1	4/25/2018 3:05:10 AM
Surr: 1-Bromo-4-fluorobenzene	94.0	43.2 - 143		%Rec	1	4/25/2018 3:05:10 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: R42972		Analyst: CG
Percent Moisture	22.9	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:40:00 PM
Project: MVSC
Lab ID: 1804291-013
Matrix: Soil
Client Sample ID: **SB-14-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloromethane	ND	0.0595	Q-	mg/Kg-dry	1	4/25/2018 3:35:22 AM
Vinyl chloride	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromomethane	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloroethane	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Methylene chloride	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
trans-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
2,2-Dichloropropane	ND	0.119		mg/Kg-dry	1	4/25/2018 3:35:22 AM
cis-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloroform	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Carbon tetrachloride	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichloroethane (EDC)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Benzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Trichloroethene (TCE)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichloropropane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromodichloromethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Dibromomethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
cis-1,3-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Toluene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
trans-1,3-Dichloropropylene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,2-Trichloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3-Dichloropropane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Tetrachloroethene (PCE)	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Dibromochloromethane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dibromoethane (EDB)	ND	0.00595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chlorobenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Ethylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
m,p-Xylene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
o-Xylene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Styrene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Isopropylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromoform	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:40:00 PM
Project: MVSC
Lab ID: 1804291-013
Matrix: Soil
Client Sample ID: **SB-14-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
n-Propylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3,5-Trimethylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
2-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
4-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
tert-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,3-Trichloropropane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,4-Trichlorobenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
sec-Butylbenzene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
4-Isopropyltoluene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,4-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
n-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dibromo-3-chloropropane	ND	0.595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,4-Trimethylbenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Hexachlorobutadiene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Naphthalene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,3-Trichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Surr: Dibromofluoromethane	93.6	56.5 - 129		%Rec	1	4/25/2018 3:35:22 AM
Surr: Toluene-d8	86.8	64.5 - 151		%Rec	1	4/25/2018 3:35:22 AM
Surr: 1-Bromo-4-fluorobenzene	89.0	43.2 - 143		%Rec	1	4/25/2018 3:35:22 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: R42972		Analyst: CG
Percent Moisture	18.2	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:50:00 PM
Project: MVSC
Lab ID: 1804291-014
Matrix: Soil
Client Sample ID: **SB-14-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloromethane	ND	0.0506	Q-	mg/Kg-dry	1	4/25/2018 4:35:37 AM
Vinyl chloride	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromomethane	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Trichlorofluoromethane (CFC-11)	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloroethane	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloroethene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Methylene chloride	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
trans-1,2-Dichloroethene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Methyl tert-butyl ether (MTBE)	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloroethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
2,2-Dichloropropane	ND	0.101		mg/Kg-dry	1	4/25/2018 4:35:37 AM
cis-1,2-Dichloroethene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloroform	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,1-Trichloroethane (TCA)	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloropropene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Carbon tetrachloride	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichloroethane (EDC)	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Benzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Trichloroethene (TCE)	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichloropropane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromodichloromethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Dibromomethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
cis-1,3-Dichloropropene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Toluene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
trans-1,3-Dichloropropylene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,2-Trichloroethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3-Dichloropropane	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Tetrachloroethene (PCE)	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Dibromochloromethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dibromoethane (EDB)	ND	0.00506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,1,2-Tetrachloroethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Ethylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
m,p-Xylene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
o-Xylene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Styrene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Isopropylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromoform	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:50:00 PM
Project: MVSC
Lab ID: 1804291-014
Matrix: Soil
Client Sample ID: **SB-14-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
n-Propylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3,5-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
2-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
4-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
tert-Butylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,3-Trichloropropane	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,4-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
sec-Butylbenzene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
4-Isopropyltoluene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,4-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
n-Butylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dibromo-3-chloropropane	ND	0.506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,4-Trimethylbenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Hexachlorobutadiene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Naphthalene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,3-Trichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Surr: Dibromofluoromethane	88.8	56.5 - 129		%Rec	1	4/25/2018 4:35:37 AM
Surr: Toluene-d8	90.7	64.5 - 151		%Rec	1	4/25/2018 4:35:37 AM
Surr: 1-Bromo-4-fluorobenzene	91.9	43.2 - 143		%Rec	1	4/25/2018 4:35:37 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: R42972		Analyst: CG
Percent Moisture	7.28	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804291-015
Matrix: Soil
Client Sample ID: **SB-14-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloromethane	ND	0.0608	Q-	mg/Kg-dry	1	4/25/2018 5:05:49 AM
Vinyl chloride	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromomethane	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Trichlorofluoromethane (CFC-11)	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloroethane	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloroethene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Methylene chloride	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
trans-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Methyl tert-butyl ether (MTBE)	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloroethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
2,2-Dichloropropane	ND	0.122		mg/Kg-dry	1	4/25/2018 5:05:49 AM
cis-1,2-Dichloroethene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloroform	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,1-Trichloroethane (TCA)	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloropropene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Carbon tetrachloride	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichloroethane (EDC)	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Benzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Trichloroethene (TCE)	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichloropropane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromodichloromethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Dibromomethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
cis-1,3-Dichloropropene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Toluene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
trans-1,3-Dichloropropylene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,2-Trichloroethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3-Dichloropropane	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Tetrachloroethene (PCE)	0.109	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Dibromochloromethane	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dibromoethane (EDB)	ND	0.00608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chlorobenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,1,2-Tetrachloroethane	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Ethylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
m,p-Xylene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
o-Xylene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Styrene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Isopropylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromoform	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804291-015 **Matrix:** Soil
Client Sample ID: **SB-14-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
n-Propylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3,5-Trimethylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
2-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
4-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
tert-Butylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,3-Trichloropropane	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,4-Trichlorobenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
sec-Butylbenzene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
4-Isopropyltoluene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
n-Butylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dibromo-3-chloropropane	ND	0.608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Hexachlorobutadiene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Naphthalene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Surr: Dibromofluoromethane	94.2	56.5 - 129		%Rec	1	4/25/2018 5:05:49 AM
Surr: Toluene-d8	92.3	64.5 - 151		%Rec	1	4/25/2018 5:05:49 AM
Surr: 1-Bromo-4-fluorobenzene	91.5	43.2 - 143		%Rec	1	4/25/2018 5:05:49 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: R42972 Analyst: CG

Percent Moisture	5.27	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804291-016
Matrix: Soil
Client Sample ID: **SB-15-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloromethane	ND	0.0669	Q-	mg/Kg-dry	1	4/25/2018 5:35:55 AM
Vinyl chloride	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromomethane	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloroethane	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloroethene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Methylene chloride	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
trans-1,2-Dichloroethene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloroethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
2,2-Dichloropropane	ND	0.134		mg/Kg-dry	1	4/25/2018 5:35:55 AM
cis-1,2-Dichloroethene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloroform	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloropropene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Carbon tetrachloride	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichloroethane (EDC)	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Benzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Trichloroethene (TCE)	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichloropropane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromodichloromethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Dibromomethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
cis-1,3-Dichloropropene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Toluene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
trans-1,3-Dichloropropylene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,2-Trichloroethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3-Dichloropropane	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Tetrachloroethene (PCE)	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Dibromochloromethane	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dibromoethane (EDB)	ND	0.00669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chlorobenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Ethylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
m,p-Xylene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
o-Xylene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Styrene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Isopropylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromoform	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804291-016
Matrix: Soil
Client Sample ID: **SB-15-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
n-Propylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3,5-Trimethylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
2-Chlorotoluene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
4-Chlorotoluene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
tert-Butylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,3-Trichloropropane	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,4-Trichlorobenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
sec-Butylbenzene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
4-Isopropyltoluene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,4-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
n-Butylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dibromo-3-chloropropane	ND	0.669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,4-Trimethylbenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Hexachlorobutadiene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Naphthalene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,3-Trichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Surr: Dibromofluoromethane	99.8	56.5 - 129		%Rec	1	4/25/2018 5:35:55 AM
Surr: Toluene-d8	101	64.5 - 151		%Rec	1	4/25/2018 5:35:55 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	43.2 - 143		%Rec	1	4/25/2018 5:35:55 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: R42972		Analyst: CG
Percent Moisture	15.1	0.500		wt%	1	4/19/2018 7:59:11 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:30:00 AM
Project: MVSC
Lab ID: 1804291-017
Matrix: Soil
Client Sample ID: **SB-15-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Chloromethane	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Vinyl chloride	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Bromomethane	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Trichlorofluoromethane (CFC-11)	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Chloroethane	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1-Dichloroethene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Methylene chloride	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
trans-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Methyl tert-butyl ether (MTBE)	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1-Dichloroethane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
2,2-Dichloropropane	ND	0.129		mg/Kg-dry	1	4/25/2018 9:08:56 AM
cis-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Chloroform	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1,1-Trichloroethane (TCA)	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1-Dichloropropene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Carbon tetrachloride	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2-Dichloroethane (EDC)	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Benzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Trichloroethene (TCE)	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2-Dichloropropane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Bromodichloromethane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Dibromomethane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
cis-1,3-Dichloropropene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Toluene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
trans-1,3-Dichloropropylene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1,2-Trichloroethane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,3-Dichloropropane	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Tetrachloroethene (PCE)	0.0781	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Dibromochloromethane	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2-Dibromoethane (EDB)	ND	0.00647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Chlorobenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,1,1,2-Tetrachloroethane	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Ethylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
m,p-Xylene	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
o-Xylene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Styrene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Isopropylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Bromoform	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:30:00 AM
Project: MVSC
Lab ID: 1804291-017
Matrix: Soil
Client Sample ID: **SB-15-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
n-Propylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Bromobenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,3,5-Trimethylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
2-Chlorotoluene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
4-Chlorotoluene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
tert-Butylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2,3-Trichloropropane	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2,4-Trichlorobenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
sec-Butylbenzene	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
4-Isopropyltoluene	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,3-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,4-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
n-Butylbenzene	ND	0.0324		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2-Dibromo-3-chloropropane	ND	0.647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2,4-Trimethylbenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Hexachlorobutadiene	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Naphthalene	ND	0.0647		mg/Kg-dry	1	4/25/2018 9:08:56 AM
1,2,3-Trichlorobenzene	ND	0.0259		mg/Kg-dry	1	4/25/2018 9:08:56 AM
Surr: Dibromofluoromethane	100	56.5 - 129		%Rec	1	4/25/2018 9:08:56 AM
Surr: Toluene-d8	111	64.5 - 151		%Rec	1	4/25/2018 9:08:56 AM
Surr: 1-Bromo-4-fluorobenzene	94.9	43.2 - 143		%Rec	1	4/25/2018 9:08:56 AM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	20.7	0.500		wt%	1	4/20/2018 9:51:17 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:45:00 AM
Project: MVSC
Lab ID: 1804291-018
Matrix: Soil
Client Sample ID: **SB-15-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Chloromethane	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Vinyl chloride	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Bromomethane	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Trichlorofluoromethane (CFC-11)	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Chloroethane	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1-Dichloroethene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Methylene chloride	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
trans-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Methyl tert-butyl ether (MTBE)	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1-Dichloroethane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
2,2-Dichloropropane	ND	0.116		mg/Kg-dry	1	4/25/2018 9:40:03 AM
cis-1,2-Dichloroethene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Chloroform	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1,1-Trichloroethane (TCA)	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1-Dichloropropene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Carbon tetrachloride	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2-Dichloroethane (EDC)	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Benzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Trichloroethene (TCE)	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2-Dichloropropane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Bromodichloromethane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Dibromomethane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
cis-1,3-Dichloropropene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Toluene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
trans-1,3-Dichloropropylene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1,2-Trichloroethane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,3-Dichloropropane	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Tetrachloroethene (PCE)	0.0645	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Dibromochloromethane	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2-Dibromoethane (EDB)	ND	0.00580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Chlorobenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,1,1,2-Tetrachloroethane	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Ethylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
m,p-Xylene	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
o-Xylene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Styrene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Isopropylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Bromoform	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:45:00 AM
Project: MVSC
Lab ID: 1804291-018
Matrix: Soil
Client Sample ID: **SB-15-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
n-Propylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Bromobenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,3,5-Trimethylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
2-Chlorotoluene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
4-Chlorotoluene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
tert-Butylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2,3-Trichloropropane	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2,4-Trichlorobenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
sec-Butylbenzene	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
4-Isopropyltoluene	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,3-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,4-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
n-Butylbenzene	ND	0.0290		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2-Dichlorobenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2-Dibromo-3-chloropropane	ND	0.580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2,4-Trimethylbenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Hexachlorobutadiene	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Naphthalene	ND	0.0580		mg/Kg-dry	1	4/25/2018 9:40:03 AM
1,2,3-Trichlorobenzene	ND	0.0232		mg/Kg-dry	1	4/25/2018 9:40:03 AM
Surr: Dibromofluoromethane	92.5	56.5 - 129		%Rec	1	4/25/2018 9:40:03 AM
Surr: Toluene-d8	113	64.5 - 151		%Rec	1	4/25/2018 9:40:03 AM
Surr: 1-Bromo-4-fluorobenzene	95.4	43.2 - 143		%Rec	1	4/25/2018 9:40:03 AM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	8.97	0.500		wt%	1	4/20/2018 9:51:17 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 9:20:00 AM
Project: MVSC
Lab ID: 1804291-019
Matrix: Soil
Client Sample ID: **SB-15-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Chloromethane	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Vinyl chloride	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Bromomethane	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Chloroethane	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1-Dichloroethene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Methylene chloride	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
trans-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1-Dichloroethane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
2,2-Dichloropropane	ND	0.107		mg/Kg-dry	1	4/25/2018 10:11:07 AM
cis-1,2-Dichloroethene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Chloroform	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1-Dichloropropene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Carbon tetrachloride	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2-Dichloroethane (EDC)	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Benzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Trichloroethene (TCE)	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2-Dichloropropane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Bromodichloromethane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Dibromomethane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
cis-1,3-Dichloropropene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Toluene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
trans-1,3-Dichloropropylene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1,2-Trichloroethane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,3-Dichloropropane	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Tetrachloroethene (PCE)	0.132	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Dibromochloromethane	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2-Dibromoethane (EDB)	ND	0.00536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Chlorobenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Ethylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
m,p-Xylene	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
o-Xylene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Styrene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Isopropylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Bromoform	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 9:20:00 AM
Project: MVSC
Lab ID: 1804291-019
Matrix: Soil
Client Sample ID: **SB-15-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
n-Propylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Bromobenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,3,5-Trimethylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
2-Chlorotoluene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
4-Chlorotoluene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
tert-Butylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2,3-Trichloropropane	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2,4-Trichlorobenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
sec-Butylbenzene	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
4-Isopropyltoluene	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,3-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,4-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
n-Butylbenzene	ND	0.0268		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2-Dichlorobenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2-Dibromo-3-chloropropane	ND	0.536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2,4-Trimethylbenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Hexachlorobutadiene	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Naphthalene	ND	0.0536		mg/Kg-dry	1	4/25/2018 10:11:07 AM
1,2,3-Trichlorobenzene	ND	0.0214		mg/Kg-dry	1	4/25/2018 10:11:07 AM
Surr: Dibromofluoromethane	91.2	56.5 - 129		%Rec	1	4/25/2018 10:11:07 AM
Surr: Toluene-d8	102	64.5 - 151		%Rec	1	4/25/2018 10:11:07 AM
Surr: 1-Bromo-4-fluorobenzene	92.7	43.2 - 143		%Rec	1	4/25/2018 10:11:07 AM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	10.4	0.500		wt%	1	4/20/2018 9:51:17 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 10:38:00 AM
Project: MVSC
Lab ID: 1804291-021
Matrix: Soil
Client Sample ID: **SB-16-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Chloromethane	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Vinyl chloride	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Bromomethane	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Trichlorofluoromethane (CFC-11)	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Chloroethane	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1-Dichloroethene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Methylene chloride	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
trans-1,2-Dichloroethene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Methyl tert-butyl ether (MTBE)	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1-Dichloroethane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
2,2-Dichloropropane	ND	0.146		mg/Kg-dry	1	4/25/2018 11:13:15 AM
cis-1,2-Dichloroethene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Chloroform	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1,1-Trichloroethane (TCA)	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1-Dichloropropene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Carbon tetrachloride	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2-Dichloroethane (EDC)	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Benzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Trichloroethene (TCE)	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2-Dichloropropane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Bromodichloromethane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Dibromomethane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
cis-1,3-Dichloropropene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Toluene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
trans-1,3-Dichloropropylene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1,2-Trichloroethane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,3-Dichloropropane	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Tetrachloroethene (PCE)	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Dibromochloromethane	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2-Dibromoethane (EDB)	ND	0.00732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Chlorobenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,1,1,2-Tetrachloroethane	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Ethylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
m,p-Xylene	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
o-Xylene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Styrene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Isopropylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Bromoform	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 10:38:00 AM
Project: MVSC
Lab ID: 1804291-021
Matrix: Soil
Client Sample ID: **SB-16-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
n-Propylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Bromobenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,3,5-Trimethylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
2-Chlorotoluene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
4-Chlorotoluene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
tert-Butylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2,3-Trichloropropane	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2,4-Trichlorobenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
sec-Butylbenzene	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
4-Isopropyltoluene	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,3-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,4-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
n-Butylbenzene	ND	0.0366		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2-Dichlorobenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2-Dibromo-3-chloropropane	ND	0.732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2,4-Trimethylbenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Hexachlorobutadiene	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Naphthalene	ND	0.0732		mg/Kg-dry	1	4/25/2018 11:13:15 AM
1,2,3-Trichlorobenzene	ND	0.0293		mg/Kg-dry	1	4/25/2018 11:13:15 AM
Surr: Dibromofluoromethane	112	56.5 - 129		%Rec	1	4/25/2018 11:13:15 AM
Surr: Toluene-d8	101	64.5 - 151		%Rec	1	4/25/2018 11:13:15 AM
Surr: 1-Bromo-4-fluorobenzene	94.1	43.2 - 143		%Rec	1	4/25/2018 11:13:15 AM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	4.44	0.500		wt%	1	4/20/2018 9:51:17 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 11:15:00 AM
Project: MVSC
Lab ID: 1804291-022
Matrix: Soil
Client Sample ID: **SB-16-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Chloromethane	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Vinyl chloride	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Bromomethane	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Trichlorofluoromethane (CFC-11)	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Chloroethane	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1-Dichloroethene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Methylene chloride	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
trans-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Methyl tert-butyl ether (MTBE)	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1-Dichloroethane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
2,2-Dichloropropane	ND	0.104		mg/Kg-dry	1	4/25/2018 11:44:18 AM
cis-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Chloroform	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1,1-Trichloroethane (TCA)	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1-Dichloropropene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Carbon tetrachloride	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2-Dichloroethane (EDC)	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Benzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Trichloroethene (TCE)	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2-Dichloropropane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Bromodichloromethane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Dibromomethane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
cis-1,3-Dichloropropene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Toluene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
trans-1,3-Dichloropropylene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1,2-Trichloroethane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,3-Dichloropropane	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Tetrachloroethene (PCE)	0.0505	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Dibromochloromethane	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2-Dibromoethane (EDB)	ND	0.00521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Chlorobenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,1,1,2-Tetrachloroethane	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Ethylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
m,p-Xylene	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
o-Xylene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Styrene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Isopropylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Bromoform	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 11:15:00 AM
Project: MVSC
Lab ID: 1804291-022
Matrix: Soil
Client Sample ID: **SB-16-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
n-Propylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Bromobenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,3,5-Trimethylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
2-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
4-Chlorotoluene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
tert-Butylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2,3-Trichloropropane	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2,4-Trichlorobenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
sec-Butylbenzene	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
4-Isopropyltoluene	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,3-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,4-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
n-Butylbenzene	ND	0.0261		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2-Dibromo-3-chloropropane	ND	0.521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2,4-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Hexachlorobutadiene	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Naphthalene	ND	0.0521		mg/Kg-dry	1	4/25/2018 11:44:18 AM
1,2,3-Trichlorobenzene	ND	0.0208		mg/Kg-dry	1	4/25/2018 11:44:18 AM
Surr: Dibromofluoromethane	91.8	56.5 - 129		%Rec	1	4/25/2018 11:44:18 AM
Surr: Toluene-d8	89.3	64.5 - 151		%Rec	1	4/25/2018 11:44:18 AM
Surr: 1-Bromo-4-fluorobenzene	87.7	43.2 - 143		%Rec	1	4/25/2018 11:44:18 AM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	7.92	0.500		wt%	1	4/20/2018 9:51:17 AM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 12:05:00 PM
Project: MVSC
Lab ID: 1804291-023
Matrix: Soil
Client Sample ID: **SB-16-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Chloromethane	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Vinyl chloride	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Bromomethane	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Trichlorofluoromethane (CFC-11)	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Chloroethane	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Methyl tert-butyl ether (MTBE)	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
2,2-Dichloropropane	ND	0.112		mg/Kg-dry	1	4/25/2018 12:15:14 PM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Chloroform	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1,1-Trichloroethane (TCA)	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Carbon tetrachloride	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2-Dichloroethane (EDC)	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Benzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Bromodichloromethane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Dibromomethane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Toluene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
trans-1,3-Dichloropropylene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1,2-Trichloroethane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,3-Dichloropropane	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Tetrachloroethene (PCE)	0.0575	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Dibromochloromethane	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2-Dibromoethane (EDB)	ND	0.00561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Chlorobenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,1,1,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Ethylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
m,p-Xylene	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
o-Xylene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Styrene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Isopropylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Bromoform	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 12:05:00 PM
Project: MVSC
Lab ID: 1804291-023
Matrix: Soil
Client Sample ID: **SB-16-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
n-Propylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Bromobenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,3,5-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
2-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
4-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
tert-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2,3-Trichloropropane	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2,4-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
sec-Butylbenzene	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
4-Isopropyltoluene	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
n-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2-Dibromo-3-chloropropane	ND	0.561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Hexachlorobutadiene	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Naphthalene	ND	0.0561		mg/Kg-dry	1	4/25/2018 12:15:14 PM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/25/2018 12:15:14 PM
Surr: Dibromofluoromethane	87.8	56.5 - 129		%Rec	1	4/25/2018 12:15:14 PM
Surr: Toluene-d8	85.4	64.5 - 151		%Rec	1	4/25/2018 12:15:14 PM
Surr: 1-Bromo-4-fluorobenzene	91.0	43.2 - 143		%Rec	1	4/25/2018 12:15:14 PM
Sample Moisture (Percent Moisture)				Batch ID: R43003		Analyst: CG
Percent Moisture	10.5	0.500		wt%	1	4/20/2018 9:51:17 AM

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1804325-002ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/20/2018**		RunNo: **43003**		
Client ID: **BATCH**	Batch ID: **R43003**					Analysis Date: **4/20/2018**		SeqNo: **831162**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	12.9	0.500						10.82	17.8	20	

Sample ID **1804291-018ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/20/2018**		RunNo: **43003**		
Client ID: **SB-15-30**	Batch ID: **R43003**					Analysis Date: **4/20/2018**		SeqNo: **831175**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	9.40	0.500						8.969	4.71	20	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1804291-001ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/19/2018**		RunNo: **42972**		
Client ID: **SB-10-6**	Batch ID: **R42972**					Analysis Date: **4/19/2018**		SeqNo: **830566**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	7.00	0.500						7.363	5.10	20	

Sample ID **1804291-016ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/19/2018**		RunNo: **42972**		
Client ID: **SB-15-10**	Batch ID: **R42972**					Analysis Date: **4/19/2018**		SeqNo: **830582**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	14.9	0.500						15.10	1.60	20	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20486** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **LCSS** Batch ID: **20486** Analysis Date: **4/24/2018** SeqNo: **833296**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.749	0.0200	1.000	0	74.9	14.3	167				
Chloromethane	0.623	0.0500	1.000	0	62.3	32	156				
Vinyl chloride	0.603	0.0250	1.000	0	60.3	43.4	151				
Bromomethane	1.20	0.0500	1.000	0	120	35	155				
Trichlorofluoromethane (CFC-11)	1.85	0.0200	1.000	0	185	33.8	156				S
Chloroethane	0.974	0.0500	1.000	0	97.4	33.1	147				
1,1-Dichloroethene	0.667	0.0200	1.000	0	66.7	39	144				
Methylene chloride	0.924	0.0200	1.000	0	92.4	46.3	140				
trans-1,2-Dichloroethene	1.01	0.0200	1.000	0	101	68	130				
Methyl tert-butyl ether (MTBE)	0.950	0.0500	1.000	0	95.0	44.1	152				
1,1-Dichloroethane	1.02	0.0200	1.000	0	102	61.9	137				
2,2-Dichloropropane	1.20	0.100	1.000	0	120	35.5	186				
cis-1,2-Dichloroethene	0.920	0.0200	1.000	0	92.0	71.3	135				
Chloroform	0.958	0.0200	1.000	0	95.8	69	145				
1,1,1-Trichloroethane (TCA)	1.03	0.0250	1.000	0	103	69	132				
1,1-Dichloropropene	1.04	0.0200	1.000	0	104	72.7	131				
Carbon tetrachloride	1.05	0.0250	1.000	0	105	63.4	137				
1,2-Dichloroethane (EDC)	0.956	0.0200	1.000	0	95.6	50.9	162				
Benzene	0.999	0.0200	1.000	0	99.9	64.3	133				
Trichloroethene (TCE)	0.911	0.0200	1.000	0	91.1	65.5	137				
1,2-Dichloropropane	0.825	0.0200	1.000	0	82.5	63.2	142				
Bromodichloromethane	0.851	0.0200	1.000	0	85.1	53.4	131				
Dibromomethane	0.861	0.0200	1.000	0	86.1	60.1	146				
cis-1,3-Dichloropropene	0.880	0.0200	1.000	0	88.0	59.1	143				
Toluene	0.902	0.0200	1.000	0	90.2	67.3	138				
trans-1,3-Dichloropropylene	0.898	0.0200	1.000	0	89.8	49.2	149				
1,1,2-Trichloroethane	0.859	0.0200	1.000	0	85.9	56.9	147				
1,3-Dichloropropane	0.778	0.0250	1.000	0	77.8	56.1	153				
Tetrachloroethene (PCE)	0.978	0.0250	1.000	0	97.8	52.7	150				
Dibromochloromethane	0.879	0.0250	1.000	0	87.9	70.6	144				
1,2-Dibromoethane (EDB)	0.933	0.00500	1.000	0	93.3	50.5	154				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20486** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **LCSS** Batch ID: **20486** Analysis Date: **4/24/2018** SeqNo: **833296**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.04	0.0250	1.000	0	104	84.9	125				
1,1,1,2-Tetrachloroethane	1.02	0.0250	1.000	0	102	65.9	141				
Ethylbenzene	1.05	0.0250	1.000	0	105	74	129				
m,p-Xylene	2.23	0.0500	2.000	0	111	70	124				
o-Xylene	1.08	0.0250	1.000	0	108	68.1	139				
Styrene	1.06	0.0250	1.000	0	106	73.3	146				
Isopropylbenzene	1.09	0.0250	1.000	0	109	70	130				
Bromoform	0.985	0.0500	1.000	0	98.5	44.3	130				
1,1,2,2-Tetrachloroethane	0.953	0.0200	1.000	0	95.3	44.8	165				
n-Propylbenzene	1.08	0.0250	1.000	0	108	75.8	139				
Bromobenzene	1.06	0.0200	1.000	0	106	49.2	144				
1,3,5-Trimethylbenzene	1.10	0.0250	1.000	0	110	76.5	135				
2-Chlorotoluene	1.06	0.0250	1.000	0	106	76.7	129				
4-Chlorotoluene	1.07	0.0250	1.000	0	107	77.5	125				
tert-Butylbenzene	1.10	0.0250	1.000	0	110	66.2	130				
1,2,3-Trichloropropane	0.972	0.0250	1.000	0	97.2	67.9	136				
1,2,4-Trichlorobenzene	1.03	0.0250	1.000	0	103	65.5	150				
sec-Butylbenzene	1.10	0.0500	1.000	0	110	75.6	133				
4-Isopropyltoluene	1.11	0.0500	1.000	0	111	76.8	131				
1,3-Dichlorobenzene	1.08	0.0200	1.000	0	108	72.8	128				
1,4-Dichlorobenzene	1.06	0.0200	1.000	0	106	72.6	126				
n-Butylbenzene	1.04	0.0250	1.000	0	104	78.4	140				
1,2-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.8	126				
1,2-Dibromo-3-chloropropane	0.892	0.500	1.000	0	89.2	40.2	155				
1,2,4-Trimethylbenzene	1.10	0.0200	1.000	0	110	77.5	129				
Hexachlorobutadiene	1.09	0.0500	1.000	0	109	42	151				
Naphthalene	0.945	0.0500	1.000	0	94.5	46.5	167				
1,2,3-Trichlorobenzene	1.00	0.0200	1.000	0	100	64.5	149				
Surr: Dibromofluoromethane	1.18		1.250		94.6	56.5	129				
Surr: Toluene-d8	0.926		1.250		74.1	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.19		1.250		94.9	43.2	143				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20486**	SampType:	**LCS**	Units:	**mg/Kg**	Prep Date:	**4/24/2018**	RunNo:	**43108**
Client ID:	**LCSS**	Batch ID:	**20486**			Analysis Date:	**4/24/2018**	SeqNo:	**833296**

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-20486**	SampType:	**MBLK**	Units:	**mg/Kg**	Prep Date:	**4/24/2018**	RunNo:	**43108**
Client ID:	**MBLKS**	Batch ID:	**20486**			Analysis Date:	**4/24/2018**	SeqNo:	**833297**

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									Q
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									
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	0.0200									
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									

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20486**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **4/24/2018**	RunNo: **43108**	
Client ID: **MBLKS**	Batch ID: **20486**		Analysis Date: **4/24/2018**	SeqNo: **833297**	

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									
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: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-20486**	SampType: **MBLK**		Units: **mg/Kg**		Prep Date: **4/24/2018**		RunNo: **43108**		
Client ID:	**MBLKS**	Batch ID: **20486**				Analysis Date: **4/24/2018**		SeqNo: **833297**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachlorobutadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.13		1.250		90.1	56.5	129				
Surr: Toluene-d8	0.917		1.250		73.4	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.15		1.250		92.1	43.2	143				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID	**1804291-013BDUP**	SampType: **DUP**		Units: **mg/Kg-dry**		Prep Date: **4/24/2018**		RunNo: **43108**		
Client ID:	**SB-14-10**	Batch ID: **20486**				Analysis Date: **4/25/2018**		SeqNo: **833275**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0238						0		30	
Chloromethane	ND	0.0595						0		30	Q
Vinyl chloride	ND	0.0298						0		30	
Bromomethane	ND	0.0595						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0238						0		30	
Chloroethane	ND	0.0595						0		30	
1,1-Dichloroethene	ND	0.0238						0		30	
Methylene chloride	ND	0.0238						0		30	
trans-1,2-Dichloroethene	ND	0.0238						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0595						0		30	
1,1-Dichloroethane	ND	0.0238						0		30	
2,2-Dichloropropane	ND	0.119						0		30	
cis-1,2-Dichloroethene	ND	0.0238						0		30	
Chloroform	ND	0.0238						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0298						0		30	
1,1-Dichloropropene	ND	0.0238						0		30	
Carbon tetrachloride	ND	0.0298						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-013BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-14-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833275**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	ND	0.0238						0		30	
Benzene	ND	0.0238						0		30	
Trichloroethene (TCE)	ND	0.0238						0		30	
1,2-Dichloropropane	ND	0.0238						0		30	
Bromodichloromethane	ND	0.0238						0		30	
Dibromomethane	ND	0.0238						0		30	
cis-1,3-Dichloropropene	ND	0.0238						0		30	
Toluene	ND	0.0238						0		30	
trans-1,3-Dichloropropylene	ND	0.0238						0		30	
1,1,2-Trichloroethane	ND	0.0238						0		30	
1,3-Dichloropropane	ND	0.0298						0		30	
Tetrachloroethene (PCE)	ND	0.0298						0		30	
Dibromochloromethane	ND	0.0298						0		30	
1,2-Dibromoethane (EDB)	ND	0.00595						0		30	
Chlorobenzene	ND	0.0298						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0298						0		30	
Ethylbenzene	ND	0.0298						0		30	
m,p-Xylene	ND	0.0595						0		30	
o-Xylene	ND	0.0298						0		30	
Styrene	ND	0.0298						0		30	
Isopropylbenzene	ND	0.0298						0		30	
Bromoform	ND	0.0595						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0238						0		30	
n-Propylbenzene	ND	0.0298						0		30	
Bromobenzene	ND	0.0238						0		30	
1,3,5-Trimethylbenzene	ND	0.0298						0		30	
2-Chlorotoluene	ND	0.0298						0		30	
4-Chlorotoluene	ND	0.0298						0		30	
tert-Butylbenzene	ND	0.0298						0		30	
1,2,3-Trichloropropane	ND	0.0298						0		30	
1,2,4-Trichlorobenzene	ND	0.0298						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-013BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-14-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833275**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
sec-Butylbenzene	ND	0.0595						0		30	
4-Isopropyltoluene	ND	0.0595						0		30	
1,3-Dichlorobenzene	ND	0.0238						0		30	
1,4-Dichlorobenzene	ND	0.0238						0		30	
n-Butylbenzene	ND	0.0298						0		30	
1,2-Dichlorobenzene	ND	0.0238						0		30	
1,2-Dibromo-3-chloropropane	ND	0.595						0		30	
1,2,4-Trimethylbenzene	ND	0.0238						0		30	
Hexachlorobutadiene	ND	0.0595						0		30	
Naphthalene	ND	0.0595						0		30	
1,2,3-Trichlorobenzene	ND	0.0238						0		30	
Surr: Dibromofluoromethane	1.31		1.489		88.1	56.5	129		0		
Surr: Toluene-d8	1.24		1.489		83.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.36		1.489		91.1	43.2	143		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804291-016BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833279**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.17	0.0267	1.337	0	87.6	43.5	121				
Chloromethane	1.02	0.0669	1.337	0	76.6	45	130				
Vinyl chloride	1.02	0.0334	1.337	0	76.4	43.6	150				
Bromomethane	1.89	0.0669	1.337	0	141	21.3	120				S
Trichlorofluoromethane (CFC-11)	2.75	0.0267	1.337	0	206	35	131				S
Chloroethane	1.89	0.0669	1.337	0	141	31.9	123				S
1,1-Dichloroethene	1.07	0.0267	1.337	0	80.0	47.3	147				
Methylene chloride	1.66	0.0267	1.337	0	124	54.7	142				
trans-1,2-Dichloroethene	1.59	0.0267	1.337	0	119	52	136				
Methyl tert-butyl ether (MTBE)	1.45	0.0669	1.337	0	109	58.5	167				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-016BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833279**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethane	1.28	0.0267	1.337	0	95.5	51.8	141				
2,2-Dichloropropane	1.23	0.134	1.337	0	91.6	36	123				
cis-1,2-Dichloroethene	1.24	0.0267	1.337	0	92.9	58.6	136				
Chloroform	1.35	0.0267	1.337	0	101	53.2	129				
1,1,1-Trichloroethane (TCA)	1.35	0.0334	1.337	0	101	58.3	145				
1,1-Dichloropropene	1.39	0.0267	1.337	0	104	55.1	138				
Carbon tetrachloride	1.32	0.0334	1.337	0	98.4	53.3	144				
1,2-Dichloroethane (EDC)	1.37	0.0267	1.337	0	102	51.3	139				
Benzene	1.41	0.0267	1.337	0	106	63.5	133				
Trichloroethene (TCE)	1.37	0.0267	1.337	0	102	61.6	147				
1,2-Dichloropropane	1.47	0.0267	1.337	0	110	59	136				
Bromodichloromethane	1.53	0.0267	1.337	0	115	50.7	141				
Dibromomethane	1.36	0.0267	1.337	0	102	50.6	137				
cis-1,3-Dichloropropene	1.63	0.0267	1.337	0	122	50.4	138				
Toluene	1.70	0.0267	1.337	0	127	63.4	132				
trans-1,3-Dichloropropylene	1.76	0.0267	1.337	0	132	44.1	147				
1,1,2-Trichloroethane	1.62	0.0267	1.337	0	121	51.6	137				
1,3-Dichloropropane	1.71	0.0334	1.337	0	128	53.1	134				
Tetrachloroethene (PCE)	1.40	0.0334	1.337	0	105	35.6	158				
Dibromochloromethane	1.47	0.0334	1.337	0	110	55.3	140				
1,2-Dibromoethane (EDB)	1.58	0.00669	1.337	0	118	50.4	136				
Chlorobenzene	1.32	0.0334	1.337	0	98.7	60	133				
1,1,1,2-Tetrachloroethane	1.27	0.0334	1.337	0	94.9	53.1	142				
Ethylbenzene	1.38	0.0334	1.337	0	103	54.5	134				
m,p-Xylene	2.69	0.0669	2.674	0	101	53.1	132				
o-Xylene	1.35	0.0334	1.337	0	101	53.3	139				
Styrene	1.36	0.0334	1.337	0	101	51.1	132				
Isopropylbenzene	1.36	0.0334	1.337	0	101	58.9	138				
Bromoform	1.18	0.0669	1.337	0	88.6	57.9	130				
1,1,2,2-Tetrachloroethane	1.28	0.0267	1.337	0	96.0	51.9	131				
n-Propylbenzene	1.39	0.0334	1.337	0	104	53.6	140				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-016BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833279**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	1.22	0.0267	1.337	0	91.3	54.2	140				
1,3,5-Trimethylbenzene	1.37	0.0334	1.337	0	102	51.8	136				
2-Chlorotoluene	1.40	0.0334	1.337	0	105	51.6	136				
4-Chlorotoluene	1.42	0.0334	1.337	0	106	50.1	139				
tert-Butylbenzene	1.31	0.0334	1.337	0	98.0	50.5	135				
1,2,3-Trichloropropane	1.31	0.0334	1.337	0	98.1	50.5	131				
1,2,4-Trichlorobenzene	1.17	0.0334	1.337	0	87.4	50.8	130				
sec-Butylbenzene	1.36	0.0669	1.337	0	102	52.6	141				
4-Isopropyltoluene	1.32	0.0669	1.337	0	98.3	52.9	134				
1,3-Dichlorobenzene	1.33	0.0267	1.337	0	99.7	52.6	131				
1,4-Dichlorobenzene	1.32	0.0267	1.337	0	99.1	52.9	129				
n-Butylbenzene	1.43	0.0334	1.337	0	107	52.6	130				
1,2-Dichlorobenzene	1.30	0.0267	1.337	0	97.0	55.8	129				
1,2-Dibromo-3-chloropropane	1.27	0.669	1.337	0	94.9	40.5	131				
1,2,4-Trimethylbenzene	1.36	0.0267	1.337	0	102	50.6	137				
Hexachlorobutadiene	1.13	0.0669	1.337	0	84.2	40.6	158				
Naphthalene	1.15	0.0669	1.337	0	86.1	52.3	124				
1,2,3-Trichlorobenzene	1.14	0.0267	1.337	0	85.1	54.4	124				
Surr: Dibromofluoromethane	1.70		1.672		102	56.5	129				
Surr: Toluene-d8	1.85		1.672		111	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.71		1.672		102	43.2	143				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID **1804291-016BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.13	0.0267	1.337	0	84.2	43.5	121	1.171	4.01	30	
Chloromethane	1.02	0.0669	1.337	0	76.4	45	130	1.024	0.292	30	
Vinyl chloride	0.926	0.0334	1.337	0	69.2	43.6	150	1.021	9.81	30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-016BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	1.61	0.0669	1.337	0	121	21.3	120	1.888	15.8	30	S
Trichlorofluoromethane (CFC-11)	2.35	0.0267	1.337	0	176	35	131	2.750	15.6	30	S
Chloroethane	1.56	0.0669	1.337	0	117	31.9	123	1.892	19.1	30	
1,1-Dichloroethene	0.863	0.0267	1.337	0	64.6	47.3	147	1.069	21.3	30	
Methylene chloride	1.34	0.0267	1.337	0	99.9	54.7	142	1.663	21.8	30	
trans-1,2-Dichloroethene	1.34	0.0267	1.337	0	100	52	136	1.589	17.3	30	
Methyl tert-butyl ether (MTBE)	1.36	0.0669	1.337	0	102	58.5	167	1.452	6.49	30	
1,1-Dichloroethane	1.60	0.0267	1.337	0	120	51.8	141	1.277	22.5	30	
2,2-Dichloropropane	1.59	0.134	1.337	0	119	36	123	1.225	26.1	30	
cis-1,2-Dichloroethene	1.49	0.0267	1.337	0	111	58.6	136	1.242	17.9	30	
Chloroform	1.65	0.0267	1.337	0	123	53.2	129	1.348	19.9	30	
1,1,1-Trichloroethane (TCA)	1.58	0.0334	1.337	0	118	58.3	145	1.353	15.7	30	
1,1-Dichloropropene	1.63	0.0267	1.337	0	122	55.1	138	1.395	15.7	30	
Carbon tetrachloride	1.48	0.0334	1.337	0	111	53.3	144	1.316	11.7	30	
1,2-Dichloroethane (EDC)	1.76	0.0267	1.337	0	131	51.3	139	1.368	24.8	30	
Benzene	1.66	0.0267	1.337	0	124	63.5	133	1.413	16.2	30	
Trichloroethene (TCE)	1.53	0.0267	1.337	0	114	61.6	147	1.368	11.1	30	
1,2-Dichloropropane	1.78	0.0267	1.337	0	133	59	136	1.471	19.0	30	
Bromodichloromethane	1.49	0.0267	1.337	0	112	50.7	141	1.532	2.66	30	
Dibromomethane	1.53	0.0267	1.337	0	114	50.6	137	1.357	11.8	30	
cis-1,3-Dichloropropene	1.60	0.0267	1.337	0	119	50.4	138	1.626	1.84	30	
Toluene	1.55	0.0267	1.337	0	116	63.4	132	1.701	9.37	30	
trans-1,3-Dichloropropylene	1.62	0.0267	1.337	0	121	44.1	147	1.763	8.23	30	
1,1,2-Trichloroethane	1.48	0.0267	1.337	0	111	51.6	137	1.617	8.71	30	
1,3-Dichloropropane	1.55	0.0334	1.337	0	116	53.1	134	1.714	9.85	30	
Tetrachloroethene (PCE)	1.29	0.0334	1.337	0	96.8	35.6	158	1.404	8.13	30	
Dibromochloromethane	1.39	0.0334	1.337	0	104	55.3	140	1.471	5.74	30	
1,2-Dibromoethane (EDB)	1.46	0.00669	1.337	0	109	50.4	136	1.581	7.95	30	
Chlorobenzene	1.30	0.0334	1.337	0	97.4	60	133	1.320	1.36	30	
1,1,1,2-Tetrachloroethane	1.27	0.0334	1.337	0	94.7	53.1	142	1.269	0.209	30	
Ethylbenzene	1.36	0.0334	1.337	0	102	54.5	134	1.380	1.21	30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-016BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-10** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833280**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	2.68	0.0669	2.674	0	100	53.1	132	2.693	0.642	30	
o-Xylene	1.33	0.0334	1.337	0	99.8	53.3	139	1.348	1.05	30	
Styrene	1.34	0.0334	1.337	0	99.9	51.1	132	1.355	1.47	30	
Isopropylbenzene	1.34	0.0334	1.337	0	100	58.9	138	1.357	1.07	30	
Bromoform	1.20	0.0669	1.337	0	89.5	57.9	130	1.185	0.980	30	
1,1,2,2-Tetrachloroethane	1.28	0.0267	1.337	0	95.8	51.9	131	1.283	0.205	30	
n-Propylbenzene	1.38	0.0334	1.337	0	103	53.6	140	1.390	0.544	30	
Bromobenzene	1.21	0.0267	1.337	0	90.4	54.2	140	1.221	1.06	30	
1,3,5-Trimethylbenzene	1.35	0.0334	1.337	0	101	51.8	136	1.365	1.08	30	
2-Chlorotoluene	1.38	0.0334	1.337	0	103	51.6	136	1.403	1.42	30	
4-Chlorotoluene	1.40	0.0334	1.337	0	105	50.1	139	1.417	1.01	30	
tert-Butylbenzene	1.31	0.0334	1.337	0	97.9	50.5	135	1.310	0.0571	30	
1,2,3-Trichloropropane	1.29	0.0334	1.337	0	96.6	50.5	131	1.312	1.54	30	
1,2,4-Trichlorobenzene	1.18	0.0334	1.337	0	87.9	50.8	130	1.169	0.496	30	
sec-Butylbenzene	1.35	0.0669	1.337	0	101	52.6	141	1.357	0.527	30	
4-Isopropyltoluene	1.31	0.0669	1.337	0	98.0	52.9	134	1.315	0.372	30	
1,3-Dichlorobenzene	1.34	0.0267	1.337	0	99.9	52.6	131	1.333	0.270	30	
1,4-Dichlorobenzene	1.33	0.0267	1.337	0	99.2	52.9	129	1.325	0.0869	30	
n-Butylbenzene	1.45	0.0334	1.337	0	108	52.6	130	1.427	1.51	30	
1,2-Dichlorobenzene	1.30	0.0267	1.337	0	97.0	55.8	129	1.298	0.0485	30	
1,2-Dibromo-3-chloropropane	1.29	0.669	1.337	0	96.3	40.5	131	1.268	1.52	30	
1,2,4-Trimethylbenzene	1.35	0.0267	1.337	0	101	50.6	137	1.359	0.512	30	
Hexachlorobutadiene	1.14	0.0669	1.337	0	85.5	40.6	158	1.127	1.47	30	
Naphthalene	1.18	0.0669	1.337	0	87.9	52.3	124	1.152	2.01	30	
1,2,3-Trichlorobenzene	1.16	0.0267	1.337	0	86.4	54.4	124	1.138	1.45	30	
Surr: Dibromofluoromethane	1.95		1.672		117	56.5	129		0		
Surr: Toluene-d8	1.72		1.672		103	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.70		1.672		102	43.2	143		0		

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-019BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-40** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833284**

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	0.0536						0		30	
Vinyl chloride	ND	0.0268						0		30	
Bromomethane	ND	0.0536						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0214						0		30	
Chloroethane	ND	0.0536						0		30	
1,1-Dichloroethene	ND	0.0214						0		30	
Methylene chloride	ND	0.0214						0		30	
trans-1,2-Dichloroethene	ND	0.0214						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0536						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	0.0268						0		30	
1,1-Dichloropropene	ND	0.0214						0		30	
Carbon tetrachloride	ND	0.0268						0		30	
1,2-Dichloroethane (EDC)	ND	0.0214						0		30	
Benzene	ND	0.0214						0		30	
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	0.0268						0		30	
Tetrachloroethene (PCE)	0.137	0.0268						0.1316	4.00	30	
Dibromochloromethane	ND	0.0268						0		30	
1,2-Dibromoethane (EDB)	ND	0.00536						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-019BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/24/2018** RunNo: **43108**
Client ID: **SB-15-40** Batch ID: **20486** Analysis Date: **4/25/2018** SeqNo: **833284**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.0268						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0268						0		30	
Ethylbenzene	ND	0.0268						0		30	
m,p-Xylene	ND	0.0536						0		30	
o-Xylene	ND	0.0268						0		30	
Styrene	ND	0.0268						0		30	
Isopropylbenzene	ND	0.0268						0		30	
Bromoform	ND	0.0536						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0214						0		30	
n-Propylbenzene	ND	0.0268						0		30	
Bromobenzene	ND	0.0214						0		30	
1,3,5-Trimethylbenzene	ND	0.0268						0		30	
2-Chlorotoluene	ND	0.0268						0		30	
4-Chlorotoluene	ND	0.0268						0		30	
tert-Butylbenzene	ND	0.0268						0		30	
1,2,3-Trichloropropane	ND	0.0268						0		30	
1,2,4-Trichlorobenzene	ND	0.0268						0		30	
sec-Butylbenzene	ND	0.0536						0		30	
4-Isopropyltoluene	ND	0.0536						0		30	
1,3-Dichlorobenzene	ND	0.0214						0		30	
1,4-Dichlorobenzene	ND	0.0214						0		30	
n-Butylbenzene	ND	0.0268						0		30	
1,2-Dichlorobenzene	ND	0.0214						0		30	
1,2-Dibromo-3-chloropropane	ND	0.536						0		30	
1,2,4-Trimethylbenzene	ND	0.0214						0		30	
Hexachlorobutadiene	ND	0.0536						0		30	
Naphthalene	ND	0.0536						0		30	
1,2,3-Trichlorobenzene	ND	0.0214						0		30	
Surr: Dibromofluoromethane	1.53		1.339		114	56.5	129		0		
Surr: Toluene-d8	1.42		1.339		106	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.28		1.339		96.0	43.2	143		0		

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-019BDUP**	SampType: **DUP**				Units: **mg/Kg-dry**		Prep Date: **4/24/2018**			RunNo: **43108**	
Client ID: **SB-15-40**	Batch ID: **20486**						Analysis Date: **4/25/2018**			SeqNo: **833284**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20465** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **LCSS** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832444**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.873	0.0200	1.000	0	87.3	14.3	167				
Chloromethane	0.815	0.0500	1.000	0	81.5	32	156				
Vinyl chloride	0.753	0.0250	1.000	0	75.3	43.4	151				
Bromomethane	1.07	0.0500	1.000	0	107	35	155				
Trichlorofluoromethane (CFC-11)	1.05	0.0200	1.000	0	105	33.8	156				
Chloroethane	0.974	0.0500	1.000	0	97.4	33.1	147				
1,1-Dichloroethene	0.987	0.0200	1.000	0	98.7	39	144				
Methylene chloride	1.09	0.0200	1.000	0	109	46.3	140				
trans-1,2-Dichloroethene	1.08	0.0200	1.000	0	108	68	130				
Methyl tert-butyl ether (MTBE)	1.07	0.0500	1.000	0	107	44.1	152				
1,1-Dichloroethane	1.09	0.0200	1.000	0	109	61.9	137				
2,2-Dichloropropane	0.871	0.100	1.000	0	87.1	35.5	186				
cis-1,2-Dichloroethene	0.936	0.0200	1.000	0	93.6	71.3	135				
Chloroform	0.987	0.0200	1.000	0	98.7	69	145				
1,1,1-Trichloroethane (TCA)	1.00	0.0250	1.000	0	100	69	132				
1,1-Dichloropropene	0.967	0.0200	1.000	0	96.7	72.7	131				
Carbon tetrachloride	0.984	0.0250	1.000	0	98.4	63.4	137				
1,2-Dichloroethane (EDC)	0.948	0.0200	1.000	0	94.8	50.9	162				
Benzene	0.976	0.0200	1.000	0	97.6	64.3	133				
Trichloroethene (TCE)	1.07	0.0200	1.000	0	107	65.5	137				
1,2-Dichloropropane	1.06	0.0200	1.000	0	106	63.2	142				
Bromodichloromethane	1.06	0.0200	1.000	0	106	53.4	131				
Dibromomethane	1.07	0.0200	1.000	0	107	60.1	146				
cis-1,3-Dichloropropene	1.06	0.0200	1.000	0	106	59.1	143				
Toluene	1.10	0.0200	1.000	0	110	67.3	138				
trans-1,3-Dichloropropylene	1.02	0.0200	1.000	0	102	49.2	149				
1,1,2-Trichloroethane	1.05	0.0200	1.000	0	105	56.9	147				
1,3-Dichloropropane	1.00	0.0250	1.000	0	100	56.1	153				
Tetrachloroethene (PCE)	1.04	0.0250	1.000	0	104	52.7	150				
Dibromochloromethane	1.05	0.0250	1.000	0	105	70.6	144				
1,2-Dibromoethane (EDB)	1.02	0.00500	1.000	0	102	50.5	154				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20465** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **LCSS** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832444**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.02	0.0250	1.000	0	102	84.9	125				
1,1,1,2-Tetrachloroethane	1.02	0.0250	1.000	0	102	65.9	141				
Ethylbenzene	1.02	0.0250	1.000	0	102	74	129				
m,p-Xylene	2.07	0.0500	2.000	0	104	70	124				
o-Xylene	1.04	0.0250	1.000	0	104	68.1	139				
Styrene	1.03	0.0250	1.000	0	103	73.3	146				
Isopropylbenzene	1.05	0.0250	1.000	0	105	70	130				
Bromoform	1.08	0.0500	1.000	0	108	44.3	130				
1,1,2,2-Tetrachloroethane	1.01	0.0200	1.000	0	101	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	1.04	0.0250	1.000	0	104	76.5	135				
2-Chlorotoluene	1.02	0.0250	1.000	0	102	76.7	129				
4-Chlorotoluene	1.02	0.0250	1.000	0	102	77.5	125				
tert-Butylbenzene	1.05	0.0250	1.000	0	105	66.2	130				
1,2,3-Trichloropropane	1.00	0.0250	1.000	0	100	67.9	136				
1,2,4-Trichlorobenzene	1.05	0.0250	1.000	0	105	65.5	150				
sec-Butylbenzene	1.04	0.0500	1.000	0	104	75.6	133				
4-Isopropyltoluene	1.04	0.0500	1.000	0	104	76.8	131				
1,3-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.8	128				
1,4-Dichlorobenzene	1.04	0.0200	1.000	0	104	72.6	126				
n-Butylbenzene	0.988	0.0250	1.000	0	98.8	78.4	140				
1,2-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.8	126				
1,2-Dibromo-3-chloropropane	1.04	0.500	1.000	0	104	40.2	155				
1,2,4-Trimethylbenzene	1.04	0.0200	1.000	0	104	77.5	129				
Hexachlorobutadiene	1.07	0.0500	1.000	0	107	42	151				
Naphthalene	1.04	0.0500	1.000	0	104	46.5	167				
1,2,3-Trichlorobenzene	1.04	0.0200	1.000	0	104	64.5	149				
Surr: Dibromofluoromethane	1.20		1.250		96.2	56.5	129				
Surr: Toluene-d8	1.16		1.250		92.6	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		95.8	43.2	143				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20465**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **4/20/2018**		RunNo: **43070**			
Client ID: **LCSS**	Batch ID: **20465**					Analysis Date: **4/24/2018**		SeqNo: **832444**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **MB-20465**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **4/20/2018**		RunNo: **43070**			
Client ID: **MBLKS**	Batch ID: **20465**					Analysis Date: **4/24/2018**		SeqNo: **832445**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									Q
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									
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	0.0200									
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: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20465** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **MBLKS** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832445**

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: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20465** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **MBLKS** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832445**

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	ND	0.0200									
Surr: Dibromofluoromethane	1.09		1.250		87.5	56.5	129				
Surr: Toluene-d8	1.05		1.250		84.0	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.30		1.250		104	43.2	143				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804291-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-10-6** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832439**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0237						0		30	Q
Chloromethane	ND	0.0593						0		30	
Vinyl chloride	ND	0.0297						0		30	
Bromomethane	ND	0.0593						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0237						0		30	
Chloroethane	ND	0.0593						0		30	
1,1-Dichloroethene	ND	0.0237						0		30	
Methylene chloride	ND	0.0237						0		30	
trans-1,2-Dichloroethene	ND	0.0237						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0593						0		30	
1,1-Dichloroethane	ND	0.0237						0		30	
2,2-Dichloropropane	ND	0.119						0		30	
cis-1,2-Dichloroethene	ND	0.0237						0		30	
Chloroform	ND	0.0237						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0297						0		30	
1,1-Dichloropropene	ND	0.0237						0		30	
Carbon tetrachloride	ND	0.0297						0		30	
1,2-Dichloroethane (EDC)	ND	0.0237						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-10-6** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832439**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0237						0		30	
Trichloroethene (TCE)	ND	0.0237						0		30	
1,2-Dichloropropane	ND	0.0237						0		30	
Bromodichloromethane	ND	0.0237						0		30	
Dibromomethane	ND	0.0237						0		30	
cis-1,3-Dichloropropene	ND	0.0237						0		30	
Toluene	ND	0.0237						0		30	
trans-1,3-Dichloropropylene	ND	0.0237						0		30	
1,1,2-Trichloroethane	ND	0.0237						0		30	
1,3-Dichloropropane	ND	0.0297						0		30	
Tetrachloroethene (PCE)	0.203	0.0297						0.1927	5.45	30	
Dibromochloromethane	ND	0.0297						0		30	
1,2-Dibromoethane (EDB)	ND	0.00593						0		30	
Chlorobenzene	ND	0.0297						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0297						0		30	
Ethylbenzene	ND	0.0297						0		30	
m,p-Xylene	ND	0.0593						0		30	
o-Xylene	ND	0.0297						0		30	
Styrene	ND	0.0297						0		30	
Isopropylbenzene	ND	0.0297						0		30	
Bromoform	ND	0.0593						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0237						0		30	
n-Propylbenzene	ND	0.0297						0		30	
Bromobenzene	ND	0.0237						0		30	
1,3,5-Trimethylbenzene	ND	0.0297						0		30	
2-Chlorotoluene	ND	0.0297						0		30	
4-Chlorotoluene	ND	0.0297						0		30	
tert-Butylbenzene	ND	0.0297						0		30	
1,2,3-Trichloropropane	ND	0.0297						0		30	
1,2,4-Trichlorobenzene	ND	0.0297						0		30	
sec-Butylbenzene	ND	0.0593						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-10-6** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832439**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	0.0593						0		30	
1,3-Dichlorobenzene	ND	0.0237						0		30	
1,4-Dichlorobenzene	ND	0.0237						0		30	
n-Butylbenzene	ND	0.0297						0		30	
1,2-Dichlorobenzene	ND	0.0237						0		30	
1,2-Dibromo-3-chloropropane	ND	0.593						0		30	
1,2,4-Trimethylbenzene	ND	0.0237						0		30	
Hexachlorobutadiene	ND	0.0593						0		30	
Naphthalene	ND	0.0593						0		30	
1,2,3-Trichlorobenzene	ND	0.0237						0		30	
Surr: Dibromofluoromethane	1.37		1.483		92.3	56.5	129		0		
Surr: Toluene-d8	1.28		1.483		86.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.42		1.483		96.0	43.2	143		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804291-006BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.27	0.0280	1.400	0	90.5	43.5	121				
Chloromethane	1.28	0.0700	1.400	0	91.2	45	130				
Vinyl chloride	1.28	0.0350	1.400	0	91.7	43.6	150				
Bromomethane	1.44	0.0700	1.400	0	103	21.3	120				
Trichlorofluoromethane (CFC-11)	1.57	0.0280	1.400	0	112	35	131				
Chloroethane	1.54	0.0700	1.400	0	110	31.9	123				
1,1-Dichloroethene	1.65	0.0280	1.400	0	118	47.3	147				
Methylene chloride	1.71	0.0280	1.400	0	122	54.7	142				
trans-1,2-Dichloroethene	1.65	0.0280	1.400	0	118	52	136				
Methyl tert-butyl ether (MTBE)	1.77	0.0700	1.400	0	126	58.5	167				
1,1-Dichloroethane	2.21	0.0280	1.400	0	158	51.8	141				S

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-006BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	1.25	0.140	1.400	0	89.4	36	123				
cis-1,2-Dichloroethene	1.85	0.0280	1.400	0	132	58.6	136				
Chloroform	1.92	0.0280	1.400	0	137	53.2	129				S
1,1,1-Trichloroethane (TCA)	1.43	0.0350	1.400	0	102	58.3	145				
1,1-Dichloropropene	1.47	0.0280	1.400	0	105	55.1	138				
Carbon tetrachloride	1.42	0.0350	1.400	0	102	53.3	144				
1,2-Dichloroethane (EDC)	1.50	0.0280	1.400	0	107	51.3	139				
Benzene	1.51	0.0280	1.400	0	108	63.5	133				
Trichloroethene (TCE)	1.43	0.0280	1.400	0	102	61.6	147				
1,2-Dichloropropane	1.63	0.0280	1.400	0	116	59	136				
Bromodichloromethane	1.49	0.0280	1.400	0	107	50.7	141				
Dibromomethane	1.48	0.0280	1.400	0	106	50.6	137				
cis-1,3-Dichloropropene	1.90	0.0280	1.400	0	136	50.4	138				
Toluene	2.08	0.0280	1.400	0	148	63.4	132				S
trans-1,3-Dichloropropylene	1.97	0.0280	1.400	0	141	44.1	147				
1,1,2-Trichloroethane	2.13	0.0280	1.400	0	152	51.6	137				S
1,3-Dichloropropane	2.23	0.0350	1.400	0	159	53.1	134				S
Tetrachloroethene (PCE)	1.92	0.0350	1.400	0.1384	127	35.6	158				
Dibromochloromethane	1.88	0.0350	1.400	0	135	55.3	140				
1,2-Dibromoethane (EDB)	2.01	0.00700	1.400	0	144	50.4	136				S
Chlorobenzene	1.46	0.0350	1.400	0	105	60	133				
1,1,1,2-Tetrachloroethane	1.44	0.0350	1.400	0	103	53.1	142				
Ethylbenzene	1.55	0.0350	1.400	0	111	54.5	134				
m,p-Xylene	2.98	0.0700	2.799	0	106	53.1	132				
o-Xylene	1.49	0.0350	1.400	0	106	53.3	139				
Styrene	1.51	0.0350	1.400	0	108	51.1	132				
Isopropylbenzene	1.50	0.0350	1.400	0	107	58.9	138				
Bromoform	1.46	0.0700	1.400	0	104	57.9	130				
1,1,2,2-Tetrachloroethane	1.67	0.0280	1.400	0	119	51.9	131				
n-Propylbenzene	1.54	0.0350	1.400	0	110	53.6	140				
Bromobenzene	1.39	0.0280	1.400	0	99.7	54.2	140				

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-006BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832440**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	1.50	0.0350	1.400	0	107	51.8	136				
2-Chlorotoluene	1.56	0.0350	1.400	0	111	51.6	136				
4-Chlorotoluene	1.56	0.0350	1.400	0	112	50.1	139				
tert-Butylbenzene	1.45	0.0350	1.400	0	104	50.5	135				
1,2,3-Trichloropropane	1.61	0.0350	1.400	0	115	50.5	131				
1,2,4-Trichlorobenzene	1.35	0.0350	1.400	0	96.3	50.8	130				
sec-Butylbenzene	1.49	0.0700	1.400	0	107	52.6	141				
4-Isopropyltoluene	1.44	0.0700	1.400	0	103	52.9	134				
1,3-Dichlorobenzene	1.47	0.0280	1.400	0	105	52.6	131				
1,4-Dichlorobenzene	1.48	0.0280	1.400	0	106	52.9	129				
n-Butylbenzene	1.55	0.0350	1.400	0	111	52.6	130				
1,2-Dichlorobenzene	1.48	0.0280	1.400	0	106	55.8	129				
1,2-Dibromo-3-chloropropane	1.76	0.700	1.400	0	126	40.5	131				
1,2,4-Trimethylbenzene	1.49	0.0280	1.400	0	107	50.6	137				
Hexachlorobutadiene	1.31	0.0700	1.400	0	93.3	40.6	158				
Naphthalene	1.52	0.0700	1.400	0	108	52.3	124				
1,2,3-Trichlorobenzene	1.38	0.0280	1.400	0	98.6	54.4	124				
Surr: Dibromofluoromethane	1.68		1.750		96.2	56.5	129				
Surr: Toluene-d8	2.12		1.750		121	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.80		1.750		103	43.2	143				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID **1804291-006BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832441**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.951	0.0280	1.400	0	68.0	43.5	121	1.267	28.5	30	
Chloromethane	1.03	0.0700	1.400	0	73.6	45	130	1.277	21.4	30	
Vinyl chloride	0.976	0.0350	1.400	0	69.7	43.6	150	1.283	27.2	30	
Bromomethane	1.52	0.0700	1.400	0	108	21.3	120	1.441	5.07	30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-006BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832441**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	1.33	0.0280	1.400	0	94.7	35	131	1.567	16.7	30	
Chloroethane	1.49	0.0700	1.400	0	106	31.9	123	1.542	3.56	30	
1,1-Dichloroethene	1.54	0.0280	1.400	0	110	47.3	147	1.648	6.87	30	
Methylene chloride	2.03	0.0280	1.400	0	145	54.7	142	1.708	17.0	30	S
trans-1,2-Dichloroethene	1.47	0.0280	1.400	0	105	52	136	1.653	11.6	30	
Methyl tert-butyl ether (MTBE)	1.70	0.0700	1.400	0	121	58.5	167	1.765	3.94	30	
1,1-Dichloroethane	1.78	0.0280	1.400	0	127	51.8	141	2.214	21.9	30	
2,2-Dichloropropane	0.969	0.140	1.400	0	69.3	36	123	1.252	25.5	30	
cis-1,2-Dichloroethene	1.44	0.0280	1.400	0	103	58.6	136	1.845	24.3	30	
Chloroform	1.96	0.0280	1.400	0	140	53.2	129	1.917	2.25	30	S
1,1,1-Trichloroethane (TCA)	1.31	0.0350	1.400	0	93.8	58.3	145	1.426	8.31	30	
1,1-Dichloropropene	1.33	0.0280	1.400	0	95.1	55.1	138	1.467	9.75	30	
Carbon tetrachloride	1.32	0.0350	1.400	0	94.5	53.3	144	1.424	7.35	30	
1,2-Dichloroethane (EDC)	1.37	0.0280	1.400	0	97.6	51.3	139	1.496	9.12	30	
Benzene	1.36	0.0280	1.400	0	97.4	63.5	133	1.511	10.2	30	
Trichloroethene (TCE)	1.17	0.0280	1.400	0	83.3	61.6	147	1.430	20.3	30	
1,2-Dichloropropane	1.10	0.0280	1.400	0	78.5	59	136	1.630	38.9	30	R
Bromodichloromethane	1.15	0.0280	1.400	0	81.8	50.7	141	1.492	26.3	30	
Dibromomethane	1.18	0.0280	1.400	0	84.3	50.6	137	1.480	22.5	30	
cis-1,3-Dichloropropene	1.08	0.0280	1.400	0	77.2	50.4	138	1.898	54.9	30	R
Toluene	1.27	0.0280	1.400	0	90.9	63.4	132	2.075	48.0	30	R
trans-1,3-Dichloropropylene	1.18	0.0280	1.400	0	84.6	44.1	147	1.974	50.1	30	R
1,1,2-Trichloroethane	1.36	0.0280	1.400	0	97.1	51.6	137	2.133	44.3	30	R
1,3-Dichloropropane	1.29	0.0350	1.400	0	92.0	53.1	134	2.229	53.5	30	R
Tetrachloroethene (PCE)	1.39	0.0350	1.400	0.1384	89.2	35.6	158	1.921	32.3	30	R
Dibromochloromethane	1.34	0.0350	1.400	0	95.6	55.3	140	1.884	33.9	30	R
1,2-Dibromoethane (EDB)	1.33	0.00700	1.400	0	95.1	50.4	136	2.013	40.7	30	R
Chlorobenzene	1.38	0.0350	1.400	0	98.4	60	133	1.463	5.99	30	
1,1,1,2-Tetrachloroethane	1.38	0.0350	1.400	0	98.4	53.1	142	1.441	4.56	30	
Ethylbenzene	1.35	0.0350	1.400	0	96.5	54.5	134	1.552	13.9	30	
m,p-Xylene	2.76	0.0700	2.799	0	98.5	53.1	132	2.977	7.72	30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-006BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-12-5** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832441**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	1.39	0.0350	1.400	0	99.1	53.3	139	1.490	7.16	30	
Styrene	1.40	0.0350	1.400	0	100	51.1	132	1.505	7.00	30	
Isopropylbenzene	1.39	0.0350	1.400	0	99.0	58.9	138	1.501	7.93	30	
Bromoform	1.49	0.0700	1.400	0	107	57.9	130	1.457	2.45	30	
1,1,2,2-Tetrachloroethane	1.44	0.0280	1.400	0	103	51.9	131	1.667	14.9	30	
n-Propylbenzene	1.35	0.0350	1.400	0	96.8	53.6	140	1.542	12.9	30	
Bromobenzene	1.41	0.0280	1.400	0	101	54.2	140	1.395	1.13	30	
1,3,5-Trimethylbenzene	1.39	0.0350	1.400	0	99.6	51.8	136	1.496	7.04	30	
2-Chlorotoluene	1.39	0.0350	1.400	0	99.2	51.6	136	1.555	11.4	30	
4-Chlorotoluene	1.38	0.0350	1.400	0	98.9	50.1	139	1.562	12.0	30	
tert-Butylbenzene	1.40	0.0350	1.400	0	99.8	50.5	135	1.454	4.06	30	
1,2,3-Trichloropropane	1.36	0.0350	1.400	0	97.0	50.5	131	1.612	17.2	30	
1,2,4-Trichlorobenzene	1.41	0.0350	1.400	0	101	50.8	130	1.348	4.63	30	
sec-Butylbenzene	1.37	0.0700	1.400	0	98.2	52.6	141	1.494	8.33	30	
4-Isopropyltoluene	1.39	0.0700	1.400	0	99.2	52.9	134	1.441	3.73	30	
1,3-Dichlorobenzene	1.42	0.0280	1.400	0	101	52.6	131	1.470	3.51	30	
1,4-Dichlorobenzene	1.41	0.0280	1.400	0	101	52.9	129	1.477	4.78	30	
n-Butylbenzene	1.27	0.0350	1.400	0	90.9	52.6	130	1.554	19.9	30	
1,2-Dichlorobenzene	1.42	0.0280	1.400	0	101	55.8	129	1.478	4.18	30	
1,2-Dibromo-3-chloropropane	1.49	0.700	1.400	0	106	40.5	131	1.763	16.9	30	
1,2,4-Trimethylbenzene	1.40	0.0280	1.400	0	100	50.6	137	1.491	6.06	30	
Hexachlorobutadiene	1.40	0.0700	1.400	0	99.9	40.6	158	1.306	6.79	30	
Naphthalene	1.48	0.0700	1.400	0	106	52.3	124	1.516	2.55	30	
1,2,3-Trichlorobenzene	1.44	0.0280	1.400	0	103	54.4	124	1.379	4.45	30	
Surr: Dibromofluoromethane	1.66		1.750		95.1	56.5	129		0		
Surr: Toluene-d8	1.39		1.750		79.4	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.70		1.750		97.4	43.2	143		0		

NOTES:
S - Outlying spike recovery(ies) observed.
R - High RPD observed. The method is in control as indicated by the LCS.

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-11-8** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832867**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0278						0		30	Q
Chloromethane	ND	0.0695						0		30	Q
Vinyl chloride	ND	0.0347						0		30	
Bromomethane	ND	0.0695						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0278						0		30	
Chloroethane	ND	0.0695						0		30	
1,1-Dichloroethene	ND	0.0278						0		30	
Methylene chloride	ND	0.0278						0		30	
trans-1,2-Dichloroethene	ND	0.0278						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0695						0		30	
1,1-Dichloroethane	ND	0.0278						0		30	
2,2-Dichloropropane	ND	0.139						0		30	
cis-1,2-Dichloroethene	ND	0.0278						0		30	
Chloroform	ND	0.0278						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0347						0		30	
1,1-Dichloropropene	ND	0.0278						0		30	
Carbon tetrachloride	ND	0.0347						0		30	
1,2-Dichloroethane (EDC)	ND	0.0278						0		30	
Benzene	ND	0.0278						0		30	
Trichloroethene (TCE)	ND	0.0278						0		30	
1,2-Dichloropropane	ND	0.0278						0		30	
Bromodichloromethane	ND	0.0278						0		30	
Dibromomethane	ND	0.0278						0		30	
cis-1,3-Dichloropropene	ND	0.0278						0		30	
Toluene	ND	0.0278						0		30	
trans-1,3-Dichloropropylene	ND	0.0278						0		30	
1,1,2-Trichloroethane	ND	0.0278						0		30	
1,3-Dichloropropane	ND	0.0347						0		30	
Tetrachloroethene (PCE)	ND	0.0347						0		30	
Dibromochloromethane	ND	0.0347						0		30	
1,2-Dibromoethane (EDB)	ND	0.00695						0		30	

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/20/2018** RunNo: **43070**
Client ID: **SB-11-8** Batch ID: **20465** Analysis Date: **4/24/2018** SeqNo: **832867**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.0347						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0347						0		30	
Ethylbenzene	ND	0.0347						0		30	
m,p-Xylene	ND	0.0695						0		30	
o-Xylene	ND	0.0347						0		30	
Styrene	ND	0.0347						0		30	
Isopropylbenzene	ND	0.0347						0		30	
Bromoform	ND	0.0695						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0278						0		30	
n-Propylbenzene	ND	0.0347						0		30	
Bromobenzene	ND	0.0278						0		30	
1,3,5-Trimethylbenzene	ND	0.0347						0		30	
2-Chlorotoluene	ND	0.0347						0		30	
4-Chlorotoluene	ND	0.0347						0		30	
tert-Butylbenzene	ND	0.0347						0		30	
1,2,3-Trichloropropane	ND	0.0347						0		30	
1,2,4-Trichlorobenzene	ND	0.0347						0		30	
sec-Butylbenzene	ND	0.0695						0		30	
4-Isopropyltoluene	ND	0.0695						0		30	
1,3-Dichlorobenzene	ND	0.0278						0		30	
1,4-Dichlorobenzene	ND	0.0278						0		30	
n-Butylbenzene	ND	0.0347						0		30	
1,2-Dichlorobenzene	ND	0.0278						0		30	
1,2-Dibromo-3-chloropropane	ND	0.695						0		30	
1,2,4-Trimethylbenzene	ND	0.0278						0		30	
Hexachlorobutadiene	ND	0.0695						0		30	
Naphthalene	ND	0.0695						0		30	
1,2,3-Trichlorobenzene	ND	0.0278						0		30	
Surr: Dibromofluoromethane	1.76		1.737		101	56.5	129		0		
Surr: Toluene-d8	1.55		1.737		89.5	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.68		1.737		96.7	43.2	143		0		

Work Order: 1804291
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804291-003BDUP**	SampType: **DUP**		Units: **mg/Kg-dry**	Prep Date: **4/20/2018**		RunNo: **43070**	
Client ID: **SB-11-8**	Batch ID: **20465**			Analysis Date: **4/24/2018**		SeqNo: **832867**	

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 (<20%RSD, <20% Drift)

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1804291**
Logged by:	**Brianna Barnes**	Date Received:	**4/18/2018 8:42:00 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	5.6
Sample	3.4
Temp Blank	3.0

* 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: 9/16/18 Page: 1 of: 3

Laboratory Project No (internal): 1904291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No: 1358.001.01.009

Address: 1215 4th Ave Suite 1350

Collected by: C. DeBoer

City, State, Zip: Seattle, WA 98161

Location: Normandy Park, 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)	HOLD				Comments
1 SB-10-6	9/16/18	905	Soil	X																	
2 SB-10-10		910														X					
3 SB-11-8		940		X																	
4 SB-11-15		950		X																	
5 SB-12-1		1010		X																	
6 SB-12-5		1020		X																	
7 SB-12-10		1030														X					
8 SB-13-5		1225		X																	
9 SB-13-10		1230		X																	
10 SB-13-20	↓	1245	↓	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 Chris DeBoer	9/18/18 842	x	9/16/18 0842
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: 4/16/18 Page: 2 of: 3

Laboratory Project No (internal): 1804291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No: 1358.001.01.00a

Address:

Collected by:

City, State, Zip: see page 1

Location:

Telephone: see page 1

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-13-29	4/16/18	1305	Soil	X													
2	SB-14-5		1330		X													
3	SB-14-10		1340		X													
4	SB-14-20		1350		X													
5	SB-14-30		1420													X		
6	SB-15-10	4/17/18	820		X													
7	SB-15-20		830		X													
8	SB-15-30		845		X													
9	SB-15-40		920		X													
10	TRIP BLANK	–	–	–												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 Chris DeBruin	4/18/18 842	x	4/18/18 0842
Relinquished	Date/Time	Received	Date/Time
x		x	

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: 4/17/18 (4/18) Page: 3 of: 3

Laboratory Project No (internal): 1804291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No:

Address:

Collected by:

City, State, Zip: see page 2

Location: see page 1

Telephone: see page 2

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-16-20	4/17/18	1038	soil	X																
2	SB-16-30	"	1115	"	X																
3	SB-16-40	"	1205	"	X																
4																					
5		4/17/18																			
6																					
7																					
8																					
9																					
10																					

Chris DeBoer

*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 Chris DeBoer	4/18/18 843	x	4/18/18 0843
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

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: 9/6/18 | Page: 1 of: 3

Laboratory Project No (internal): 1904291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No: 1358.001.01.009

Address: 1215 4th Ave Suite 1350

Collected by: C. DeBoer

City, State, Zip: Seattle, WA 98161

Location: Normandy Park, 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)	HOLD				Comments
1	SB-10-6	4/16/18	905	Soil	X																		
2	SB-10-10		910															X					modified by Chris DeBoer 4/26/18
3	SB-11-8		940		X																		Chris DeBoer
4	SB-11-15		950		X																		
5	SB-12-1		1010		X																		
6	SB-12-5		1020		X																		
7	SB-12-10		1030		X													X					
8	SB-13-5		1225		X																		
9	SB-13-10		1230		X																		
10	SB-13-20	↓	1245	↓	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 Chris DeBoer	4/16/18 842	x	4/16/18 0842
Relinquished	Date/Time	Received	Date/Time
x		x	

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: 4/16/18 Page: 2 of: 3

Laboratory Project No (internal): 1804291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No: 1358.001.01.00A

Address:

Collected by:

City, State, Zip: see page 1

Location:

Telephone: see page 1

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-13-29	4/16/18	1305	Soil	X														
2	SB-14-5	"	1330	"	X														
3	SB-14-10		1340		X														
4	SB-14-20		1350		X														
5	SB-14-30		1420		X												X		modified by Chris DeBoer 4/26/18 Chris DeBoer.
6	SB-15-10	4/17/18	820		X														
7	SB-15-20		830		X														
8	SB-15-30		845		X														
9	SB-15-40		920		X														
10	TRIP BLANK	–	–	–													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 Chris DeBoer	4/18/18 843	x	4/15/18 0542
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: 4/17/18 (CW) | Page: 3 of: 3 | Laboratory Project No (internal): 1804291

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No:

Address:

Collected by:

City, State, Zip: see page 2

Location: see page 1

Telephone: see page 2

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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)	HELD				Comments
1	SB-16-20	4/17/18	1038	Soil	X																		
2	SB-16-30		1115		X																		
3	SB-16-40		1205		X																		
4																							
5		4/17/18																					
6																							
7																							
8																							
9																							
10																							

Chris DeBoer

*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 Chris DeBoer	4/18/18 843	x	4/18/18 0843
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

MEMORANDUM

TO: Project File **DATE:** June 12, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: 1358.001.01.003

TASK: April 16 and 17, 2018 Soil Samples

LAB: Fremont Work Order Number 1804291

Twenty-two (22) soil samples and a trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on April 16 and 17, 2018. Samples associated with Work Order Number 1804291 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Fremont Analytical (Fremont) of Seattle, Washington.

The monitoring event occurred between April 16 and 25, 2018. Sample results associated with this monitoring event include four work orders (1804291, 1804329, 1804368, and 1804398). The quality assurance review of the laboratory data for Work Order Number 1804291 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler and sample temperatures at the time of receipt were measured at 5.6 degrees Centigrade

(°C) and 3.4°C, respectively. The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition with the following discussion:

- Four samples (SB-10-10, SB-12-10, SB-14-30, and Trip Blank) were placed on hold. Samples SB-10-10, SB-12-10, and SB-14-30 were submitted for VOC analysis per PES's April 26, 2018 request.

No data were qualified based upon the sample collection and preservation information.

Holding Times

USEPA Method 8260C:
All samples were analyzed for VOCs within the EPA recommended holding time of fourteen days for soils. All holding time criteria were met.

Total Solids by USEPA Method 8000D:
Soil samples were analyzed within the USEPA recommended holding time of seven days for total solids.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Fremont's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by Fremont for dichlorodifluoromethane (CFC-12) and/or chloromethane associated with analytical batch 20465 (analyzed on April 24, 2018). These results are qualified by the laboratory "Q-" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated dichlorodifluoromethane (CFC-12) and/or chloromethane results with laboratory qualified (Q-) results are estimated and qualified (J/UJ).**

Method Blank Results

Laboratory method blanks were included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at concentrations at or above the reporting limits (RLs).

Trip Blank Results

A trip blank was collected but not submitted for analysis.

Equipment Blank Results

Equipment blanks were not collected.

Field Duplicate Analyses

Field duplicate samples were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C:
Laboratory duplicate analysis was performed on client samples SB-14-10, SB-15-40, SB-10-6, and SB-11-8. Results are comparable and within 30% relative percent difference (RPD).

Total Solids by USEPA Method 8000D:
Laboratory duplicate sample analyses were performed on client and non-client samples within the analytical batches. The primary/duplicate RPDs for total solids analyses are within the laboratory control limit of 20%.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blanks, laboratory duplicates, matrix spike samples, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's are within the laboratory control limits with one exception:

- Analytical Batch 20486 (soil): LCS % recovery for trichlorofluoromethane (CFC-11) is above laboratory acceptance criteria and laboratory qualified (S). No action was taken since this compound was not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on client samples SB-15-10 and SB-12-5. MS/MSD % Rs and RPDs are within the laboratory control limits with the following exceptions:

- Analytical Batch 20486 (soil): Sample SB-15-10 MS and/or MSD % recoveries for bromomethane, trichlorofluoromethane (CFC-11), and chloroethane are above laboratory acceptance criteria and laboratory qualified (S). No action was taken since these compounds were not detected in the associated samples.

- Analytical Batch 20465 (soil): Sample SB-12-5 MS/MSD % recoveries for multiple recoveries are above laboratory acceptance criteria and laboratory qualified (S). Multiple RPDs were elevated, above criteria, and laboratory qualified (R). No action was taken since outlying compounds were not detected in the samples with one exception. Tetrachloroethene (PCE) RPD was elevated but no action was taken since both recoveries are within criteria. Refer to LCS and laboratory duplicates for additional accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260C VOC analyses were reported based on laboratory RLs. The RLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:05:00 AM
Project: MVSC
Lab ID: 1804291-001
Matrix: Soil
Client Sample ID: **SB-10-6**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0237	Q-	mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloromethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Vinyl chloride	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromomethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloroethane	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Methylene chloride	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
trans-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
2,2-Dichloropropane	ND	0.119		mg/Kg-dry	1	4/24/2018 8:06:22 AM
cis-1,2-Dichloroethene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chloroform	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1-Dichloropropene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Carbon tetrachloride	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichloroethane (EDC)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Benzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Trichloroethene (TCE)	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichloropropane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromodichloromethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Dibromomethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
cis-1,3-Dichloropropene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Toluene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
trans-1,3-Dichloropropylene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,2-Trichloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3-Dichloropropane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Tetrachloroethene (PCE)	0.193	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Dibromochloromethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dibromoethane (EDB)	ND	0.00593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Chlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Ethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
m,p-Xylene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
o-Xylene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Styrene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Isopropylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromoform	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:05:00 AM
Project: MVSC
Lab ID: 1804291-001
Matrix: Soil
Client Sample ID: **SB-10-6**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
n-Propylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Bromobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3,5-Trimethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
2-Chlorotoluene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
4-Chlorotoluene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
tert-Butylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,3-Trichloropropane	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,4-Trichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
sec-Butylbenzene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
4-Isopropyltoluene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,3-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,4-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
n-Butylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2-Dibromo-3-chloropropane	ND	0.593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,4-Trimethylbenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Hexachlorobutadiene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Naphthalene	ND	0.0593		mg/Kg-dry	1	4/24/2018 8:06:22 AM
1,2,3-Trichlorobenzene	ND	0.0237		mg/Kg-dry	1	4/24/2018 8:06:22 AM
Surr: Dibromofluoromethane	89.9	56.5 - 129		%Rec	1	4/24/2018 8:06:22 AM
Surr: Toluene-d8	79.7	64.5 - 151		%Rec	1	4/24/2018 8:06:22 AM
Surr: 1-Bromo-4-fluorobenzene	91.3	43.2 - 143		%Rec	1	4/24/2018 8:06:22 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: R42972		Analyst: CG
Percent Moisture	7.36	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:10:00 AM
Project: MVSC
Lab ID: 1804291-002
Matrix: Soil
Client Sample ID: **SB-10-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0287	Q-	mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloromethane	ND UJ	0.0718	Q-	mg/Kg-dry	1	4/24/2018 12:46:48 PM
Vinyl chloride	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromomethane	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloroethane	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Methylene chloride	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
trans-1,2-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
2,2-Dichloropropane	ND	0.144		mg/Kg-dry	1	4/24/2018 12:46:48 PM
cis-1,2-Dichloroethene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chloroform	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1-Dichloropropene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Carbon tetrachloride	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichloroethane (EDC)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Benzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Trichloroethene (TCE)	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichloropropane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromodichloromethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Dibromomethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
cis-1,3-Dichloropropene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Toluene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
trans-1,3-Dichloropropylene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,2-Trichloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3-Dichloropropane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Tetrachloroethene (PCE)	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Dibromochloromethane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dibromoethane (EDB)	ND	0.00718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Chlorobenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Ethylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
m,p-Xylene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
o-Xylene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Styrene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Isopropylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromoform	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM

JC 6/5/18

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:10:00 AM
Project: MVSC
Lab ID: 1804291-002
Matrix: Soil
Client Sample ID: **SB-10-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
n-Propylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Bromobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3,5-Trimethylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
2-Chlorotoluene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
4-Chlorotoluene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
tert-Butylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,3-Trichloropropane	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,4-Trichlorobenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
sec-Butylbenzene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
4-Isopropyltoluene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,3-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,4-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
n-Butylbenzene	ND	0.0359		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2-Dibromo-3-chloropropane	ND	0.718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,4-Trimethylbenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Hexachlorobutadiene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Naphthalene	ND	0.0718		mg/Kg-dry	1	4/24/2018 12:46:48 PM
1,2,3-Trichlorobenzene	ND	0.0287		mg/Kg-dry	1	4/24/2018 12:46:48 PM
Surr: Dibromofluoromethane	94.1	56.5 - 129		%Rec	1	4/24/2018 12:46:48 PM
Surr: Toluene-d8	84.0	64.5 - 151		%Rec	1	4/24/2018 12:46:48 PM
Surr: 1-Bromo-4-fluorobenzene	91.7	43.2 - 143		%Rec	1	4/24/2018 12:46:48 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: R42972		Analyst: CG
Percent Moisture	12.7	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:40:00 AM
Project: MVSC
Lab ID: 1804291-003
Matrix: Soil
Client Sample ID: **SB-11-8**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0278	Q-	mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloromethane	ND UJ	0.0695	Q-	mg/Kg-dry	1	4/24/2018 1:17:54 PM
Vinyl chloride	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromomethane	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Trichlorofluoromethane (CFC-11)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloroethane	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Methylene chloride	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
trans-1,2-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Methyl tert-butyl ether (MTBE)	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
2,2-Dichloropropane	ND	0.139		mg/Kg-dry	1	4/24/2018 1:17:54 PM
cis-1,2-Dichloroethene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chloroform	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,1-Trichloroethane (TCA)	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1-Dichloropropene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Carbon tetrachloride	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichloroethane (EDC)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Benzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Trichloroethene (TCE)	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichloropropane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromodichloromethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Dibromomethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
cis-1,3-Dichloropropene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Toluene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
trans-1,3-Dichloropropylene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,2-Trichloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3-Dichloropropane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Tetrachloroethene (PCE)	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Dibromochloromethane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dibromoethane (EDB)	ND	0.00695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Chlorobenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,1,1,2-Tetrachloroethane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Ethylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
m,p-Xylene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
o-Xylene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Styrene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Isopropylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromoform	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:40:00 AM
Project: MVSC
Lab ID: 1804291-003
Matrix: Soil
Client Sample ID: **SB-11-8**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
n-Propylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Bromobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3,5-Trimethylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
2-Chlorotoluene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
4-Chlorotoluene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
tert-Butylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,3-Trichloropropane	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,4-Trichlorobenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
sec-Butylbenzene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
4-Isopropyltoluene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,3-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,4-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
n-Butylbenzene	ND	0.0347		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2-Dibromo-3-chloropropane	ND	0.695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,4-Trimethylbenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Hexachlorobutadiene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Naphthalene	ND	0.0695		mg/Kg-dry	1	4/24/2018 1:17:54 PM
1,2,3-Trichlorobenzene	ND	0.0278		mg/Kg-dry	1	4/24/2018 1:17:54 PM
Surr: Dibromofluoromethane	96.5	56.5 - 129		%Rec	1	4/24/2018 1:17:54 PM
Surr: Toluene-d8	91.1	64.5 - 151		%Rec	1	4/24/2018 1:17:54 PM
Surr: 1-Bromo-4-fluorobenzene	92.4	43.2 - 143		%Rec	1	4/24/2018 1:17:54 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: R42972		Analyst: CG
Percent Moisture	14.8	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:50:00 AM
Project: MVSC
Lab ID: 1804291-004
Matrix: Soil
Client Sample ID: **SB-11-15**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0282	Q-	mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloromethane	ND UJ	0.0705	Q-	mg/Kg-dry	1	4/24/2018 2:20:03 PM
Vinyl chloride	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromomethane	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Trichlorofluoromethane (CFC-11)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloroethane	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Methylene chloride	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
trans-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Methyl tert-butyl ether (MTBE)	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
2,2-Dichloropropane	ND	0.141		mg/Kg-dry	1	4/24/2018 2:20:03 PM
cis-1,2-Dichloroethene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chloroform	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,1-Trichloroethane (TCA)	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1-Dichloropropene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Carbon tetrachloride	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichloroethane (EDC)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Benzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Trichloroethene (TCE)	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichloropropane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromodichloromethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Dibromomethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
cis-1,3-Dichloropropene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Toluene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
trans-1,3-Dichloropropylene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,2-Trichloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3-Dichloropropane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Tetrachloroethene (PCE)	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Dibromochloromethane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dibromoethane (EDB)	ND	0.00705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Chlorobenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,1,1,2-Tetrachloroethane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Ethylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
m,p-Xylene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
o-Xylene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Styrene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Isopropylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromoform	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 9:50:00 AM
Project: MVSC
Lab ID: 1804291-004
Matrix: Soil
Client Sample ID: **SB-11-15**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
n-Propylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Bromobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3,5-Trimethylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
2-Chlorotoluene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
4-Chlorotoluene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
tert-Butylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,3-Trichloropropane	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,4-Trichlorobenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
sec-Butylbenzene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
4-Isopropyltoluene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,3-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,4-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
n-Butylbenzene	ND	0.0353		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2-Dibromo-3-chloropropane	ND	0.705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,4-Trimethylbenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Hexachlorobutadiene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Naphthalene	ND	0.0705		mg/Kg-dry	1	4/24/2018 2:20:03 PM
1,2,3-Trichlorobenzene	ND	0.0282		mg/Kg-dry	1	4/24/2018 2:20:03 PM
Surr: Dibromofluoromethane	104	56.5 - 129		%Rec	1	4/24/2018 2:20:03 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 2:20:03 PM
Surr: 1-Bromo-4-fluorobenzene	95.3	43.2 - 143		%Rec	1	4/24/2018 2:20:03 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: R42972		Analyst: CG
Percent Moisture	10.6	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:10:00 AM
Project: MVSC
Lab ID: 1804291-005
Matrix: Soil
Client Sample ID: **SB-12-1**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	0.0279	Q-	mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloromethane	ND	UJ	0.0696	Q-	mg/Kg-dry	1	4/24/2018 2:51:15 PM
Vinyl chloride	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromomethane	ND		0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Trichlorofluoromethane (CFC-11)	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloroethane	ND		0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloroethene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Methylene chloride	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
trans-1,2-Dichloroethene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Methyl tert-butyl ether (MTBE)	ND		0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloroethane	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
2,2-Dichloropropane	ND		0.139		mg/Kg-dry	1	4/24/2018 2:51:15 PM
cis-1,2-Dichloroethene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chloroform	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,1-Trichloroethane (TCA)	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1-Dichloropropene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Carbon tetrachloride	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichloroethane (EDC)	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Benzene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Trichloroethene (TCE)	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichloropropane	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromodichloromethane	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Dibromomethane	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
cis-1,3-Dichloropropene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Toluene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
trans-1,3-Dichloropropylene	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,2-Trichloroethane	ND		0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3-Dichloropropane	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Tetrachloroethene (PCE)	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Dibromochloromethane	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dibromoethane (EDB)	ND		0.00696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Chlorobenzene	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,1,1,2-Tetrachloroethane	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Ethylbenzene	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
m,p-Xylene	ND		0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
o-Xylene	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Styrene	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Isopropylbenzene	ND		0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromoform	ND		0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:10:00 AM
Project: MVSC
Lab ID: 1804291-005
Matrix: Soil
Client Sample ID: **SB-12-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
n-Propylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Bromobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3,5-Trimethylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
2-Chlorotoluene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
4-Chlorotoluene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
tert-Butylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,3-Trichloropropane	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,4-Trichlorobenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
sec-Butylbenzene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
4-Isopropyltoluene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,3-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,4-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
n-Butylbenzene	ND	0.0348		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2-Dibromo-3-chloropropane	ND	0.696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,4-Trimethylbenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Hexachlorobutadiene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Naphthalene	ND	0.0696		mg/Kg-dry	1	4/24/2018 2:51:15 PM
1,2,3-Trichlorobenzene	ND	0.0279		mg/Kg-dry	1	4/24/2018 2:51:15 PM
Surr: Dibromofluoromethane	94.3	56.5 - 129		%Rec	1	4/24/2018 2:51:15 PM
Surr: Toluene-d8	95.4	64.5 - 151		%Rec	1	4/24/2018 2:51:15 PM
Surr: 1-Bromo-4-fluorobenzene	95.9	43.2 - 143		%Rec	1	4/24/2018 2:51:15 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: R42972		Analyst: CG
Percent Moisture	26.1	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:20:00 AM
Project: MVSC
Lab ID: 1804291-006
Matrix: Soil
Client Sample ID: **SB-12-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	0.0280	Q-	mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloromethane	ND	UJ	0.0700	Q-	mg/Kg-dry	1	4/24/2018 3:22:27 PM
Vinyl chloride	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromomethane	ND		0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Trichlorofluoromethane (CFC-11)	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloroethane	ND		0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Methylene chloride	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
trans-1,2-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Methyl tert-butyl ether (MTBE)	ND		0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloroethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
2,2-Dichloropropane	ND		0.140		mg/Kg-dry	1	4/24/2018 3:22:27 PM
cis-1,2-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chloroform	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,1-Trichloroethane (TCA)	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1-Dichloropropene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Carbon tetrachloride	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichloroethane (EDC)	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Benzene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Trichloroethene (TCE)	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichloropropane	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromodichloromethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Dibromomethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
cis-1,3-Dichloropropene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Toluene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
trans-1,3-Dichloropropylene	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,2-Trichloroethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3-Dichloropropane	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Tetrachloroethene (PCE)	0.138		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Dibromochloromethane	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dibromoethane (EDB)	ND		0.00700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Chlorobenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,1,1,2-Tetrachloroethane	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Ethylbenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
m,p-Xylene	ND		0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
o-Xylene	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Styrene	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Isopropylbenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromoform	ND		0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:20:00 AM
Project: MVSC
Lab ID: 1804291-006
Matrix: Soil
Client Sample ID: **SB-12-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
n-Propylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Bromobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3,5-Trimethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
2-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
4-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
tert-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,3-Trichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,4-Trichlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
sec-Butylbenzene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
4-Isopropyltoluene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,3-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,4-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
n-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2-Dibromo-3-chloropropane	ND	0.700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,4-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Hexachlorobutadiene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Naphthalene	ND	0.0700		mg/Kg-dry	1	4/24/2018 3:22:27 PM
1,2,3-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 3:22:27 PM
Surr: Dibromofluoromethane	113	56.5 - 129		%Rec	1	4/24/2018 3:22:27 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 3:22:27 PM
Surr: 1-Bromo-4-fluorobenzene	94.2	43.2 - 143		%Rec	1	4/24/2018 3:22:27 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: R42972		Analyst: CG
Percent Moisture	7.11	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804291-007
Matrix: Soil
Client Sample ID: **SB-12-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0260	Q-	mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloromethane	ND UJ	0.0650	Q-	mg/Kg-dry	1	4/24/2018 3:53:29 PM
Vinyl chloride	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromomethane	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloroethane	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Methylene chloride	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
trans-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
2,2-Dichloropropane	ND	0.130		mg/Kg-dry	1	4/24/2018 3:53:29 PM
cis-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chloroform	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1-Dichloropropene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Carbon tetrachloride	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichloroethane (EDC)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Benzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Trichloroethene (TCE)	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichloropropane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromodichloromethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Dibromomethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
cis-1,3-Dichloropropene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Toluene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
trans-1,3-Dichloropropylene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,2-Trichloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3-Dichloropropane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Tetrachloroethene (PCE)	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Dibromochloromethane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dibromoethane (EDB)	ND	0.00650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Chlorobenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Ethylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
m,p-Xylene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
o-Xylene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Styrene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Isopropylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromoform	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM

JC 6/5/18

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804291-007
Matrix: Soil
Client Sample ID: **SB-12-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
n-Propylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Bromobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3,5-Trimethylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
2-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
4-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
tert-Butylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,3-Trichloropropane	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,4-Trichlorobenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
sec-Butylbenzene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
4-Isopropyltoluene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,3-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,4-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
n-Butylbenzene	ND	0.0325		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2-Dibromo-3-chloropropane	ND	0.650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,4-Trimethylbenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Hexachlorobutadiene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Naphthalene	ND	0.0650		mg/Kg-dry	1	4/24/2018 3:53:29 PM
1,2,3-Trichlorobenzene	ND	0.0260		mg/Kg-dry	1	4/24/2018 3:53:29 PM
Surr: Dibromofluoromethane	115	56.5 - 129		%Rec	1	4/24/2018 3:53:29 PM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/24/2018 3:53:29 PM
Surr: 1-Bromo-4-fluorobenzene	95.7	43.2 - 143		%Rec	1	4/24/2018 3:53:29 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: R42972		Analyst: CG
Percent Moisture	2.55	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:25:00 PM
Project: MVSC
Lab ID: 1804291-008
Matrix: Soil
Client Sample ID: **SB-13-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	0.0280	Q-	mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloromethane	ND	UJ	0.0700	Q-	mg/Kg-dry	1	4/24/2018 4:24:36 PM
Vinyl chloride	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromomethane	ND		0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Trichlorofluoromethane (CFC-11)	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloroethane	ND		0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Methylene chloride	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
trans-1,2-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Methyl tert-butyl ether (MTBE)	ND		0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloroethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
2,2-Dichloropropane	ND		0.140		mg/Kg-dry	1	4/24/2018 4:24:36 PM
cis-1,2-Dichloroethene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chloroform	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,1-Trichloroethane (TCA)	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1-Dichloropropene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Carbon tetrachloride	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichloroethane (EDC)	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Benzene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Trichloroethene (TCE)	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichloropropane	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromodichloromethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Dibromomethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
cis-1,3-Dichloropropene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Toluene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
trans-1,3-Dichloropropylene	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,2-Trichloroethane	ND		0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3-Dichloropropane	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Tetrachloroethene (PCE)	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Dibromochloromethane	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dibromoethane (EDB)	ND		0.00700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Chlorobenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,1,1,2-Tetrachloroethane	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Ethylbenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
m,p-Xylene	ND		0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
o-Xylene	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Styrene	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Isopropylbenzene	ND		0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromoform	ND		0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:25:00 PM
Project: MVSC
Lab ID: 1804291-008
Matrix: Soil
Client Sample ID: **SB-13-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
n-Propylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Bromobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3,5-Trimethylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
2-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
4-Chlorotoluene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
tert-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,3-Trichloropropane	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,4-Trichlorobenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
sec-Butylbenzene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
4-Isopropyltoluene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,3-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,4-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
n-Butylbenzene	ND	0.0350		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2-Dibromo-3-chloropropane	ND	0.700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,4-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Hexachlorobutadiene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Naphthalene	ND	0.0700		mg/Kg-dry	1	4/24/2018 4:24:36 PM
1,2,3-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/24/2018 4:24:36 PM
Surr: Dibromofluoromethane	109	56.5 - 129		%Rec	1	4/24/2018 4:24:36 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/24/2018 4:24:36 PM
Surr: 1-Bromo-4-fluorobenzene	96.2	43.2 - 143		%Rec	1	4/24/2018 4:24:36 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: R42972		Analyst: CG
Percent Moisture	21.4	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804291-009
Matrix: Soil
Client Sample ID: **SB-13-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	0.0297	Q-	mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloromethane	ND	UJ	0.0742	Q-	mg/Kg-dry	1	4/24/2018 4:55:41 PM
Vinyl chloride	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromomethane	ND		0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Trichlorofluoromethane (CFC-11)	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloroethane	ND		0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloroethene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Methylene chloride	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
trans-1,2-Dichloroethene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Methyl tert-butyl ether (MTBE)	ND		0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloroethane	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
2,2-Dichloropropane	ND		0.148		mg/Kg-dry	1	4/24/2018 4:55:41 PM
cis-1,2-Dichloroethene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chloroform	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,1-Trichloroethane (TCA)	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1-Dichloropropene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Carbon tetrachloride	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichloroethane (EDC)	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Benzene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Trichloroethene (TCE)	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichloropropane	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromodichloromethane	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Dibromomethane	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
cis-1,3-Dichloropropene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Toluene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
trans-1,3-Dichloropropylene	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,2-Trichloroethane	ND		0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3-Dichloropropane	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Tetrachloroethene (PCE)	0.128		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Dibromochloromethane	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dibromoethane (EDB)	ND		0.00742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Chlorobenzene	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,1,1,2-Tetrachloroethane	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Ethylbenzene	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
m,p-Xylene	ND		0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
o-Xylene	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Styrene	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Isopropylbenzene	ND		0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromoform	ND		0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804291-009
Matrix: Soil
Client Sample ID: **SB-13-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
n-Propylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Bromobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3,5-Trimethylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
2-Chlorotoluene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
4-Chlorotoluene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
tert-Butylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,3-Trichloropropane	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,4-Trichlorobenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
sec-Butylbenzene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
4-Isopropyltoluene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,3-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,4-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
n-Butylbenzene	ND	0.0371		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2-Dibromo-3-chloropropane	ND	0.742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,4-Trimethylbenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Hexachlorobutadiene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Naphthalene	ND	0.0742		mg/Kg-dry	1	4/24/2018 4:55:41 PM
1,2,3-Trichlorobenzene	ND	0.0297		mg/Kg-dry	1	4/24/2018 4:55:41 PM
Surr: Dibromofluoromethane	114	56.5 - 129		%Rec	1	4/24/2018 4:55:41 PM
Surr: Toluene-d8	104	64.5 - 151		%Rec	1	4/24/2018 4:55:41 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	43.2 - 143		%Rec	1	4/24/2018 4:55:41 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: R42972		Analyst: CG
Percent Moisture	15.0	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:45:00 PM
Project: MVSC
Lab ID: 1804291-010
Matrix: Soil
Client Sample ID: **SB-13-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND UJ	0.0230	Q-	mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloromethane	ND UJ	0.0576	Q-	mg/Kg-dry	1	4/24/2018 6:28:48 PM
Vinyl chloride	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromomethane	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloroethane	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Methylene chloride	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
trans-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
2,2-Dichloropropane	ND	0.115		mg/Kg-dry	1	4/24/2018 6:28:48 PM
cis-1,2-Dichloroethene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chloroform	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1-Dichloropropene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Carbon tetrachloride	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichloroethane (EDC)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Benzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Trichloroethene (TCE)	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichloropropane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromodichloromethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Dibromomethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
cis-1,3-Dichloropropene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Toluene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
trans-1,3-Dichloropropylene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,2-Trichloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3-Dichloropropane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Tetrachloroethene (PCE)	6.03	0.288	D	mg/Kg-dry	10	4/24/2018 5:26:49 PM
Dibromochloromethane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dibromoethane (EDB)	ND	0.00576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Chlorobenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Ethylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
m,p-Xylene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
o-Xylene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Styrene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Isopropylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromoform	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 12:45:00 PM
Project: MVSC
Lab ID: 1804291-010
Matrix: Soil
Client Sample ID: **SB-13-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
n-Propylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Bromobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3,5-Trimethylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
2-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
4-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
tert-Butylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,3-Trichloropropane	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,4-Trichlorobenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
sec-Butylbenzene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
4-Isopropyltoluene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,3-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,4-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
n-Butylbenzene	ND	0.0288		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2-Dibromo-3-chloropropane	ND	0.576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,4-Trimethylbenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Hexachlorobutadiene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Naphthalene	ND	0.0576		mg/Kg-dry	1	4/24/2018 6:28:48 PM
1,2,3-Trichlorobenzene	ND	0.0230		mg/Kg-dry	1	4/24/2018 6:28:48 PM
Surr: Dibromofluoromethane	106	56.5 - 129		%Rec	1	4/24/2018 6:28:48 PM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/24/2018 6:28:48 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	43.2 - 143		%Rec	1	4/24/2018 6:28:48 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: R42972		Analyst: CG
Percent Moisture	7.93	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:05:00 PM
Project: MVSC
Lab ID: 1804291-011
Matrix: Soil
Client Sample ID: **SB-13-29**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20465 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	UJ	0.0238	Q-	mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloromethane	ND	UJ	0.0596	Q-	mg/Kg-dry	1	4/24/2018 5:57:51 PM
Vinyl chloride	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromomethane	ND		0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Trichlorofluoromethane (CFC-11)	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloroethane	ND		0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloroethene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Methylene chloride	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
trans-1,2-Dichloroethene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Methyl tert-butyl ether (MTBE)	ND		0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloroethane	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
2,2-Dichloropropane	ND		0.119		mg/Kg-dry	1	4/24/2018 5:57:51 PM
cis-1,2-Dichloroethene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chloroform	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,1-Trichloroethane (TCA)	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1-Dichloropropene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Carbon tetrachloride	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichloroethane (EDC)	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Benzene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Trichloroethene (TCE)	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichloropropane	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromodichloromethane	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Dibromomethane	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
cis-1,3-Dichloropropene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Toluene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
trans-1,3-Dichloropropylene	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,2-Trichloroethane	ND		0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3-Dichloropropane	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Tetrachloroethene (PCE)	0.110		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Dibromochloromethane	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dibromoethane (EDB)	ND		0.00596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Chlorobenzene	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,1,1,2-Tetrachloroethane	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Ethylbenzene	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
m,p-Xylene	ND		0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
o-Xylene	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Styrene	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Isopropylbenzene	ND		0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromoform	ND		0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:05:00 PM
Project: MVSC
Lab ID: 1804291-011
Matrix: Soil
Client Sample ID: **SB-13-29**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20465		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
n-Propylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Bromobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3,5-Trimethylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
2-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
4-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
tert-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,3-Trichloropropane	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,4-Trichlorobenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
sec-Butylbenzene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
4-Isopropyltoluene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,3-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,4-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
n-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2-Dibromo-3-chloropropane	ND	0.596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,4-Trimethylbenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Hexachlorobutadiene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Naphthalene	ND	0.0596		mg/Kg-dry	1	4/24/2018 5:57:51 PM
1,2,3-Trichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/24/2018 5:57:51 PM
Surr: Dibromofluoromethane	114	56.5 - 129		%Rec	1	4/24/2018 5:57:51 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/24/2018 5:57:51 PM
Surr: 1-Bromo-4-fluorobenzene	97.6	43.2 - 143		%Rec	1	4/24/2018 5:57:51 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: R42972		Analyst: CG
Percent Moisture	5.69	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:30:00 PM
Project: MVSC
Lab ID: 1804291-012
Matrix: Soil
Client Sample ID: **SB-14-5**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloromethane	ND	UJ	0.0633	Q-	mg/Kg-dry	1	4/25/2018 3:05:10 AM
Vinyl chloride	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromomethane	ND		0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Trichlorofluoromethane (CFC-11)	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloroethane	ND		0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloroethene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Methylene chloride	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
trans-1,2-Dichloroethene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Methyl tert-butyl ether (MTBE)	ND		0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloroethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
2,2-Dichloropropane	ND		0.127		mg/Kg-dry	1	4/25/2018 3:05:10 AM
cis-1,2-Dichloroethene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chloroform	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,1-Trichloroethane (TCA)	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1-Dichloropropene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Carbon tetrachloride	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichloroethane (EDC)	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Benzene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Trichloroethene (TCE)	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichloropropane	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromodichloromethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Dibromomethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
cis-1,3-Dichloropropene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Toluene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
trans-1,3-Dichloropropylene	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,2-Trichloroethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3-Dichloropropane	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Tetrachloroethene (PCE)	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Dibromochloromethane	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dibromoethane (EDB)	ND		0.00633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Chlorobenzene	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,1,1,2-Tetrachloroethane	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Ethylbenzene	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
m,p-Xylene	ND		0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
o-Xylene	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Styrene	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Isopropylbenzene	ND		0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromoform	ND		0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:30:00 PM
Project: MVSC
Lab ID: 1804291-012
Matrix: Soil
Client Sample ID: **SB-14-5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
n-Propylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Bromobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3,5-Trimethylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
2-Chlorotoluene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
4-Chlorotoluene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
tert-Butylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,3-Trichloropropane	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,4-Trichlorobenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
sec-Butylbenzene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
4-Isopropyltoluene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,3-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,4-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
n-Butylbenzene	ND	0.0317		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2-Dibromo-3-chloropropane	ND	0.633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,4-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Hexachlorobutadiene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Naphthalene	ND	0.0633		mg/Kg-dry	1	4/25/2018 3:05:10 AM
1,2,3-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 3:05:10 AM
Surr: Dibromofluoromethane	91.8	56.5 - 129		%Rec	1	4/25/2018 3:05:10 AM
Surr: Toluene-d8	85.0	64.5 - 151		%Rec	1	4/25/2018 3:05:10 AM
Surr: 1-Bromo-4-fluorobenzene	94.0	43.2 - 143		%Rec	1	4/25/2018 3:05:10 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: R42972		Analyst: CG
Percent Moisture	22.9	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:40:00 PM
Project: MVSC
Lab ID: 1804291-013
Matrix: Soil
Client Sample ID: **SB-14-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloromethane	ND	UJ 0.0595	Q-	mg/Kg-dry	1	4/25/2018 3:35:22 AM
Vinyl chloride	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromomethane	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Trichlorofluoromethane (CFC-11)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloroethane	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Methylene chloride	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
trans-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Methyl tert-butyl ether (MTBE)	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
2,2-Dichloropropane	ND	0.119		mg/Kg-dry	1	4/25/2018 3:35:22 AM
cis-1,2-Dichloroethene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chloroform	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,1-Trichloroethane (TCA)	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Carbon tetrachloride	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichloroethane (EDC)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Benzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Trichloroethene (TCE)	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichloropropane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromodichloromethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Dibromomethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
cis-1,3-Dichloropropene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Toluene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
trans-1,3-Dichloropropylene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,2-Trichloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3-Dichloropropane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Tetrachloroethene (PCE)	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Dibromochloromethane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dibromoethane (EDB)	ND	0.00595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Chlorobenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,1,1,2-Tetrachloroethane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Ethylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
m,p-Xylene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
o-Xylene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Styrene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Isopropylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromoform	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:40:00 PM
Project: MVSC
Lab ID: 1804291-013
Matrix: Soil
Client Sample ID: **SB-14-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
n-Propylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Bromobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3,5-Trimethylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
2-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
4-Chlorotoluene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
tert-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,3-Trichloropropane	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,4-Trichlorobenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
sec-Butylbenzene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
4-Isopropyltoluene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,3-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,4-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
n-Butylbenzene	ND	0.0298		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2-Dibromo-3-chloropropane	ND	0.595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,4-Trimethylbenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Hexachlorobutadiene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Naphthalene	ND	0.0595		mg/Kg-dry	1	4/25/2018 3:35:22 AM
1,2,3-Trichlorobenzene	ND	0.0238		mg/Kg-dry	1	4/25/2018 3:35:22 AM
Surr: Dibromofluoromethane	93.6	56.5 - 129		%Rec	1	4/25/2018 3:35:22 AM
Surr: Toluene-d8	86.8	64.5 - 151		%Rec	1	4/25/2018 3:35:22 AM
Surr: 1-Bromo-4-fluorobenzene	89.0	43.2 - 143		%Rec	1	4/25/2018 3:35:22 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: R42972		Analyst: CG
Percent Moisture	18.2	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:50:00 PM
Project: MVSC
Lab ID: 1804291-014
Matrix: Soil
Client Sample ID: **SB-14-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloromethane	ND	UJ	0.0506	Q-	mg/Kg-dry	1	4/25/2018 4:35:37 AM
Vinyl chloride	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromomethane	ND		0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Trichlorofluoromethane (CFC-11)	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloroethane	ND		0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloroethene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Methylene chloride	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
trans-1,2-Dichloroethene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Methyl tert-butyl ether (MTBE)	ND		0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloroethane	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
2,2-Dichloropropane	ND		0.101		mg/Kg-dry	1	4/25/2018 4:35:37 AM
cis-1,2-Dichloroethene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chloroform	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,1-Trichloroethane (TCA)	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1-Dichloropropene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Carbon tetrachloride	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichloroethane (EDC)	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Benzene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Trichloroethene (TCE)	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichloropropane	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromodichloromethane	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Dibromomethane	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
cis-1,3-Dichloropropene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Toluene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
trans-1,3-Dichloropropylene	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,2-Trichloroethane	ND		0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3-Dichloropropane	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Tetrachloroethene (PCE)	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Dibromochloromethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dibromoethane (EDB)	ND		0.00506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Chlorobenzene	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,1,1,2-Tetrachloroethane	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Ethylbenzene	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
m,p-Xylene	ND		0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
o-Xylene	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Styrene	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Isopropylbenzene	ND		0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromoform	ND		0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM

JC 6/5/18

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 1:50:00 PM
Project: MVSC
Lab ID: 1804291-014
Matrix: Soil
Client Sample ID: **SB-14-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
n-Propylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Bromobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3,5-Trimethylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
2-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
4-Chlorotoluene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
tert-Butylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,3-Trichloropropane	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,4-Trichlorobenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
sec-Butylbenzene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
4-Isopropyltoluene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,3-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,4-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
n-Butylbenzene	ND	0.0253		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2-Dibromo-3-chloropropane	ND	0.506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,4-Trimethylbenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Hexachlorobutadiene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Naphthalene	ND	0.0506		mg/Kg-dry	1	4/25/2018 4:35:37 AM
1,2,3-Trichlorobenzene	ND	0.0202		mg/Kg-dry	1	4/25/2018 4:35:37 AM
Surr: Dibromofluoromethane	88.8	56.5 - 129		%Rec	1	4/25/2018 4:35:37 AM
Surr: Toluene-d8	90.7	64.5 - 151		%Rec	1	4/25/2018 4:35:37 AM
Surr: 1-Bromo-4-fluorobenzene	91.9	43.2 - 143		%Rec	1	4/25/2018 4:35:37 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: R42972		Analyst: CG
Percent Moisture	7.28	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc. **Collection Date:** 4/16/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804291-015 **Matrix:** Soil
Client Sample ID: **SB-14-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloromethane	ND	UJ	0.0608	Q-	mg/Kg-dry	1	4/25/2018 5:05:49 AM
Vinyl chloride	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromomethane	ND		0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Trichlorofluoromethane (CFC-11)	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloroethane	ND		0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloroethene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Methylene chloride	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
trans-1,2-Dichloroethene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Methyl tert-butyl ether (MTBE)	ND		0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloroethane	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
2,2-Dichloropropane	ND		0.122		mg/Kg-dry	1	4/25/2018 5:05:49 AM
cis-1,2-Dichloroethene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chloroform	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,1-Trichloroethane (TCA)	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1-Dichloropropene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Carbon tetrachloride	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichloroethane (EDC)	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Benzene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Trichloroethene (TCE)	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichloropropane	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromodichloromethane	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Dibromomethane	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
cis-1,3-Dichloropropene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Toluene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
trans-1,3-Dichloropropylene	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,2-Trichloroethane	ND		0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3-Dichloropropane	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Tetrachloroethene (PCE)	0.109		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Dibromochloromethane	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dibromoethane (EDB)	ND		0.00608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Chlorobenzene	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,1,1,2-Tetrachloroethane	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Ethylbenzene	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
m,p-Xylene	ND		0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
o-Xylene	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Styrene	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Isopropylbenzene	ND		0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromoform	ND		0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/16/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804291-015
Matrix: Soil
Client Sample ID: **SB-14-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
n-Propylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Bromobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3,5-Trimethylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
2-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
4-Chlorotoluene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
tert-Butylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,3-Trichloropropane	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,4-Trichlorobenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
sec-Butylbenzene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
4-Isopropyltoluene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,3-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,4-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
n-Butylbenzene	ND	0.0304		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2-Dibromo-3-chloropropane	ND	0.608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,4-Trimethylbenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Hexachlorobutadiene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Naphthalene	ND	0.0608		mg/Kg-dry	1	4/25/2018 5:05:49 AM
1,2,3-Trichlorobenzene	ND	0.0243		mg/Kg-dry	1	4/25/2018 5:05:49 AM
Surr: Dibromofluoromethane	94.2	56.5 - 129		%Rec	1	4/25/2018 5:05:49 AM
Surr: Toluene-d8	92.3	64.5 - 151		%Rec	1	4/25/2018 5:05:49 AM
Surr: 1-Bromo-4-fluorobenzene	91.5	43.2 - 143		%Rec	1	4/25/2018 5:05:49 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: R42972		Analyst: CG
Percent Moisture	5.27	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804291-016
Matrix: Soil
Client Sample ID: **SB-15-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20486 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloromethane	ND	UJ	0.0669	Q-	mg/Kg-dry	1	4/25/2018 5:35:55 AM
Vinyl chloride	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromomethane	ND		0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Trichlorofluoromethane (CFC-11)	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloroethane	ND		0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloroethene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Methylene chloride	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
trans-1,2-Dichloroethene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Methyl tert-butyl ether (MTBE)	ND		0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloroethane	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
2,2-Dichloropropane	ND		0.134		mg/Kg-dry	1	4/25/2018 5:35:55 AM
cis-1,2-Dichloroethene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chloroform	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,1-Trichloroethane (TCA)	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1-Dichloropropene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Carbon tetrachloride	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichloroethane (EDC)	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Benzene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Trichloroethene (TCE)	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichloropropane	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromodichloromethane	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Dibromomethane	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
cis-1,3-Dichloropropene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Toluene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
trans-1,3-Dichloropropylene	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,2-Trichloroethane	ND		0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3-Dichloropropane	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Tetrachloroethene (PCE)	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Dibromochloromethane	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dibromoethane (EDB)	ND		0.00669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Chlorobenzene	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,1,1,2-Tetrachloroethane	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Ethylbenzene	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
m,p-Xylene	ND		0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
o-Xylene	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Styrene	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Isopropylbenzene	ND		0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromoform	ND		0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM

Analytical Report

Work Order: **1804291**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/17/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804291-016
Matrix: Soil
Client Sample ID: **SB-15-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20486		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
n-Propylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Bromobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3,5-Trimethylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
2-Chlorotoluene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
4-Chlorotoluene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
tert-Butylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,3-Trichloropropane	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,4-Trichlorobenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
sec-Butylbenzene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
4-Isopropyltoluene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,3-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,4-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
n-Butylbenzene	ND	0.0334		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2-Dibromo-3-chloropropane	ND	0.669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,4-Trimethylbenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Hexachlorobutadiene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Naphthalene	ND	0.0669		mg/Kg-dry	1	4/25/2018 5:35:55 AM
1,2,3-Trichlorobenzene	ND	0.0267		mg/Kg-dry	1	4/25/2018 5:35:55 AM
Surr: Dibromofluoromethane	99.8	56.5 - 129		%Rec	1	4/25/2018 5:35:55 AM
Surr: Toluene-d8	101	64.5 - 151		%Rec	1	4/25/2018 5:35:55 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	43.2 - 143		%Rec	1	4/25/2018 5:35:55 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: R42972		Analyst: CG
Percent Moisture	15.1	0.500		wt%	1	4/19/2018 7:59:11 AM

JC 6/5/18

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: MVSC
Work Order Number: 1804329

April 27, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 9 sample(s) on 4/20/2018 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: *04/27/2018*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1804329

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1804329-001	SB-17-20	04/18/2018 12:00 PM	04/20/2018 8:32 AM
1804329-002	SB-17-30	04/18/2018 12:30 PM	04/20/2018 8:32 AM
1804329-003	SB-17-40	04/18/2018 12:50 PM	04/20/2018 8:32 AM
1804329-004	SB-18-40	04/18/2018 3:10 PM	04/20/2018 8:32 AM
1804329-005	SB-18-30	04/18/2018 2:35 PM	04/20/2018 8:32 AM
1804329-006	SB-19-GW	04/19/2018 10:45 AM	04/20/2018 8:32 AM
1804329-007	SB-20-GW	04/19/2018 1:45 PM	04/20/2018 8:32 AM
1804329-008	SB-21-GW	04/19/2018 3:35 PM	04/20/2018 8:32 AM
1804329-009	Trip Blank	04/17/2018 3:06 PM	04/20/2018 8:32 AM

Case Narrative

WO#: **1804329**
Date: **4/27/2018**

CLIENT: PES Environmental, Inc.
Project: MVSC

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: 4/18/2018 12:00:00 PM
Project: MVSC
Lab ID: 1804329-001
Matrix: Soil
Client Sample ID: **SB-17-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloromethane	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Vinyl chloride	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromomethane	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloroethane	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloroethene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Methylene chloride	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
trans-1,2-Dichloroethene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloroethane	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
2,2-Dichloropropane	ND	0.147		mg/Kg-dry	1	4/26/2018 10:06:44 PM
cis-1,2-Dichloroethene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloroform	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloropropene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Carbon tetrachloride	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichloroethane (EDC)	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Benzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Trichloroethene (TCE)	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichloropropane	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromodichloromethane	ND	0.0295	Q-	mg/Kg-dry	1	4/26/2018 10:06:44 PM
Dibromomethane	ND	0.0295	Q-	mg/Kg-dry	1	4/26/2018 10:06:44 PM
cis-1,3-Dichloropropene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Toluene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
trans-1,3-Dichloropropylene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,2-Trichloroethane	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3-Dichloropropane	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Tetrachloroethene (PCE)	0.0435	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Dibromochloromethane	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dibromoethane (EDB)	ND	0.00737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chlorobenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Ethylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
m,p-Xylene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
o-Xylene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Styrene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Isopropylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromoform	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:00:00 PM
Project: MVSC
Lab ID: 1804329-001
Matrix: Soil
Client Sample ID: **SB-17-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
n-Propylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3,5-Trimethylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
2-Chlorotoluene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
4-Chlorotoluene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
tert-Butylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,3-Trichloropropane	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,4-Trichlorobenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
sec-Butylbenzene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
4-Isopropyltoluene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,4-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
n-Butylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dibromo-3-chloropropane	ND	0.737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,4-Trimethylbenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Hexachlorobutadiene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Naphthalene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,3-Trichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Surr: Dibromofluoromethane	88.5	56.5 - 129		%Rec	1	4/26/2018 10:06:44 PM
Surr: Toluene-d8	126	64.5 - 151		%Rec	1	4/26/2018 10:06:44 PM
Surr: 1-Bromo-4-fluorobenzene	97.2	43.2 - 143		%Rec	1	4/26/2018 10:06:44 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: R43040		Analyst: NG
Percent Moisture	14.8	0.500		wt%	1	4/23/2018 10:57:52 AM

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804329-002
Matrix: Soil
Client Sample ID: **SB-17-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloromethane	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Vinyl chloride	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromomethane	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Trichlorofluoromethane (CFC-11)	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloroethane	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloroethene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Methylene chloride	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
trans-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Methyl tert-butyl ether (MTBE)	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloroethane	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
2,2-Dichloropropane	ND	0.113		mg/Kg-dry	1	4/26/2018 10:36:41 PM
cis-1,2-Dichloroethene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloroform	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,1-Trichloroethane (TCA)	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloropropene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Carbon tetrachloride	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichloroethane (EDC)	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Benzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Trichloroethene (TCE)	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichloropropane	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromodichloromethane	ND	0.0225	Q-	mg/Kg-dry	1	4/26/2018 10:36:41 PM
Dibromomethane	ND	0.0225	Q-	mg/Kg-dry	1	4/26/2018 10:36:41 PM
cis-1,3-Dichloropropene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Toluene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
trans-1,3-Dichloropropylene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,2-Trichloroethane	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3-Dichloropropane	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Tetrachloroethene (PCE)	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Dibromochloromethane	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dibromoethane (EDB)	ND	0.00563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chlorobenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,1,2-Tetrachloroethane	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Ethylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
m,p-Xylene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
o-Xylene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Styrene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Isopropylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromoform	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804329-002
Matrix: Soil
Client Sample ID: **SB-17-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
n-Propylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3,5-Trimethylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
2-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
4-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
tert-Butylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,3-Trichloropropane	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,4-Trichlorobenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
sec-Butylbenzene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
4-Isopropyltoluene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,4-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
n-Butylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dibromo-3-chloropropane	ND	0.563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,4-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Hexachlorobutadiene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Naphthalene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,3-Trichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Surr: Dibromofluoromethane	97.5	56.5 - 129		%Rec	1	4/26/2018 10:36:41 PM
Surr: Toluene-d8	68.5	64.5 - 151		%Rec	1	4/26/2018 10:36:41 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	43.2 - 143		%Rec	1	4/26/2018 10:36:41 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: R43040		Analyst: NG
Percent Moisture	4.95	0.500		wt%	1	4/23/2018 10:57:52 AM

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:50:00 PM
Project: MVSC
Lab ID: 1804329-003
Matrix: Soil
Client Sample ID: **SB-17-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloromethane	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Vinyl chloride	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromomethane	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Trichlorofluoromethane (CFC-11)	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloroethane	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloroethene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Methylene chloride	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
trans-1,2-Dichloroethene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Methyl tert-butyl ether (MTBE)	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloroethane	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
2,2-Dichloropropane	ND	0.0924		mg/Kg-dry	1	4/26/2018 11:36:24 PM
cis-1,2-Dichloroethene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloroform	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,1-Trichloroethane (TCA)	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloropropene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Carbon tetrachloride	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichloroethane (EDC)	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Benzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Trichloroethene (TCE)	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichloropropane	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromodichloromethane	ND	0.0185	Q-	mg/Kg-dry	1	4/26/2018 11:36:24 PM
Dibromomethane	ND	0.0185	Q-	mg/Kg-dry	1	4/26/2018 11:36:24 PM
cis-1,3-Dichloropropene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Toluene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
trans-1,3-Dichloropropylene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,2-Trichloroethane	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3-Dichloropropane	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Tetrachloroethene (PCE)	0.0286	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Dibromochloromethane	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dibromoethane (EDB)	ND	0.00462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chlorobenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,1,2-Tetrachloroethane	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Ethylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
m,p-Xylene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
o-Xylene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Styrene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Isopropylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromoform	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:50:00 PM
Project: MVSC
Lab ID: 1804329-003
Matrix: Soil
Client Sample ID: **SB-17-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
n-Propylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3,5-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
2-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
4-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
tert-Butylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,3-Trichloropropane	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,4-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
sec-Butylbenzene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
4-Isopropyltoluene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,4-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
n-Butylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dibromo-3-chloropropane	ND	0.462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,4-Trimethylbenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Hexachlorobutadiene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Naphthalene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,3-Trichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Surr: Dibromofluoromethane	91.3	56.5 - 129		%Rec	1	4/26/2018 11:36:24 PM
Surr: Toluene-d8	83.6	64.5 - 151		%Rec	1	4/26/2018 11:36:24 PM
Surr: 1-Bromo-4-fluorobenzene	93.5	43.2 - 143		%Rec	1	4/26/2018 11:36:24 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: R43040		Analyst: NG
Percent Moisture	9.45	0.500		wt%	1	4/23/2018 10:57:52 AM

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 3:10:00 PM
Project: MVSC
Lab ID: 1804329-004
Matrix: Soil
Client Sample ID: **SB-18-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloromethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Vinyl chloride	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromomethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloroethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Methylene chloride	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
trans-1,2-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
2,2-Dichloropropane	ND	0.108		mg/Kg-dry	1	4/27/2018 3:05:00 AM
cis-1,2-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloroform	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloropropene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Carbon tetrachloride	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichloroethane (EDC)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Benzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Trichloroethene (TCE)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichloropropane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromodichloromethane	ND	0.0215	Q-	mg/Kg-dry	1	4/27/2018 3:05:00 AM
Dibromomethane	ND	0.0215	Q-	mg/Kg-dry	1	4/27/2018 3:05:00 AM
cis-1,3-Dichloropropene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Toluene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
trans-1,3-Dichloropropylene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,2-Trichloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3-Dichloropropane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Tetrachloroethene (PCE)	0.0284	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Dibromochloromethane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dibromoethane (EDB)	ND	0.00538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chlorobenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Ethylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
m,p-Xylene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
o-Xylene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Styrene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Isopropylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromoform	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 3:10:00 PM
Project: MVSC
Lab ID: 1804329-004
Matrix: Soil
Client Sample ID: **SB-18-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
n-Propylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3,5-Trimethylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
2-Chlorotoluene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
4-Chlorotoluene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
tert-Butylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,3-Trichloropropane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,4-Trichlorobenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
sec-Butylbenzene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
4-Isopropyltoluene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,4-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
n-Butylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dibromo-3-chloropropane	ND	0.538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,4-Trimethylbenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Hexachlorobutadiene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Naphthalene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,3-Trichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Surr: Dibromofluoromethane	103	56.5 - 129		%Rec	1	4/27/2018 3:05:00 AM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/27/2018 3:05:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.0	43.2 - 143		%Rec	1	4/27/2018 3:05:00 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: R43040		Analyst: NG
Percent Moisture	9.96	0.500		wt%	1	4/23/2018 10:57:52 AM

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 2:35:00 PM
Project: MVSC
Lab ID: 1804329-005
Matrix: Soil
Client Sample ID: **SB-18-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloromethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Vinyl chloride	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromomethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloroethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
2,2-Dichloropropane	ND	0.112		mg/Kg-dry	1	4/27/2018 3:34:00 AM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloroform	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Carbon tetrachloride	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichloroethane (EDC)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Benzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromodichloromethane	ND	0.0224	Q-	mg/Kg-dry	1	4/27/2018 3:34:00 AM
Dibromomethane	ND	0.0224	Q-	mg/Kg-dry	1	4/27/2018 3:34:00 AM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Toluene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
trans-1,3-Dichloropropylene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,2-Trichloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3-Dichloropropane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Tetrachloroethene (PCE)	0.0429	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Dibromochloromethane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dibromoethane (EDB)	ND	0.00560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chlorobenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Ethylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
m,p-Xylene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
o-Xylene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Styrene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Isopropylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromoform	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 2:35:00 PM
Project: MVSC
Lab ID: 1804329-005
Matrix: Soil
Client Sample ID: **SB-18-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
n-Propylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3,5-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
2-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
4-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
tert-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,3-Trichloropropane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,4-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
sec-Butylbenzene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
4-Isopropyltoluene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
n-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dibromo-3-chloropropane	ND	0.560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Hexachlorobutadiene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Naphthalene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Surr: Dibromofluoromethane	94.1	56.5 - 129		%Rec	1	4/27/2018 3:34:00 AM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/27/2018 3:34:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	43.2 - 143		%Rec	1	4/27/2018 3:34:00 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: R43040		Analyst: NG
Percent Moisture	2.81	0.500		wt%	1	4/23/2018 10:57:52 AM

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 10:45:00 AM
Project: MVSC
Lab ID: 1804329-006
Matrix: Groundwater
Client Sample ID: **SB-19-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20470 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Chloromethane	ND	2.00		µg/L	1	4/22/2018 3:53:27 AM
Vinyl chloride	ND	0.200		µg/L	1	4/22/2018 3:53:27 AM
Bromomethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Chloroethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Methylene chloride	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/22/2018 3:53:27 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Chloroform	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Carbon tetrachloride	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Benzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/22/2018 3:53:27 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Bromodichloromethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Dibromomethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Toluene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Tetrachloroethene (PCE)	14.8	1.00		µg/L	1	4/22/2018 3:53:27 AM
Dibromochloromethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/22/2018 3:53:27 AM
Chlorobenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Ethylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
m,p-Xylene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
o-Xylene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Styrene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Isopropylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Bromoform	ND	2.00		µg/L	1	4/22/2018 3:53:27 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 10:45:00 AM
Project: MVSC
Lab ID: 1804329-006
Matrix: Groundwater
Client Sample ID: **SB-19-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20470		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
n-Propylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Bromobenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
2-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
4-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
tert-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/22/2018 3:53:27 AM
sec-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
n-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/22/2018 3:53:27 AM
Naphthalene	ND	1.00		µg/L	1	4/22/2018 3:53:27 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/22/2018 3:53:27 AM
Surr: Dibromofluoromethane	119	45.4 - 152		%Rec	1	4/22/2018 3:53:27 AM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	4/22/2018 3:53:27 AM
Surr: 1-Bromo-4-fluorobenzene	102	64.2 - 128		%Rec	1	4/22/2018 3:53:27 AM

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 1:45:00 PM
Project: MVSC
Lab ID: 1804329-007
Matrix: Groundwater
Client Sample ID: **SB-20-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20470 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Chloromethane	ND	2.00		µg/L	1	4/22/2018 4:23:55 AM
Vinyl chloride	ND	0.200		µg/L	1	4/22/2018 4:23:55 AM
Bromomethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Chloroethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Methylene chloride	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/22/2018 4:23:55 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Chloroform	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Carbon tetrachloride	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Benzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/22/2018 4:23:55 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Bromodichloromethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Dibromomethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Toluene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Tetrachloroethene (PCE)	10.8	1.00		µg/L	1	4/22/2018 4:23:55 AM
Dibromochloromethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/22/2018 4:23:55 AM
Chlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Ethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
m,p-Xylene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
o-Xylene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Styrene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Isopropylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Bromoform	ND	2.00		µg/L	1	4/22/2018 4:23:55 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 1:45:00 PM
Project: MVSC
Lab ID: 1804329-007
Matrix: Groundwater
Client Sample ID: **SB-20-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20470		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
n-Propylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Bromobenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
2-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
4-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
tert-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/22/2018 4:23:55 AM
sec-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
n-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/22/2018 4:23:55 AM
Naphthalene	ND	1.00		µg/L	1	4/22/2018 4:23:55 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/22/2018 4:23:55 AM
Surr: Dibromofluoromethane	116	45.4 - 152		%Rec	1	4/22/2018 4:23:55 AM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	4/22/2018 4:23:55 AM
Surr: 1-Bromo-4-fluorobenzene	99.0	64.2 - 128		%Rec	1	4/22/2018 4:23:55 AM

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 3:35:00 PM
Project: MVSC
Lab ID: 1804329-008
Matrix: Groundwater
Client Sample ID: **SB-21-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20470 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Chloromethane	ND	2.00		µg/L	1	4/22/2018 4:54:17 AM
Vinyl chloride	ND	0.200		µg/L	1	4/22/2018 4:54:17 AM
Bromomethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Chloroethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Methylene chloride	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/22/2018 4:54:17 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Chloroform	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Carbon tetrachloride	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Benzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/22/2018 4:54:17 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Bromodichloromethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Dibromomethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Toluene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Tetrachloroethene (PCE)	8.18	1.00		µg/L	1	4/22/2018 4:54:17 AM
Dibromochloromethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/22/2018 4:54:17 AM
Chlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Ethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
m,p-Xylene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
o-Xylene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Styrene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Isopropylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Bromoform	ND	2.00		µg/L	1	4/22/2018 4:54:17 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/19/2018 3:35:00 PM
Project: MVSC
Lab ID: 1804329-008
Matrix: Groundwater
Client Sample ID: **SB-21-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20470		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
n-Propylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Bromobenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
2-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
4-Chlorotoluene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
tert-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/22/2018 4:54:17 AM
sec-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
n-Butylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/22/2018 4:54:17 AM
Naphthalene	ND	1.00		µg/L	1	4/22/2018 4:54:17 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/22/2018 4:54:17 AM
Surr: Dibromofluoromethane	116	45.4 - 152		%Rec	1	4/22/2018 4:54:17 AM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	4/22/2018 4:54:17 AM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	4/22/2018 4:54:17 AM

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1804337-002ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/23/2018**		RunNo: **43040**		
Client ID: **BATCH**	Batch ID: **R43040**					Analysis Date: **4/23/2018**		SeqNo: **831806**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	19.5	0.500						19.58	0.281	20	

Sample ID **1804329-003ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/23/2018**		RunNo: **43040**		
Client ID: **SB-17-40**	Batch ID: **R43040**					Analysis Date: **4/23/2018**		SeqNo: **831811**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	10.3	0.500						9.450	8.46	20	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20504** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **LCSS** Batch ID: **20504** Analysis Date: **4/26/2018** SeqNo: **833921**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.881	0.0200	1.000	0	88.1	14.3	167				
Chloromethane	0.860	0.0500	1.000	0	86.0	32	156				
Vinyl chloride	0.811	0.0250	1.000	0	81.1	43.4	151				
Bromomethane	1.38	0.0500	1.000	0	138	35	155				
Trichlorofluoromethane (CFC-11)	1.05	0.0200	1.000	0	105	33.8	156				
Chloroethane	0.932	0.0500	1.000	0	93.2	33.1	147				
1,1-Dichloroethene	1.34	0.0200	1.000	0	134	39	144				
Methylene chloride	0.739	0.0200	1.000	0	73.9	46.3	140				
trans-1,2-Dichloroethene	0.748	0.0200	1.000	0	74.8	68	130				
Methyl tert-butyl ether (MTBE)	0.744	0.0500	1.000	0	74.4	44.1	152				
1,1-Dichloroethane	0.743	0.0200	1.000	0	74.3	61.9	137				
2,2-Dichloropropane	0.923	0.100	1.000	0	92.3	35.5	186				
cis-1,2-Dichloroethene	0.802	0.0200	1.000	0	80.2	71.3	135				
Chloroform	0.821	0.0200	1.000	0	82.1	69	145				
1,1,1-Trichloroethane (TCA)	0.865	0.0250	1.000	0	86.5	69	132				
1,1-Dichloropropene	0.839	0.0200	1.000	0	83.9	72.7	131				
Carbon tetrachloride	0.865	0.0250	1.000	0	86.5	63.4	137				
1,2-Dichloroethane (EDC)	0.925	0.0200	1.000	0	92.5	50.9	162				
Benzene	0.892	0.0200	1.000	0	89.2	64.3	133				
Trichloroethene (TCE)	1.19	0.0200	1.000	0	119	65.5	137				
1,2-Dichloropropane	1.27	0.0200	1.000	0	127	63.2	142				
Bromodichloromethane	1.22	0.0200	1.000	0	122	53.4	131				
Dibromomethane	1.17	0.0200	1.000	0	117	60.1	146				
cis-1,3-Dichloropropene	1.16	0.0200	1.000	0	116	59.1	143				
Toluene	1.14	0.0200	1.000	0	114	67.3	138				
trans-1,3-Dichloropropylene	1.18	0.0200	1.000	0	118	49.2	149				
1,1,2-Trichloroethane	1.08	0.0200	1.000	0	108	56.9	147				
1,3-Dichloropropane	1.05	0.0250	1.000	0	105	56.1	153				
Tetrachloroethene (PCE)	1.07	0.0250	1.000	0	107	52.7	150				
Dibromochloromethane	1.08	0.0250	1.000	0	108	70.6	144				
1,2-Dibromoethane (EDB)	1.08	0.00500	1.000	0	108	50.5	154				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20504** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **LCSS** Batch ID: **20504** Analysis Date: **4/26/2018** SeqNo: **833921**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.968	0.0250	1.000	0	96.8	84.9	125				
1,1,1,2-Tetrachloroethane	0.982	0.0250	1.000	0	98.2	65.9	141				
Ethylbenzene	1.01	0.0250	1.000	0	101	74	129				
m,p-Xylene	1.95	0.0500	2.000	0	97.7	70	124				
o-Xylene	0.968	0.0250	1.000	0	96.8	68.1	139				
Styrene	0.996	0.0250	1.000	0	99.6	73.3	146				
Isopropylbenzene	1.02	0.0250	1.000	0	102	70	130				
Bromoform	1.07	0.0500	1.000	0	107	44.3	130				
1,1,2,2-Tetrachloroethane	1.06	0.0200	1.000	0	106	44.8	165				
n-Propylbenzene	1.05	0.0250	1.000	0	105	75.8	139				
Bromobenzene	0.983	0.0200	1.000	0	98.3	49.2	144				
1,3,5-Trimethylbenzene	1.02	0.0250	1.000	0	102	76.5	135				
2-Chlorotoluene	1.01	0.0250	1.000	0	101	76.7	129				
4-Chlorotoluene	1.01	0.0250	1.000	0	101	77.5	125				
tert-Butylbenzene	0.993	0.0250	1.000	0	99.3	66.2	130				
1,2,3-Trichloropropane	1.04	0.0250	1.000	0	104	67.9	136				
1,2,4-Trichlorobenzene	0.998	0.0250	1.000	0	99.8	65.5	150				
sec-Butylbenzene	1.04	0.0500	1.000	0	104	75.6	133				
4-Isopropyltoluene	1.04	0.0500	1.000	0	104	76.8	131				
1,3-Dichlorobenzene	1.01	0.0200	1.000	0	101	72.8	128				
1,4-Dichlorobenzene	0.998	0.0200	1.000	0	99.8	72.6	126				
n-Butylbenzene	1.02	0.0250	1.000	0	102	78.4	140				
1,2-Dichlorobenzene	0.999	0.0200	1.000	0	99.9	72.8	126				
1,2-Dibromo-3-chloropropane	1.08	0.500	1.000	0	108	40.2	155				
1,2,4-Trimethylbenzene	1.03	0.0200	1.000	0	103	77.5	129				
Hexachlorobutadiene	0.988	0.0500	1.000	0	98.8	42	151				
Naphthalene	1.06	0.0500	1.000	0	106	46.5	167				
1,2,3-Trichlorobenzene	1.02	0.0200	1.000	0	102	64.5	149				
Surr: Dibromofluoromethane	1.23		1.250		98.2	56.5	129				
Surr: Toluene-d8	1.42		1.250		114	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.32		1.250		106	43.2	143				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20504**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **4/25/2018**		RunNo: **43140**			
Client ID: **LCSS**	Batch ID: **20504**					Analysis Date: **4/26/2018**		SeqNo: **833921**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **MB-20504**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **4/25/2018**		RunNo: **43140**			
Client ID: **MBLKS**	Batch ID: **20504**					Analysis Date: **4/26/2018**		SeqNo: **833922**			
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									
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	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									Q
Dibromomethane	ND	0.0200									Q
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20504** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **MBLKS** Batch ID: **20504** Analysis Date: **4/26/2018** SeqNo: **833922**

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: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-20504**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **4/25/2018**	RunNo: **43140**
Client ID:	**MBLKS**	Batch ID: **20504**		Analysis Date: **4/26/2018**	SeqNo: **833922**

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	ND	0.0200									
Surr: Dibromofluoromethane	1.35		1.250		108	56.5	129				
Surr: Toluene-d8	0.901		1.250		72.1	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.5	43.2	143				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID	**1804329-002BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **4/25/2018**	RunNo: **43140**
Client ID:	**SB-17-30**	Batch ID: **20504**		Analysis Date: **4/26/2018**	SeqNo: **833897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0225						0		30	
Chloromethane	ND	0.0563						0		30	
Vinyl chloride	ND	0.0281						0		30	
Bromomethane	ND	0.0563						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0225						0		30	
Chloroethane	ND	0.0563						0		30	
1,1-Dichloroethene	ND	0.0225						0		30	
Methylene chloride	ND	0.0225						0		30	
trans-1,2-Dichloroethene	ND	0.0225						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0563						0		30	
1,1-Dichloroethane	ND	0.0225						0		30	
2,2-Dichloropropane	ND	0.113						0		30	
cis-1,2-Dichloroethene	ND	0.0225						0		30	
Chloroform	ND	0.0225						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0281						0		30	
1,1-Dichloropropene	ND	0.0225						0		30	
Carbon tetrachloride	ND	0.0281						0		30	
1,2-Dichloroethane (EDC)	ND	0.0225						0		30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-30** Batch ID: **20504** Analysis Date: **4/26/2018** SeqNo: **833897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0225						0		30	
Trichloroethene (TCE)	ND	0.0225						0		30	
1,2-Dichloropropane	ND	0.0225						0		30	
Bromodichloromethane	ND	0.0225						0		30	Q
Dibromomethane	ND	0.0225						0		30	Q
cis-1,3-Dichloropropene	ND	0.0225						0		30	
Toluene	ND	0.0225						0		30	
trans-1,3-Dichloropropylene	ND	0.0225						0		30	
1,1,2-Trichloroethane	ND	0.0225						0		30	
1,3-Dichloropropane	ND	0.0281						0		30	
Tetrachloroethene (PCE)	ND	0.0281						0		30	
Dibromochloromethane	ND	0.0281						0		30	
1,2-Dibromoethane (EDB)	ND	0.00563						0		30	
Chlorobenzene	ND	0.0281						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0281						0		30	
Ethylbenzene	ND	0.0281						0		30	
m,p-Xylene	ND	0.0563						0		30	
o-Xylene	ND	0.0281						0		30	
Styrene	ND	0.0281						0		30	
Isopropylbenzene	ND	0.0281						0		30	
Bromoform	ND	0.0563						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0225						0		30	
n-Propylbenzene	ND	0.0281						0		30	
Bromobenzene	ND	0.0225						0		30	
1,3,5-Trimethylbenzene	ND	0.0281						0		30	
2-Chlorotoluene	ND	0.0281						0		30	
4-Chlorotoluene	ND	0.0281						0		30	
tert-Butylbenzene	ND	0.0281						0		30	
1,2,3-Trichloropropane	ND	0.0281						0		30	
1,2,4-Trichlorobenzene	ND	0.0281						0		30	
sec-Butylbenzene	ND	0.0563						0		30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-30** Batch ID: **20504** Analysis Date: **4/26/2018** SeqNo: **833897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Isopropyltoluene	ND	0.0563						0		30	
1,3-Dichlorobenzene	ND	0.0225						0		30	
1,4-Dichlorobenzene	ND	0.0225						0		30	
n-Butylbenzene	ND	0.0281						0		30	
1,2-Dichlorobenzene	ND	0.0225						0		30	
1,2-Dibromo-3-chloropropane	ND	0.563						0		30	
1,2,4-Trimethylbenzene	ND	0.0225						0		30	
Hexachlorobutadiene	ND	0.0563						0		30	
Naphthalene	ND	0.0563						0		30	
1,2,3-Trichlorobenzene	ND	0.0225						0		30	
Surr: Dibromofluoromethane	1.33		1.407		94.3	56.5	129		0		
Surr: Toluene-d8	1.20		1.407		85.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.28		1.407		91.3	43.2	143		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804329-003BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.06	0.0185	0.9243	0	114	43.5	121				
Chloromethane	0.687	0.0462	0.9243	0	74.3	45	130				
Vinyl chloride	0.839	0.0231	0.9243	0	90.7	43.6	150				
Bromomethane	2.17	0.0462	0.9243	0	235	21.3	120				S
Trichlorofluoromethane (CFC-11)	1.36	0.0185	0.9243	0	147	35	131				S
Chloroethane	1.09	0.0462	0.9243	0	118	31.9	123				
1,1-Dichloroethene	1.24	0.0185	0.9243	0	134	47.3	147				
Methylene chloride	0.968	0.0185	0.9243	0	105	54.7	142				
trans-1,2-Dichloroethene	0.969	0.0185	0.9243	0	105	52	136				
Methyl tert-butyl ether (MTBE)	0.846	0.0462	0.9243	0	91.5	58.5	167				
1,1-Dichloroethane	0.967	0.0185	0.9243	0	105	51.8	141				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-003BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	0.941	0.0924	0.9243	0	102	36	123				
cis-1,2-Dichloroethene	0.919	0.0185	0.9243	0	99.5	58.6	136				
Chloroform	0.832	0.0185	0.9243	0	90.0	53.2	129				
1,1,1-Trichloroethane (TCA)	0.939	0.0231	0.9243	0	102	58.3	145				
1,1-Dichloropropene	0.911	0.0185	0.9243	0	98.5	55.1	138				
Carbon tetrachloride	0.972	0.0231	0.9243	0	105	53.3	144				
1,2-Dichloroethane (EDC)	0.831	0.0185	0.9243	0	89.9	51.3	139				
Benzene	0.878	0.0185	0.9243	0	95.0	63.5	133				
Trichloroethene (TCE)	0.931	0.0185	0.9243	0	101	61.6	147				
1,2-Dichloropropane	0.896	0.0185	0.9243	0	97.0	59	136				
Bromodichloromethane	0.879	0.0185	0.9243	0	95.1	50.7	141				
Dibromomethane	0.818	0.0185	0.9243	0	88.5	50.6	137				
cis-1,3-Dichloropropene	0.813	0.0185	0.9243	0	87.9	50.4	138				
Toluene	0.894	0.0185	0.9243	0	96.7	63.4	132				
trans-1,3-Dichloropropylene	0.733	0.0185	0.9243	0	79.3	44.1	147				
1,1,2-Trichloroethane	0.678	0.0185	0.9243	0	73.4	51.6	137				
1,3-Dichloropropane	0.628	0.0231	0.9243	0	67.9	53.1	134				
Tetrachloroethene (PCE)	0.979	0.0231	0.9243	0.02855	103	35.6	158				
Dibromochloromethane	0.732	0.0231	0.9243	0	79.2	55.3	140				
1,2-Dibromoethane (EDB)	0.682	0.00462	0.9243	0	73.8	50.4	136				
Chlorobenzene	0.953	0.0231	0.9243	0	103	60	133				
1,1,1,2-Tetrachloroethane	0.938	0.0231	0.9243	0	101	53.1	142				
Ethylbenzene	0.981	0.0231	0.9243	0	106	54.5	134				
m,p-Xylene	1.96	0.0462	1.849	0	106	53.1	132				
o-Xylene	0.961	0.0231	0.9243	0	104	53.3	139				
Styrene	0.953	0.0231	0.9243	0	103	51.1	132				
Isopropylbenzene	1.06	0.0231	0.9243	0	114	58.9	138				
Bromoform	0.927	0.0462	0.9243	0	100	57.9	130				
1,1,2,2-Tetrachloroethane	0.786	0.0185	0.9243	0	85.1	51.9	131				
n-Propylbenzene	1.03	0.0231	0.9243	0	111	53.6	140				
Bromobenzene	0.998	0.0185	0.9243	0	108	54.2	140				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-003BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833899**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	1.02	0.0231	0.9243	0	110	51.8	136				
2-Chlorotoluene	0.930	0.0231	0.9243	0	101	51.6	136				
4-Chlorotoluene	0.944	0.0231	0.9243	0	102	50.1	139				
tert-Butylbenzene	1.06	0.0231	0.9243	0	115	50.5	135				
1,2,3-Trichloropropane	0.764	0.0231	0.9243	0	82.6	50.5	131				
1,2,4-Trichlorobenzene	0.984	0.0231	0.9243	0	106	50.8	130				
sec-Butylbenzene	1.08	0.0462	0.9243	0	117	52.6	141				
4-Isopropyltoluene	1.07	0.0462	0.9243	0	116	52.9	134				
1,3-Dichlorobenzene	0.962	0.0185	0.9243	0	104	52.6	131				
1,4-Dichlorobenzene	0.969	0.0185	0.9243	0	105	52.9	129				
n-Butylbenzene	0.911	0.0231	0.9243	0	98.5	52.6	130				
1,2-Dichlorobenzene	0.942	0.0185	0.9243	0	102	55.8	129				
1,2-Dibromo-3-chloropropane	0.703	0.462	0.9243	0	76.1	40.5	131				
1,2,4-Trimethylbenzene	1.01	0.0185	0.9243	0	109	50.6	137				
Hexachlorobutadiene	1.15	0.0462	0.9243	0	124	40.6	158				
Naphthalene	0.847	0.0462	0.9243	0	91.6	52.3	124				
1,2,3-Trichlorobenzene	0.924	0.0185	0.9243	0	100	54.4	124				
Surr: Dibromofluoromethane	1.16		1.155		100	56.5	129				
Surr: Toluene-d8	1.03		1.155		89.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.16		1.155		100	43.2	143				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID **1804329-003BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.08	0.0185	0.9243	0	117	43.5	121	1.057	1.94	30	
Chloromethane	0.720	0.0462	0.9243	0	77.9	45	130	0.6870	4.75	30	
Vinyl chloride	0.870	0.0231	0.9243	0	94.1	43.6	150	0.8386	3.62	30	
Bromomethane	2.19	0.0462	0.9243	0	237	21.3	120	2.171	0.810	30	S

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-003BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	1.35	0.0185	0.9243	0	146	35	131	1.361	0.755	30	S
Chloroethane	1.11	0.0462	0.9243	0	120	31.9	123	1.086	2.35	30	
1,1-Dichloroethene	1.29	0.0185	0.9243	0	139	47.3	147	1.242	3.56	30	
Methylene chloride	0.957	0.0185	0.9243	0	104	54.7	142	0.9681	1.17	30	
trans-1,2-Dichloroethene	0.990	0.0185	0.9243	0	107	52	136	0.9691	2.09	30	
Methyl tert-butyl ether (MTBE)	0.863	0.0462	0.9243	0	93.4	58.5	167	0.8461	1.98	30	
1,1-Dichloroethane	0.957	0.0185	0.9243	0	103	51.8	141	0.9667	1.06	30	
2,2-Dichloropropane	0.933	0.0924	0.9243	0	101	36	123	0.9408	0.884	30	
cis-1,2-Dichloroethene	0.909	0.0185	0.9243	0	98.4	58.6	136	0.9194	1.09	30	
Chloroform	0.865	0.0185	0.9243	0	93.6	53.2	129	0.8323	3.86	30	
1,1,1-Trichloroethane (TCA)	0.946	0.0231	0.9243	0	102	58.3	145	0.9394	0.688	30	
1,1-Dichloropropene	0.907	0.0185	0.9243	0	98.1	55.1	138	0.9108	0.409	30	
Carbon tetrachloride	0.979	0.0231	0.9243	0	106	53.3	144	0.9722	0.732	30	
1,2-Dichloroethane (EDC)	0.846	0.0185	0.9243	0	91.6	51.3	139	0.8311	1.82	30	
Benzene	0.888	0.0185	0.9243	0	96.1	63.5	133	0.8783	1.13	30	
Trichloroethene (TCE)	0.961	0.0185	0.9243	0	104	61.6	147	0.9308	3.22	30	
1,2-Dichloropropane	0.925	0.0185	0.9243	0	100	59	136	0.8962	3.18	30	
Bromodichloromethane	0.896	0.0185	0.9243	0	96.9	50.7	141	0.8791	1.91	30	
Dibromomethane	0.819	0.0185	0.9243	0	88.6	50.6	137	0.8179	0.0831	30	
cis-1,3-Dichloropropene	0.851	0.0185	0.9243	0	92.0	50.4	138	0.8128	4.54	30	
Toluene	0.935	0.0185	0.9243	0	101	63.4	132	0.8939	4.52	30	
trans-1,3-Dichloropropylene	0.794	0.0185	0.9243	0	85.9	44.1	147	0.7329	7.95	30	
1,1,2-Trichloroethane	0.695	0.0185	0.9243	0	75.2	51.6	137	0.6784	2.45	30	
1,3-Dichloropropane	0.662	0.0231	0.9243	0	71.7	53.1	134	0.6279	5.36	30	
Tetrachloroethene (PCE)	1.01	0.0231	0.9243	0.02855	106	35.6	158	0.9791	2.71	30	
Dibromochloromethane	0.762	0.0231	0.9243	0	82.5	55.3	140	0.7317	4.11	30	
1,2-Dibromoethane (EDB)	0.719	0.00462	0.9243	0	77.8	50.4	136	0.6825	5.27	30	
Chlorobenzene	0.941	0.0231	0.9243	0	102	60	133	0.9534	1.28	30	
1,1,1,2-Tetrachloroethane	0.927	0.0231	0.9243	0	100	53.1	142	0.9380	1.20	30	
Ethylbenzene	0.973	0.0231	0.9243	0	105	54.5	134	0.9815	0.851	30	
m,p-Xylene	1.93	0.0462	1.849	0	105	53.1	132	1.961	1.39	30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804329-003BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **SB-17-40** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833900**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	0.961	0.0231	0.9243	0	104	53.3	139	0.9611	0.0662	30	
Styrene	0.940	0.0231	0.9243	0	102	51.1	132	0.9533	1.39	30	
Isopropylbenzene	1.04	0.0231	0.9243	0	113	58.9	138	1.055	1.27	30	
Bromoform	0.893	0.0462	0.9243	0	96.6	57.9	130	0.9272	3.74	30	
1,1,2,2-Tetrachloroethane	0.766	0.0185	0.9243	0	82.9	51.9	131	0.7863	2.57	30	
n-Propylbenzene	1.03	0.0231	0.9243	0	112	53.6	140	1.027	0.744	30	
Bromobenzene	0.967	0.0185	0.9243	0	105	54.2	140	0.9976	3.11	30	
1,3,5-Trimethylbenzene	1.00	0.0231	0.9243	0	109	51.8	136	1.019	1.45	30	
2-Chlorotoluene	0.938	0.0231	0.9243	0	101	51.6	136	0.9303	0.803	30	
4-Chlorotoluene	0.939	0.0231	0.9243	0	102	50.1	139	0.9440	0.485	30	
tert-Butylbenzene	1.03	0.0231	0.9243	0	111	50.5	135	1.058	2.97	30	
1,2,3-Trichloropropane	0.782	0.0231	0.9243	0	84.6	50.5	131	0.7637	2.35	30	
1,2,4-Trichlorobenzene	1.09	0.0231	0.9243	0	118	50.8	130	0.9841	10.3	30	
sec-Butylbenzene	1.06	0.0462	0.9243	0	115	52.6	141	1.083	1.66	30	
4-Isopropyltoluene	1.06	0.0462	0.9243	0	114	52.9	134	1.074	1.55	30	
1,3-Dichlorobenzene	0.952	0.0185	0.9243	0	103	52.6	131	0.9617	1.04	30	
1,4-Dichlorobenzene	0.963	0.0185	0.9243	0	104	52.9	129	0.9688	0.594	30	
n-Butylbenzene	0.976	0.0231	0.9243	0	106	52.6	130	0.9106	6.91	30	
1,2-Dichlorobenzene	0.953	0.0185	0.9243	0	103	55.8	129	0.9423	1.17	30	
1,2-Dibromo-3-chloropropane	0.892	0.462	0.9243	0	96.5	40.5	131	0.7033	23.6	30	
1,2,4-Trimethylbenzene	0.986	0.0185	0.9243	0	107	50.6	137	1.008	2.15	30	
Hexachlorobutadiene	1.23	0.0462	0.9243	0	134	40.6	158	1.151	6.99	30	
Naphthalene	1.01	0.0462	0.9243	0	110	52.3	124	0.8467	18.0	30	
1,2,3-Trichlorobenzene	1.05	0.0185	0.9243	0	114	54.4	124	0.9240	13.2	30	
Surr: Dibromofluoromethane	1.19		1.155		103	56.5	129		0		
Surr: Toluene-d8	1.08		1.155		93.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.17		1.155		101	43.2	143		0		

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804377-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **BATCH** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833914**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0192						0		30	
Chloromethane	ND	0.0481						0		30	
Vinyl chloride	ND	0.0241						0		30	
Bromomethane	ND	0.0481						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0192						0		30	
Chloroethane	ND	0.0481						0		30	
1,1-Dichloroethene	ND	0.0192						0		30	
Methylene chloride	ND	0.0192						0		30	
trans-1,2-Dichloroethene	ND	0.0192						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0481						0		30	
1,1-Dichloroethane	ND	0.0192						0		30	
2,2-Dichloropropane	ND	0.0962						0		30	
cis-1,2-Dichloroethene	ND	0.0192						0		30	
Chloroform	ND	0.0192						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0241						0		30	
1,1-Dichloropropene	ND	0.0192						0		30	
Carbon tetrachloride	ND	0.0241						0		30	
1,2-Dichloroethane (EDC)	ND	0.0192						0		30	
Benzene	ND	0.0192						0		30	
Trichloroethene (TCE)	ND	0.0192						0		30	
1,2-Dichloropropane	ND	0.0192						0		30	
Bromodichloromethane	ND	0.0192						0		30	Q
Dibromomethane	ND	0.0192						0		30	Q
cis-1,3-Dichloropropene	ND	0.0192						0		30	
Toluene	ND	0.0192						0		30	
trans-1,3-Dichloropropylene	ND	0.0192						0		30	
1,1,2-Trichloroethane	ND	0.0192						0		30	
1,3-Dichloropropane	ND	0.0241						0		30	
Tetrachloroethene (PCE)	ND	0.0241						0		30	
Dibromochloromethane	ND	0.0241						0		30	
1,2-Dibromoethane (EDB)	ND	0.00481						0		30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804377-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/25/2018** RunNo: **43140**
Client ID: **BATCH** Batch ID: **20504** Analysis Date: **4/27/2018** SeqNo: **833914**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.0241						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0241						0		30	
Ethylbenzene	ND	0.0241						0		30	
m,p-Xylene	ND	0.0481						0		30	
o-Xylene	ND	0.0241						0		30	
Styrene	ND	0.0241						0		30	
Isopropylbenzene	ND	0.0241						0		30	
Bromoform	ND	0.0481						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0192						0		30	
n-Propylbenzene	ND	0.0241						0		30	
Bromobenzene	ND	0.0192						0		30	
1,3,5-Trimethylbenzene	ND	0.0241						0		30	
2-Chlorotoluene	ND	0.0241						0		30	
4-Chlorotoluene	ND	0.0241						0		30	
tert-Butylbenzene	ND	0.0241						0		30	
1,2,3-Trichloropropane	ND	0.0241						0		30	
1,2,4-Trichlorobenzene	ND	0.0241						0		30	
sec-Butylbenzene	ND	0.0481						0		30	
4-Isopropyltoluene	ND	0.0481						0		30	
1,3-Dichlorobenzene	ND	0.0192						0		30	
1,4-Dichlorobenzene	ND	0.0192						0		30	
n-Butylbenzene	ND	0.0241						0		30	
1,2-Dichlorobenzene	ND	0.0192						0		30	
1,2-Dibromo-3-chloropropane	ND	0.481						0		30	
1,2,4-Trimethylbenzene	ND	0.0192						0		30	
Hexachlorobutadiene	ND	0.0481						0		30	
Naphthalene	ND	0.0481						0		30	
1,2,3-Trichlorobenzene	ND	0.0192						0		30	
Surr: Dibromofluoromethane	1.35		1.203		112	56.5	129		0		
Surr: Toluene-d8	1.19		1.203		99.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.19		1.203		98.6	43.2	143		0		

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804377-002BDUP**	SampType: **DUP**			Units: **mg/Kg-dry**	Prep Date: **4/25/2018**		RunNo: **43140**		
Client ID: **BATCH**	Batch ID: **20504**				Analysis Date: **4/27/2018**		SeqNo: **833914**		
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 (<20%RSD, <20% Drift)

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20470** SampType: **LCS** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **LCSW** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831735**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.7	1.00	20.00	0	78.7	18.7	171				
Chloromethane	19.9	2.00	20.00	0	99.7	38.5	171				
Vinyl chloride	18.1	0.200	20.00	0	90.4	48	145				
Bromomethane	15.2	1.00	20.00	0	76.0	32.5	184				
Trichlorofluoromethane (CFC-11)	20.0	1.00	20.00	0	100	43.5	149				
Chloroethane	22.2	1.00	20.00	0	111	43.8	168				
1,1-Dichloroethene	20.4	1.00	20.00	0	102	57.5	150				
Methylene chloride	20.6	1.00	20.00	0	103	67.1	131				
trans-1,2-Dichloroethene	21.2	1.00	20.00	0	106	71.7	129				
Methyl tert-butyl ether (MTBE)	21.9	1.00	20.00	0	109	58	138				
1,1-Dichloroethane	29.2	1.00	20.00	0	146	67.9	134				S
2,2-Dichloropropane	40.6	2.00	20.00	0	203	26.5	185				S
cis-1,2-Dichloroethene	21.0	1.00	20.00	0	105	70.2	139				
Chloroform	21.7	1.00	20.00	0	108	66.3	131				
1,1,1-Trichloroethane (TCA)	21.1	1.00	20.00	0	106	63	140				
1,1-Dichloropropene	21.3	1.00	20.00	0	106	69.9	124				
Carbon tetrachloride	21.4	1.00	20.00	0	107	66.2	134				
1,2-Dichloroethane (EDC)	20.6	1.00	20.00	0	103	67	126				
Benzene	21.5	1.00	20.00	0	107	69.3	132				
Trichloroethene (TCE)	20.5	0.500	20.00	0	103	65.2	136				
1,2-Dichloropropane	21.7	1.00	20.00	0	109	70.5	130				
Bromodichloromethane	22.0	1.00	20.00	0	110	67.2	137				
Dibromomethane	21.9	1.00	20.00	0	109	69.3	143				
cis-1,3-Dichloropropene	22.1	1.00	20.00	0	110	62.6	137				
Toluene	22.0	1.00	20.00	0	110	61.3	145				
trans-1,3-Dichloropropylene	22.2	1.00	20.00	0	111	56.5	163				
1,1,2-Trichloroethane	20.9	1.00	20.00	0	105	71.7	131				
1,3-Dichloropropane	22.0	1.00	20.00	0	110	73.5	127				
Tetrachloroethene (PCE)	20.8	1.00	20.00	0	104	47.5	147				
Dibromochloromethane	22.2	1.00	20.00	0	111	67.2	134				
1,2-Dibromoethane (EDB)	20.7	0.250	20.00	0	103	73.6	125				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20470**	SampType: **LCS**	Units: **µg/L**	Prep Date: **4/20/2018**	RunNo: **43035**
Client ID: **LCSW**	Batch ID: **20470**		Analysis Date: **4/21/2018**	SeqNo: **831735**

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	20.6	1.00	20.00	0	103	76.8	124				
Ethylbenzene	21.4	1.00	20.00	0	107	72	130				
m,p-Xylene	42.3	1.00	40.00	0	106	70.3	134				
o-Xylene	21.7	1.00	20.00	0	108	72.1	131				
Styrene	21.2	1.00	20.00	0	106	64.3	140				
Isopropylbenzene	21.3	1.00	20.00	0	106	73.9	128				
Bromoform	21.4	2.00	20.00	0	107	55.3	141				
1,1,2,2-Tetrachloroethane	21.7	1.00	20.00	0	109	62.9	132				
n-Propylbenzene	21.9	1.00	20.00	0	109	74.5	127				
Bromobenzene	20.4	1.00	20.00	0	102	71	131				
1,3,5-Trimethylbenzene	21.1	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	21.0	1.00	20.00	0	105	70.8	130				
4-Chlorotoluene	20.3	1.00	20.00	0	102	70.1	131				
tert-Butylbenzene	20.0	1.00	20.00	0	99.9	68.2	131				
1,2,3-Trichloropropane	20.9	1.00	20.00	0	104	67.7	131				
1,2,4-Trichlorobenzene	21.0	2.00	20.00	0	105	41	139				
sec-Butylbenzene	20.9	1.00	20.00	0	105	72	129				
4-Isopropyltoluene	20.9	1.00	20.00	0	104	69.2	130				
1,3-Dichlorobenzene	19.7	1.00	20.00	0	98.3	80.4	124				
1,4-Dichlorobenzene	20.9	1.00	20.00	0	104	66.8	119				
n-Butylbenzene	22.2	1.00	20.00	0	111	73.8	127				
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	69.7	119				
1,2-Dibromo-3-chloropropane	22.9	1.00	20.00	0	114	63.1	136				
1,2,4-Trimethylbenzene	21.1	1.00	20.00	0	106	73.4	127				
Hexachloro-1,3-butadiene	22.1	4.00	20.00	0	110	58.6	138				
Naphthalene	19.7	1.00	20.00	0	98.3	41.8	165				
1,2,3-Trichlorobenzene	20.9	4.00	20.00	0	104	35.8	155				
Surr: Dibromofluoromethane	32.5		25.00		130	45.4	152				
Surr: Toluene-d8	25.8		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.2		25.00		105	64.2	128				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20470**	SampType: **LCS**			Units: **µg/L**		Prep Date: **4/20/2018**		RunNo: **43035**	
Client ID:	**LCSW**	Batch ID: **20470**					Analysis Date: **4/21/2018**		SeqNo: **831735**	
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-20470**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **4/20/2018**		RunNo: **43035**	
Client ID:	**MBLKW**	Batch ID: **20470**					Analysis Date: **4/21/2018**		SeqNo: **831736**	
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									
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: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20470**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **4/20/2018**	RunNo: **43035**
Client ID: **MBLKW**	Batch ID: **20470**		Analysis Date: **4/21/2018**	SeqNo: **831736**

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: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20470** SampType: **MBLK** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **MBLKW** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831736**

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	28.8		25.00		115	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.3	64.2	128				

Sample ID **1804338-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831718**

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	
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	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804338-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831718**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804338-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831718**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	29.1		25.00		116	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		97.7	64.2	128		0		

Sample ID **1804338-006ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831724**

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: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804338-006ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831724**

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: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804338-006ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831724**

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	29.1		25.00		116	45.4	152		0		
Surr: Toluene-d8	25.5		25.00		102	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.0	64.2	128		0		

Sample ID **1804334-002EMS** SampType: **MS** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831714**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	14.9	1.00	20.00	0	74.3	33.3	122				
Chloromethane	18.7	2.00	20.00	0	93.5	39.7	143				
Vinyl chloride	18.2	0.200	20.00	0	91.1	41	165				
Bromomethane	13.9	1.00	20.00	0	69.3	31.5	135				
Trichlorofluoromethane (CFC-11)	22.1	1.00	20.00	0	111	54.7	138				
Chloroethane	22.1	1.00	20.00	0	110	49.9	143				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804334-002EMS** SampType: **MS** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831714**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21.7	1.00	20.00	0	109	51.6	164				
Methylene chloride	19.5	1.00	20.00	0	97.5	61.6	135				
trans-1,2-Dichloroethene	21.4	1.00	20.00	0	107	63.5	138				
Methyl tert-butyl ether (MTBE)	20.6	1.00	20.00	0	103	60.9	132				
1,1-Dichloroethane	29.4	1.00	20.00	0	147	55.7	151				
2,2-Dichloropropane	29.6	2.00	20.00	0	148	37.7	150				
cis-1,2-Dichloroethene	20.7	1.00	20.00	0	103	60	154				
Chloroform	21.1	1.00	20.00	0	105	48.1	140				
1,1,1-Trichloroethane (TCA)	21.9	1.00	20.00	0	110	64.2	146				
1,1-Dichloropropene	22.9	1.00	20.00	0	114	73.8	136				
Carbon tetrachloride	22.5	1.00	20.00	0	112	62.7	146				
1,2-Dichloroethane (EDC)	19.3	1.00	20.00	0	96.7	63.4	137				
Benzene	21.1	1.00	20.00	0	106	65.4	138				
Trichloroethene (TCE)	20.5	0.500	20.00	0	103	60.4	134				
1,2-Dichloropropane	20.9	1.00	20.00	0	104	62.6	138				
Bromodichloromethane	20.9	1.00	20.00	0	105	59.4	139				
Dibromomethane	20.8	1.00	20.00	0	104	58.7	148				
cis-1,3-Dichloropropene	20.1	1.00	20.00	0	100	63.8	132				
Toluene	21.2	1.00	20.00	0	106	52	147				
trans-1,3-Dichloropropylene	20.2	1.00	20.00	0	101	57.7	125				
1,1,2-Trichloroethane	19.6	1.00	20.00	0	97.8	57.5	153				
1,3-Dichloropropane	19.1	1.00	20.00	0	95.5	54.1	157				
Tetrachloroethene (PCE)	21.7	1.00	20.00	0	109	50.3	133				
Dibromochloromethane	20.7	1.00	20.00	0	103	61.6	139				
1,2-Dibromoethane (EDB)	19.7	0.250	20.00	0	98.5	63.2	134				
Chlorobenzene	19.5	1.00	20.00	0	97.7	65.8	134				
1,1,1,2-Tetrachloroethane	18.9	1.00	20.00	0	94.3	65.4	135				
Ethylbenzene	20.6	1.00	20.00	0	103	64.5	136				
m,p-Xylene	39.9	1.00	40.00	0	99.7	63.3	135				
o-Xylene	19.4	1.00	20.00	0	97.1	64.8	150				
Styrene	19.6	1.00	20.00	0	97.8	52.9	163				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804334-002EMS** SampType: **MS** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831714**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	20.3	1.00	20.00	0	101	56	147				
Bromoform	19.2	2.00	20.00	0	95.9	57.7	139				
1,1,2,2-Tetrachloroethane	20.7	1.00	20.00	0	103	59.8	146				
n-Propylbenzene	21.3	1.00	20.00	0	107	57.6	142				
Bromobenzene	18.9	1.00	20.00	0	94.5	69.3	157				
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	99.9	59.9	136				
2-Chlorotoluene	18.9	1.00	20.00	0	94.7	61.7	134				
4-Chlorotoluene	19.0	1.00	20.00	0	95.2	58.4	134				
tert-Butylbenzene	20.3	1.00	20.00	0	101	66.8	141				
1,2,3-Trichloropropane	18.7	1.00	20.00	0	93.6	62.4	129				
1,2,4-Trichlorobenzene	20.0	2.00	20.00	0	100	50.9	133				
sec-Butylbenzene	21.2	1.00	20.00	0	106	56	146				
4-Isopropyltoluene	20.6	1.00	20.00	0	103	56.4	136				
1,3-Dichlorobenzene	18.9	1.00	20.00	0	94.7	58.2	128				
1,4-Dichlorobenzene	20.1	1.00	20.00	0	101	60.1	123				
n-Butylbenzene	22.9	1.00	20.00	0	114	54.6	135				
1,2-Dichlorobenzene	20.1	1.00	20.00	0	101	65.4	133				
1,2-Dibromo-3-chloropropane	22.0	1.00	20.00	0	110	51.8	142				
1,2,4-Trimethylbenzene	19.7	1.00	20.00	0	98.5	63.7	132				
Hexachloro-1,3-butadiene	22.7	4.00	20.00	0	114	58.1	130				
Naphthalene	20.0	1.00	20.00	0	99.9	50.7	154				
1,2,3-Trichlorobenzene	20.4	4.00	20.00	0	102	57	131				
Surr: Dibromofluoromethane	32.4		25.00		130	45.4	152				
Surr: Toluene-d8	25.9		25.00		104	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.4		25.00		102	64.2	128				

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804334-002EMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831715**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	15.2	1.00	20.00	0	75.9	33.3	122	14.85	2.14	30	
Chloromethane	19.0	2.00	20.00	0	95.0	39.7	143	18.71	1.49	30	
Vinyl chloride	18.3	0.200	20.00	0	91.5	41	165	18.23	0.430	30	
Bromomethane	18.0	1.00	20.00	0	90.2	31.5	135	13.87	26.2	30	
Trichlorofluoromethane (CFC-11)	22.9	1.00	20.00	0	115	54.7	138	22.11	3.56	30	
Chloroethane	22.9	1.00	20.00	0	114	49.9	143	22.09	3.42	30	
1,1-Dichloroethene	22.0	1.00	20.00	0	110	51.6	164	21.75	0.960	30	
Methylene chloride	19.8	1.00	20.00	0	99.2	61.6	135	19.49	1.79	30	
trans-1,2-Dichloroethene	21.6	1.00	20.00	0	108	63.5	138	21.36	1.29	30	
Methyl tert-butyl ether (MTBE)	26.0	1.00	20.00	0	130	60.9	132	20.56	23.4	30	
1,1-Dichloroethane	31.9	1.00	20.00	0	159	55.7	151	29.37	8.22	30	S
2,2-Dichloropropane	46.9	2.00	20.00	0	234	37.7	150	29.62	45.1	30	RS
cis-1,2-Dichloroethene	21.1	1.00	20.00	0	106	60	154	20.67	2.20	30	
Chloroform	21.7	1.00	20.00	0	109	48.1	140	21.10	2.88	30	
1,1,1-Trichloroethane (TCA)	22.8	1.00	20.00	0	114	64.2	146	21.91	4.08	30	
1,1-Dichloropropene	23.4	1.00	20.00	0	117	73.8	136	22.86	2.29	30	
Carbon tetrachloride	23.7	1.00	20.00	0	118	62.7	146	22.49	5.13	30	
1,2-Dichloroethane (EDC)	19.9	1.00	20.00	0	99.7	63.4	137	19.34	3.04	30	
Benzene	21.5	1.00	20.00	0	107	65.4	138	21.13	1.52	30	
Trichloroethene (TCE)	20.7	0.500	20.00	0	103	60.4	134	20.54	0.724	30	
1,2-Dichloropropane	21.0	1.00	20.00	0	105	62.6	138	20.87	0.559	30	
Bromodichloromethane	21.5	1.00	20.00	0	107	59.4	139	20.93	2.66	30	
Dibromomethane	21.8	1.00	20.00	0	109	58.7	148	20.83	4.45	30	
cis-1,3-Dichloropropene	21.6	1.00	20.00	0	108	63.8	132	20.05	7.65	30	
Toluene	21.6	1.00	20.00	0	108	52	147	21.17	1.95	30	
trans-1,3-Dichloropropylene	21.7	1.00	20.00	0	109	57.7	125	20.16	7.59	30	
1,1,2-Trichloroethane	20.3	1.00	20.00	0	102	57.5	153	19.55	3.78	30	
1,3-Dichloropropane	22.7	1.00	20.00	0	113	54.1	157	19.10	17.1	30	
Tetrachloroethene (PCE)	22.1	1.00	20.00	0	110	50.3	133	21.72	1.53	30	
Dibromochloromethane	22.0	1.00	20.00	0	110	61.6	139	20.67	6.22	30	
1,2-Dibromoethane (EDB)	21.3	0.250	20.00	0	106	63.2	134	19.71	7.64	30	

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804334-002EMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/20/2018** RunNo: **43035**
Client ID: **BATCH** Batch ID: **20470** Analysis Date: **4/21/2018** SeqNo: **831715**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.8	1.00	20.00	0	104	65.8	134	19.55	6.11	30	
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	100	65.4	135	18.86	6.13	30	
Ethylbenzene	21.3	1.00	20.00	0	106	64.5	136	20.59	3.23	30	
m,p-Xylene	41.7	1.00	40.00	0	104	63.3	135	39.88	4.49	30	
o-Xylene	21.4	1.00	20.00	0	107	64.8	150	19.42	9.61	30	
Styrene	20.8	1.00	20.00	0	104	52.9	163	19.56	6.10	30	
Isopropylbenzene	22.5	1.00	20.00	0	113	56	147	20.25	10.7	30	
Bromoform	21.7	2.00	20.00	0	109	57.7	139	19.17	12.5	30	
1,1,2,2-Tetrachloroethane	24.5	1.00	20.00	0	123	59.8	146	20.68	17.0	30	
n-Propylbenzene	23.2	1.00	20.00	0	116	57.6	142	21.34	8.40	30	
Bromobenzene	20.5	1.00	20.00	0	102	69.3	157	18.89	7.98	30	
1,3,5-Trimethylbenzene	21.9	1.00	20.00	0	109	59.9	136	19.98	9.11	30	
2-Chlorotoluene	21.1	1.00	20.00	0	105	61.7	134	18.94	10.7	30	
4-Chlorotoluene	21.2	1.00	20.00	0	106	58.4	134	19.04	10.7	30	
tert-Butylbenzene	22.8	1.00	20.00	0	114	66.8	141	20.25	11.6	30	
1,2,3-Trichloropropane	21.6	1.00	20.00	0	108	62.4	129	18.72	14.4	30	
1,2,4-Trichlorobenzene	19.7	2.00	20.00	0	98.6	50.9	133	19.99	1.39	30	
sec-Butylbenzene	23.3	1.00	20.00	0	117	56	146	21.22	9.43	30	
4-Isopropyltoluene	22.2	1.00	20.00	0	111	56.4	136	20.64	7.32	30	
1,3-Dichlorobenzene	22.2	1.00	20.00	0	111	58.2	128	18.94	15.7	30	
1,4-Dichlorobenzene	20.4	1.00	20.00	0	102	60.1	123	20.11	1.65	30	
n-Butylbenzene	23.4	1.00	20.00	0	117	54.6	135	22.85	2.49	30	
1,2-Dichlorobenzene	21.3	1.00	20.00	0	106	65.4	133	20.13	5.43	30	
1,2-Dibromo-3-chloropropane	25.5	1.00	20.00	0	127	51.8	142	21.98	14.8	30	
1,2,4-Trimethylbenzene	21.4	1.00	20.00	0	107	63.7	132	19.70	8.07	30	
Hexachloro-1,3-butadiene	23.1	4.00	20.00	0	115	58.1	130	22.72	1.60	30	
Naphthalene	19.6	1.00	20.00	0	97.9	50.7	154	19.98	2.02	30	
1,2,3-Trichlorobenzene	19.3	4.00	20.00	0	96.5	57	131	20.37	5.41	30	
Surr: Dibromofluoromethane	33.4		25.00		134	45.4	152		0		
Surr: Toluene-d8	25.8		25.00		103	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.3		25.00		105	64.2	128		0		

Work Order: 1804329
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804334-002EMSD**	SampType: **MSD**			Units: **µg/L**		Prep Date: **4/20/2018**			RunNo: **43035**		
Client ID: **BATCH**	Batch ID: **20470**					Analysis Date: **4/21/2018**			SeqNo: **831715**		
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.
R - High RPD observed.

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1804329**
Logged by:	**Brianna Barnes**	Date Received:	**4/20/2018 8:32:00 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	4.1
Sample	3.2
Temp Blank	2.6

* 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: 4/18/18 Page: 1 of: 1

Laboratory Project No (internal): 1804329

Project Name: MVSC

Special Remarks:

Client: PES Environmental, Inc.

Project No: 1358.001.07.009

Address: 1215 4th Ave Suite 1350

Collected by: C. DeBoer

City, State, Zip: Seattle WA 98161

Location: Normandy Park

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)	HFID				Comments
1	SB-17-20	4.18.18	1200	Soil	X																	
2	SB-17-30		1230		X																	
3	SB-17-40		1250		X																	
4	SB-18-40		1510		X																	
5	SB-18-30		1435		X																	
6	SB-19-GW	4/19/18	1045	GW	X																	
7	SB-20-GW		1345		X																	
8	SB-21-GW		1535		X																	
9	TRIP BLANK	—	—	-													X					
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 [signature]	4/20/18 700	x [signature]	4/20/18 0832
Relinquished	Date/Time	Received	Date/Time
x		x	

MEMORANDUM

TO: Project File **DATE:** June 12, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: 1358.001.01.003

TASK: April 18 and 19, 2018 Soil and Groundwater Samples

LAB: Fremont Work Order Number 1804329

Five (5) soil samples, three (3) groundwater samples, and a trip blank were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on April 18 and 19, 2018. Samples associated with Work Order Number 1804329 were analyzed for VOCs by USEPA Method 8260C. The trip blank was placed on hold. Laboratory analytical services were provided by Fremont Analytical (Fremont) of Seattle, Washington.

The monitoring event occurred between April 16 and 25, 2018. Sample results associated with this sampling period include four work orders (1804291, 1804329, 1804368, and 1804398). The quality assurance review of the laboratory data for Work Order Number 1804329 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies are identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler and sample temperatures at the time of receipt were measured at 4.1 degrees Centigrade (°C) and 3.2°C, respectively. The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

Holding Times

USEPA Method 8260C:
All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (soils and preserved waters). All holding time criteria were met.

Total Solids by USEPA Method 8000D:
Soil samples were analyzed within the USEPA recommended holding time of seven days for total solids.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Fremont's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by Fremont for bromodichloromethane and dibromomethane associated with analytical batch 20504 (analyzed on April 26, 2018). These results are qualified by the laboratory "Q-" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated bromodichloromethane and dibromomethane results with laboratory qualified (Q-) results are estimated and qualified (J/UJ).**

Method Blank Results

Laboratory method blanks were included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at concentrations at or above the reporting limits (RLs).

Trip Blank Results

A trip blank was collected but not submitted for analysis.

Equipment Blank Results

Equipment blanks were not collected.

Field Duplicate Analyses

Field duplicate samples were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C:
Laboratory duplicate analysis was performed on client sample SB-17-30 and on non-client samples. Results are comparable and within 30% relative percent difference (RPD).

Total Solids by USEPA Method 8000D:
Laboratory duplicate sample analyses were performed on client and non-client samples within the analytical batches. The primary/duplicate RPDs for total solids analyses are within the laboratory control limit of 20%.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blanks, laboratory duplicates, matrix spike samples, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's are within the laboratory control limits with one exception:

- Analytical Batch 20470 (water): LCS % recoveries for 1,1-dichloroethane and 2,2-dichloropropane are above laboratory acceptance criteria and laboratory qualified (S). No action was taken since these compounds were not detected in the associated samples.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on client samples SB-17-40 and on a non-client sample. MS/MSD % Rs and RPDs are within the laboratory control limits with the following exceptions:

- Analytical Batch 20504 (soil): Sample SB-17-40 MS/MSD % recoveries for bromomethane and trichlorofluoromethane (CFC-11) are above laboratory acceptance criteria and laboratory qualified (S). No action was taken since these compounds were not detected in the associated samples.

- Analytical Batch 20470 (water): Batch MSD % recoveries for 1,1-dichloroethane and 2,2-dichloropropane are above laboratory acceptance criteria and laboratory qualified (S). Batch RPD for 2,2-dichloropropane is elevated and above criteria. No action was taken since the spike was performed on a non-client sample. Refer to the LCS discussion for more information.

Refer to LCS and laboratory duplicates for accuracy and precision data.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260C VOC analyses were reported based on laboratory RLs. The RLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:00:00 PM
Project: MVSC
Lab ID: 1804329-001
Matrix: Soil
Client Sample ID: **SB-17-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloromethane	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Vinyl chloride	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromomethane	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Trichlorofluoromethane (CFC-11)	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloroethane	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloroethene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Methylene chloride	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
trans-1,2-Dichloroethene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Methyl tert-butyl ether (MTBE)	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloroethane	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
2,2-Dichloropropane	ND		0.147		mg/Kg-dry	1	4/26/2018 10:06:44 PM
cis-1,2-Dichloroethene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chloroform	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,1-Trichloroethane (TCA)	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1-Dichloropropene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Carbon tetrachloride	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichloroethane (EDC)	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Benzene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Trichloroethene (TCE)	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichloropropane	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromodichloromethane	ND	UJ	0.0295	Q-	mg/Kg-dry	1	4/26/2018 10:06:44 PM
Dibromomethane	ND	UJ	0.0295	Q-	mg/Kg-dry	1	4/26/2018 10:06:44 PM
cis-1,3-Dichloropropene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Toluene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
trans-1,3-Dichloropropylene	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,2-Trichloroethane	ND		0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3-Dichloropropane	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Tetrachloroethene (PCE)	0.0435		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Dibromochloromethane	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dibromoethane (EDB)	ND		0.00737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Chlorobenzene	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,1,1,2-Tetrachloroethane	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Ethylbenzene	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
m,p-Xylene	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
o-Xylene	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Styrene	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Isopropylbenzene	ND		0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromoform	ND		0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:00:00 PM
Project: MVSC
Lab ID: 1804329-001
Matrix: Soil
Client Sample ID: **SB-17-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
n-Propylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Bromobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3,5-Trimethylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
2-Chlorotoluene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
4-Chlorotoluene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
tert-Butylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,3-Trichloropropane	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,4-Trichlorobenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
sec-Butylbenzene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
4-Isopropyltoluene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,3-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,4-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
n-Butylbenzene	ND	0.0369		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2-Dibromo-3-chloropropane	ND	0.737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,4-Trimethylbenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Hexachlorobutadiene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Naphthalene	ND	0.0737		mg/Kg-dry	1	4/26/2018 10:06:44 PM
1,2,3-Trichlorobenzene	ND	0.0295		mg/Kg-dry	1	4/26/2018 10:06:44 PM
Surr: Dibromofluoromethane	88.5	56.5 - 129		%Rec	1	4/26/2018 10:06:44 PM
Surr: Toluene-d8	126	64.5 - 151		%Rec	1	4/26/2018 10:06:44 PM
Surr: 1-Bromo-4-fluorobenzene	97.2	43.2 - 143		%Rec	1	4/26/2018 10:06:44 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: R43040		Analyst: NG
Percent Moisture	14.8	0.500		wt%	1	4/23/2018 10:57:52 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804329-002
Matrix: Soil
Client Sample ID: **SB-17-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloromethane	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Vinyl chloride	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromomethane	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Trichlorofluoromethane (CFC-11)	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloroethane	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloroethene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Methylene chloride	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
trans-1,2-Dichloroethene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Methyl tert-butyl ether (MTBE)	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloroethane	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
2,2-Dichloropropane	ND		0.113		mg/Kg-dry	1	4/26/2018 10:36:41 PM
cis-1,2-Dichloroethene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chloroform	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,1-Trichloroethane (TCA)	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1-Dichloropropene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Carbon tetrachloride	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichloroethane (EDC)	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Benzene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Trichloroethene (TCE)	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichloropropane	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromodichloromethane	ND	UJ	0.0225	Q-	mg/Kg-dry	1	4/26/2018 10:36:41 PM
Dibromomethane	ND	UJ	0.0225	Q-	mg/Kg-dry	1	4/26/2018 10:36:41 PM
cis-1,3-Dichloropropene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Toluene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
trans-1,3-Dichloropropylene	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,2-Trichloroethane	ND		0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3-Dichloropropane	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Tetrachloroethene (PCE)	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Dibromochloromethane	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dibromoethane (EDB)	ND		0.00563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Chlorobenzene	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,1,1,2-Tetrachloroethane	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Ethylbenzene	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
m,p-Xylene	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
o-Xylene	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Styrene	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Isopropylbenzene	ND		0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromoform	ND		0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:30:00 PM
Project: MVSC
Lab ID: 1804329-002
Matrix: Soil
Client Sample ID: **SB-17-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
n-Propylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Bromobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3,5-Trimethylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
2-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
4-Chlorotoluene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
tert-Butylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,3-Trichloropropane	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,4-Trichlorobenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
sec-Butylbenzene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
4-Isopropyltoluene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,3-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,4-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
n-Butylbenzene	ND	0.0281		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2-Dibromo-3-chloropropane	ND	0.563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,4-Trimethylbenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Hexachlorobutadiene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Naphthalene	ND	0.0563		mg/Kg-dry	1	4/26/2018 10:36:41 PM
1,2,3-Trichlorobenzene	ND	0.0225		mg/Kg-dry	1	4/26/2018 10:36:41 PM
Surr: Dibromofluoromethane	97.5	56.5 - 129		%Rec	1	4/26/2018 10:36:41 PM
Surr: Toluene-d8	68.5	64.5 - 151		%Rec	1	4/26/2018 10:36:41 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	43.2 - 143		%Rec	1	4/26/2018 10:36:41 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: R43040		Analyst: NG
Percent Moisture	4.95	0.500		wt%	1	4/23/2018 10:57:52 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:50:00 PM
Project: MVSC
Lab ID: 1804329-003
Matrix: Soil
Client Sample ID: **SB-17-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloromethane	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Vinyl chloride	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromomethane	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Trichlorofluoromethane (CFC-11)	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloroethane	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloroethene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Methylene chloride	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
trans-1,2-Dichloroethene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Methyl tert-butyl ether (MTBE)	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloroethane	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
2,2-Dichloropropane	ND		0.0924		mg/Kg-dry	1	4/26/2018 11:36:24 PM
cis-1,2-Dichloroethene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chloroform	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,1-Trichloroethane (TCA)	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1-Dichloropropene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Carbon tetrachloride	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichloroethane (EDC)	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Benzene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Trichloroethene (TCE)	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichloropropane	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromodichloromethane	ND	UJ	0.0185	Q-	mg/Kg-dry	1	4/26/2018 11:36:24 PM
Dibromomethane	ND	UJ	0.0185	Q-	mg/Kg-dry	1	4/26/2018 11:36:24 PM
cis-1,3-Dichloropropene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Toluene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
trans-1,3-Dichloropropylene	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,2-Trichloroethane	ND		0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3-Dichloropropane	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Tetrachloroethene (PCE)	0.0286		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Dibromochloromethane	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dibromoethane (EDB)	ND		0.00462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Chlorobenzene	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,1,1,2-Tetrachloroethane	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Ethylbenzene	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
m,p-Xylene	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
o-Xylene	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Styrene	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Isopropylbenzene	ND		0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromoform	ND		0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 12:50:00 PM
Project: MVSC
Lab ID: 1804329-003
Matrix: Soil
Client Sample ID: **SB-17-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
n-Propylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Bromobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3,5-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
2-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
4-Chlorotoluene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
tert-Butylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,3-Trichloropropane	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,4-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
sec-Butylbenzene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
4-Isopropyltoluene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,3-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,4-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
n-Butylbenzene	ND	0.0231		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2-Dibromo-3-chloropropane	ND	0.462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,4-Trimethylbenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Hexachlorobutadiene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Naphthalene	ND	0.0462		mg/Kg-dry	1	4/26/2018 11:36:24 PM
1,2,3-Trichlorobenzene	ND	0.0185		mg/Kg-dry	1	4/26/2018 11:36:24 PM
Surr: Dibromofluoromethane	91.3	56.5 - 129		%Rec	1	4/26/2018 11:36:24 PM
Surr: Toluene-d8	83.6	64.5 - 151		%Rec	1	4/26/2018 11:36:24 PM
Surr: 1-Bromo-4-fluorobenzene	93.5	43.2 - 143		%Rec	1	4/26/2018 11:36:24 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: R43040		Analyst: NG
Percent Moisture	9.45	0.500		wt%	1	4/23/2018 10:57:52 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 3:10:00 PM
Project: MVSC
Lab ID: 1804329-004
Matrix: Soil
Client Sample ID: **SB-18-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloromethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Vinyl chloride	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromomethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloroethane	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Methylene chloride	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
trans-1,2-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
2,2-Dichloropropane	ND	0.108		mg/Kg-dry	1	4/27/2018 3:05:00 AM
cis-1,2-Dichloroethene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chloroform	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1-Dichloropropene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Carbon tetrachloride	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichloroethane (EDC)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Benzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Trichloroethene (TCE)	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichloropropane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromodichloromethane	ND UJ	0.0215	Q-	mg/Kg-dry	1	4/27/2018 3:05:00 AM
Dibromomethane	ND UJ	0.0215	Q-	mg/Kg-dry	1	4/27/2018 3:05:00 AM
cis-1,3-Dichloropropene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Toluene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
trans-1,3-Dichloropropylene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,2-Trichloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3-Dichloropropane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Tetrachloroethene (PCE)	0.0284	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Dibromochloromethane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dibromoethane (EDB)	ND	0.00538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Chlorobenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Ethylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
m,p-Xylene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
o-Xylene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Styrene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Isopropylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromoform	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM

JC 6/5/18

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 3:10:00 PM
Project: MVSC
Lab ID: 1804329-004
Matrix: Soil
Client Sample ID: **SB-18-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
n-Propylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Bromobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3,5-Trimethylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
2-Chlorotoluene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
4-Chlorotoluene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
tert-Butylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,3-Trichloropropane	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,4-Trichlorobenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
sec-Butylbenzene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
4-Isopropyltoluene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,3-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,4-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
n-Butylbenzene	ND	0.0269		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2-Dibromo-3-chloropropane	ND	0.538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,4-Trimethylbenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Hexachlorobutadiene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Naphthalene	ND	0.0538		mg/Kg-dry	1	4/27/2018 3:05:00 AM
1,2,3-Trichlorobenzene	ND	0.0215		mg/Kg-dry	1	4/27/2018 3:05:00 AM
Surr: Dibromofluoromethane	103	56.5 - 129		%Rec	1	4/27/2018 3:05:00 AM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	4/27/2018 3:05:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.0	43.2 - 143		%Rec	1	4/27/2018 3:05:00 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: R43040		Analyst: NG
Percent Moisture	9.96	0.500		wt%	1	4/23/2018 10:57:52 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 2:35:00 PM
Project: MVSC
Lab ID: 1804329-005
Matrix: Soil
Client Sample ID: **SB-18-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20504 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloromethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Vinyl chloride	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromomethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Trichlorofluoromethane (CFC-11)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloroethane	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Methylene chloride	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
trans-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
2,2-Dichloropropane	ND	0.112		mg/Kg-dry	1	4/27/2018 3:34:00 AM
cis-1,2-Dichloroethene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chloroform	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,1-Trichloroethane (TCA)	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Carbon tetrachloride	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichloroethane (EDC)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Benzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Trichloroethene (TCE)	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichloropropane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromodichloromethane	ND UJ	0.0224	Q-	mg/Kg-dry	1	4/27/2018 3:34:00 AM
Dibromomethane	ND UJ	0.0224	Q-	mg/Kg-dry	1	4/27/2018 3:34:00 AM
cis-1,3-Dichloropropene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Toluene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
trans-1,3-Dichloropropylene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,2-Trichloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3-Dichloropropane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Tetrachloroethene (PCE)	0.0429	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Dibromochloromethane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dibromoethane (EDB)	ND	0.00560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Chlorobenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,1,1,2-Tetrachloroethane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Ethylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
m,p-Xylene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
o-Xylene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Styrene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Isopropylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromoform	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM

Analytical Report

Work Order: **1804329**
Date Reported: **4/27/2018**

Client: PES Environmental, Inc.
Collection Date: 4/18/2018 2:35:00 PM
Project: MVSC
Lab ID: 1804329-005
Matrix: Soil
Client Sample ID: **SB-18-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20504		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
n-Propylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Bromobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3,5-Trimethylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
2-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
4-Chlorotoluene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
tert-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,3-Trichloropropane	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,4-Trichlorobenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
sec-Butylbenzene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
4-Isopropyltoluene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,3-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,4-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
n-Butylbenzene	ND	0.0280		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2-Dibromo-3-chloropropane	ND	0.560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,4-Trimethylbenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Hexachlorobutadiene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Naphthalene	ND	0.0560		mg/Kg-dry	1	4/27/2018 3:34:00 AM
1,2,3-Trichlorobenzene	ND	0.0224		mg/Kg-dry	1	4/27/2018 3:34:00 AM
Surr: Dibromofluoromethane	94.1	56.5 - 129		%Rec	1	4/27/2018 3:34:00 AM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	4/27/2018 3:34:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.8	43.2 - 143		%Rec	1	4/27/2018 3:34:00 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: R43040		Analyst: NG
Percent Moisture	2.81	0.500		wt%	1	4/23/2018 10:57:52 AM

JC 6/5/18

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: MVSC
Work Order Number: 1804368

May 01, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 4 sample(s) on 4/24/2018 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: *05/01/2018*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1804368

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1804368-001	SB-22-GW	04/20/2018 9:55 AM	04/24/2018 8:12 AM
1804368-002	SB-23-GW	04/20/2018 11:50 AM	04/24/2018 8:12 AM
1804368-003	SB-24-GW	04/23/2018 10:15 AM	04/24/2018 8:12 AM
1804368-004	SB-25-GW	04/23/2018 2:00 PM	04/24/2018 8:12 AM

Case Narrative

WO#: **1804368**
Date: **5/1/2018**

CLIENT: PES Environmental, Inc.
Project: MVSC

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: 4/20/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804368-001
Matrix: Groundwater
Client Sample ID: **SB-22-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloromethane	ND	2.00		µg/L	1	4/27/2018 7:35:39 PM
Vinyl chloride	ND	0.200		µg/L	1	4/27/2018 7:35:39 PM
Bromomethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Methylene chloride	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/27/2018 7:35:39 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloroform	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Carbon tetrachloride	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Benzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromodichloromethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Dibromomethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Toluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Tetrachloroethene (PCE)	8.91	1.00		µg/L	1	4/27/2018 7:35:39 PM
Dibromochloromethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/27/2018 7:35:39 PM
Chlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Ethylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
m,p-Xylene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
o-Xylene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Styrene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromoform	ND	2.00	Q-	µg/L	1	4/27/2018 7:35:39 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804368-001
Matrix: Groundwater
Client Sample ID: **SB-22-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20523		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 7:35:39 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 7:35:39 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 7:35:39 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	4/27/2018 7:35:39 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 7:35:39 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	4/27/2018 7:35:39 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804368-002
Matrix: Groundwater
Client Sample ID: **SB-23-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloromethane	ND	2.00		µg/L	1	4/27/2018 8:06:10 PM
Vinyl chloride	ND	0.200		µg/L	1	4/27/2018 8:06:10 PM
Bromomethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Methylene chloride	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/27/2018 8:06:10 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloroform	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Carbon tetrachloride	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Benzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromodichloromethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Dibromomethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Toluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Tetrachloroethene (PCE)	6.78	1.00		µg/L	1	4/27/2018 8:06:10 PM
Dibromochloromethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/27/2018 8:06:10 PM
Chlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Ethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
m,p-Xylene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
o-Xylene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Styrene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromoform	ND	2.00	Q-	µg/L	1	4/27/2018 8:06:10 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804368-002
Matrix: Groundwater
Client Sample ID: **SB-23-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 8:06:10 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 8:06:10 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 8:06:10 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	4/27/2018 8:06:10 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 8:06:10 PM
Surr: 1-Bromo-4-fluorobenzene	99.7	64.2 - 128		%Rec	1	4/27/2018 8:06:10 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804368-003
Matrix: Groundwater
Client Sample ID: **SB-24-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloromethane	ND	2.00		µg/L	1	4/27/2018 8:36:35 PM
Vinyl chloride	ND	0.200		µg/L	1	4/27/2018 8:36:35 PM
Bromomethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Methylene chloride	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/27/2018 8:36:35 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloroform	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Carbon tetrachloride	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Benzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromodichloromethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Dibromomethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Toluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Tetrachloroethene (PCE)	10.8	1.00		µg/L	1	4/27/2018 8:36:35 PM
Dibromochloromethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/27/2018 8:36:35 PM
Chlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Ethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
m,p-Xylene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
o-Xylene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Styrene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromoform	ND	2.00	Q-	µg/L	1	4/27/2018 8:36:35 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804368-003
Matrix: Groundwater
Client Sample ID: **SB-24-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20523		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 8:36:35 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 8:36:35 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 8:36:35 PM
Surr: Dibromofluoromethane	98.8	45.4 - 152		%Rec	1	4/27/2018 8:36:35 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 8:36:35 PM
Surr: 1-Bromo-4-fluorobenzene	98.9	64.2 - 128		%Rec	1	4/27/2018 8:36:35 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 2:00:00 PM
Project: MVSC
Lab ID: 1804368-004
Matrix: Groundwater
Client Sample ID: **SB-25-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloromethane	ND	2.00		µg/L	1	4/27/2018 9:07:02 PM
Vinyl chloride	ND	0.200		µg/L	1	4/27/2018 9:07:02 PM
Bromomethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Methylene chloride	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	4/27/2018 9:07:02 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloroform	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Carbon tetrachloride	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Benzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromodichloromethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Dibromomethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Toluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Tetrachloroethene (PCE)	1.65	1.00		µg/L	1	4/27/2018 9:07:02 PM
Dibromochloromethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	4/27/2018 9:07:02 PM
Chlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Ethylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
m,p-Xylene	1.64	1.00		µg/L	1	4/27/2018 9:07:02 PM
o-Xylene	1.24	1.00		µg/L	1	4/27/2018 9:07:02 PM
Styrene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Isopropylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromoform	ND	2.00	Q-	µg/L	1	4/27/2018 9:07:02 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 2:00:00 PM
Project: MVSC
Lab ID: 1804368-004
Matrix: Groundwater
Client Sample ID: **SB-25-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20523		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 9:07:02 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 9:07:02 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 9:07:02 PM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	4/27/2018 9:07:02 PM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	4/27/2018 9:07:02 PM
Surr: 1-Bromo-4-fluorobenzene	103	64.2 - 128		%Rec	1	4/27/2018 9:07:02 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20523** SampType: **LCS** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **LCSW** Batch ID: **20523** Analysis Date: **4/26/2018** SeqNo: **833961**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.2	1.00	20.00	0	116	18.7	171				
Chloromethane	22.6	2.00	20.00	0	113	38.5	171				
Vinyl chloride	20.7	0.200	20.00	0	104	48	145				
Bromomethane	19.4	1.00	20.00	0	97.2	32.5	184				
Trichlorofluoromethane (CFC-11)	20.0	1.00	20.00	0	100	43.5	149				
Chloroethane	21.4	1.00	20.00	0	107	43.8	168				
1,1-Dichloroethene	20.5	1.00	20.00	0	102	57.5	150				
Methylene chloride	20.7	1.00	20.00	0	103	67.1	131				
trans-1,2-Dichloroethene	20.9	1.00	20.00	0	104	71.7	129				
Methyl tert-butyl ether (MTBE)	20.6	1.00	20.00	0	103	58	138				
1,1-Dichloroethane	21.5	1.00	20.00	0	108	67.9	134				
2,2-Dichloropropane	18.9	2.00	20.00	0	94.7	26.5	185				
cis-1,2-Dichloroethene	20.8	1.00	20.00	0	104	70.2	139				
Chloroform	20.9	1.00	20.00	0	105	66.3	131				
1,1,1-Trichloroethane (TCA)	20.1	1.00	20.00	0	101	63	140				
1,1-Dichloropropene	20.4	1.00	20.00	0	102	69.9	124				
Carbon tetrachloride	19.4	1.00	20.00	0	96.8	66.2	134				
1,2-Dichloroethane (EDC)	21.1	1.00	20.00	0	105	67	126				
Benzene	21.1	1.00	20.00	0	106	69.3	132				
Trichloroethene (TCE)	20.7	0.500	20.00	0	103	65.2	136				
1,2-Dichloropropane	21.2	1.00	20.00	0	106	70.5	130				
Bromodichloromethane	20.6	1.00	20.00	0	103	67.2	137				
Dibromomethane	21.2	1.00	20.00	0	106	69.3	143				
cis-1,3-Dichloropropene	20.2	1.00	20.00	0	101	62.6	137				
Toluene	21.0	1.00	20.00	0	105	61.3	145				
trans-1,3-Dichloropropylene	20.2	1.00	20.00	0	101	56.5	163				
1,1,2-Trichloroethane	21.0	1.00	20.00	0	105	71.7	131				
1,3-Dichloropropane	20.2	1.00	20.00	0	101	73.5	127				
Tetrachloroethene (PCE)	20.8	1.00	20.00	0	104	47.5	147				
Dibromochloromethane	20.3	1.00	20.00	0	101	67.2	134				
1,2-Dibromoethane (EDB)	21.0	0.250	20.00	0	105	73.6	125				

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20523** SampType: **LCS** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **LCSW** Batch ID: **20523** Analysis Date: **4/26/2018** SeqNo: **833961**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.7	1.00	20.00	0	103	73.9	126				
1,1,1,2-Tetrachloroethane	20.7	1.00	20.00	0	103	76.8	124				
Ethylbenzene	20.9	1.00	20.00	0	104	72	130				
m,p-Xylene	42.3	1.00	40.00	0	106	70.3	134				
o-Xylene	21.2	1.00	20.00	0	106	72.1	131				
Styrene	20.7	1.00	20.00	0	103	64.3	140				
Isopropylbenzene	20.7	1.00	20.00	0	103	73.9	128				
Bromoform	19.2	2.00	20.00	0	96.2	55.3	141				
1,1,2,2-Tetrachloroethane	21.0	1.00	20.00	0	105	62.9	132				
n-Propylbenzene	20.8	1.00	20.00	0	104	74.5	127				
Bromobenzene	21.0	1.00	20.00	0	105	71	131				
1,3,5-Trimethylbenzene	20.8	1.00	20.00	0	104	73.1	128				
2-Chlorotoluene	21.5	1.00	20.00	0	107	70.8	130				
4-Chlorotoluene	19.7	1.00	20.00	0	98.7	70.1	131				
tert-Butylbenzene	20.3	1.00	20.00	0	102	68.2	131				
1,2,3-Trichloropropane	19.6	1.00	20.00	0	97.9	67.7	131				
1,2,4-Trichlorobenzene	21.6	2.00	20.00	0	108	41	139				
sec-Butylbenzene	20.4	1.00	20.00	0	102	72	129				
4-Isopropyltoluene	20.6	1.00	20.00	0	103	69.2	130				
1,3-Dichlorobenzene	21.6	1.00	20.00	0	108	80.4	124				
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	66.8	119				
n-Butylbenzene	21.8	1.00	20.00	0	109	73.8	127				
1,2-Dichlorobenzene	21.9	1.00	20.00	0	109	69.7	119				
1,2-Dibromo-3-chloropropane	20.7	1.00	20.00	0	104	63.1	136				
1,2,4-Trimethylbenzene	20.8	1.00	20.00	0	104	73.4	127				
Hexachloro-1,3-butadiene	21.5	4.00	20.00	0	107	58.6	138				
Naphthalene	20.2	1.00	20.00	0	101	41.8	165				B
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	35.8	155				
Surr: Dibromofluoromethane	26.8		25.00		107	45.4	152				
Surr: Toluene-d8	25.1		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.4		25.00		106	64.2	128				

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20523**	SampType:	**LCS**		Units:	**µg/L**	Prep Date:	**4/26/2018**	RunNo:	**43142**
Client ID:	**LCSW**	Batch ID:	**20523**				Analysis Date:	**4/26/2018**	SeqNo:	**833961**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-20523**	SampType:	**MBLK**		Units:	**µg/L**	Prep Date:	**4/26/2018**	RunNo:	**43142**
Client ID:	**MBLKW**	Batch ID:	**20523**				Analysis Date:	**4/26/2018**	SeqNo:	**833962**

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									
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									

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20523**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **4/26/2018**	RunNo: **43142**
Client ID: **MBLKW**	Batch ID: **20523**		Analysis Date: **4/26/2018**	SeqNo: **833962**

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	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									Q
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									

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20523** SampType: **MBLK** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **MBLKW** Batch ID: **20523** Analysis Date: **4/26/2018** SeqNo: **833962**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	1.00	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	25.1		25.00		100	45.4	152				
Surr: Toluene-d8	25.0		25.00		99.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.5		25.00		98.1	64.2	128				

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804346-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **833954**

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	
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	

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804346-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **833954**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	Q
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804346-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **833954**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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	23.9		25.00		95.6	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.7	64.2	128		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804360-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **834353**

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	

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804360-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **834353**

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	
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	Q
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: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804360-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/27/2018** SeqNo: **834353**

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	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	26.3		25.00		105	45.4	152		0		
Surr: Toluene-d8	25.0		25.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128		0		

NOTES:
Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift)

Sample ID **1804405-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/28/2018** SeqNo: **834364**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	25.7	1.00	20.00	0	128	33.3	122				S
Chloromethane	23.0	2.00	20.00	0	115	39.7	143				
Vinyl chloride	25.4	0.200	20.00	0	127	41	165				
Bromomethane	22.6	1.00	20.00	0	113	31.5	135				

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804405-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/28/2018** SeqNo: **834364**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	24.7	1.00	20.00	0	124	54.7	138				
Chloroethane	26.8	1.00	20.00	0	134	49.9	143				
1,1-Dichloroethene	24.5	1.00	20.00	0	123	51.6	164				
Methylene chloride	23.0	1.00	20.00	0	115	61.6	135				
trans-1,2-Dichloroethene	23.9	1.00	20.00	0	120	63.5	138				
Methyl tert-butyl ether (MTBE)	23.2	1.00	20.00	0	116	60.9	132				
1,1-Dichloroethane	25.5	1.00	20.00	0	128	55.7	151				
2,2-Dichloropropane	18.5	2.00	20.00	0	92.4	37.7	150				
cis-1,2-Dichloroethene	23.3	1.00	20.00	0	117	60	154				
Chloroform	26.2	1.00	20.00	2.502	118	48.1	140				
1,1,1-Trichloroethane (TCA)	24.1	1.00	20.00	0	121	64.2	146				
1,1-Dichloropropene	24.4	1.00	20.00	0	122	73.8	136				
Carbon tetrachloride	23.4	1.00	20.00	0	117	62.7	146				
1,2-Dichloroethane (EDC)	22.6	1.00	20.00	0	113	63.4	137				
Benzene	24.2	1.00	20.00	0	121	65.4	138				
Trichloroethene (TCE)	23.4	0.500	20.00	0	117	60.4	134				
1,2-Dichloropropane	22.8	1.00	20.00	0	114	62.6	138				
Bromodichloromethane	21.7	1.00	20.00	0	109	59.4	139				
Dibromomethane	22.9	1.00	20.00	0	114	58.7	148				
cis-1,3-Dichloropropene	20.4	1.00	20.00	0	102	63.8	132				
Toluene	23.5	1.00	20.00	0	117	52	147				
trans-1,3-Dichloropropylene	20.5	1.00	20.00	0	102	57.7	125				
1,1,2-Trichloroethane	22.7	1.00	20.00	0	114	57.5	153				
1,3-Dichloropropane	21.0	1.00	20.00	0	105	54.1	157				
Tetrachloroethene (PCE)	23.7	1.00	20.00	0	119	50.3	133				
Dibromochloromethane	21.6	1.00	20.00	0	108	61.6	139				
1,2-Dibromoethane (EDB)	22.9	0.250	20.00	0	114	63.2	134				
Chlorobenzene	22.5	1.00	20.00	0	112	65.8	134				
1,1,1,2-Tetrachloroethane	22.5	1.00	20.00	0	112	65.4	135				
Ethylbenzene	23.1	1.00	20.00	0	115	64.5	136				
m,p-Xylene	45.8	1.00	40.00	0	115	63.3	135				

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804405-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/28/2018** SeqNo: **834364**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	22.9	1.00	20.00	0	114	64.8	150				
Styrene	22.2	1.00	20.00	0	111	52.9	163				
Isopropylbenzene	23.5	1.00	20.00	0	117	56	147				
Bromoform	18.4	2.00	20.00	0	92.2	57.7	139				
1,1,2,2-Tetrachloroethane	21.8	1.00	20.00	0	109	59.8	146				
n-Propylbenzene	23.0	1.00	20.00	0	115	57.6	142				
Bromobenzene	22.3	1.00	20.00	0	111	69.3	157				
1,3,5-Trimethylbenzene	22.1	1.00	20.00	0	111	59.9	136				
2-Chlorotoluene	23.3	1.00	20.00	0	116	61.7	134				
4-Chlorotoluene	20.1	1.00	20.00	0	100	58.4	134				
tert-Butylbenzene	22.2	1.00	20.00	0	111	66.8	141				
1,2,3-Trichloropropane	20.4	1.00	20.00	0	102	62.4	129				
1,2,4-Trichlorobenzene	21.5	2.00	20.00	0	108	50.9	133				
sec-Butylbenzene	22.6	1.00	20.00	0	113	56	146				
4-Isopropyltoluene	21.7	1.00	20.00	0	109	56.4	136				
1,3-Dichlorobenzene	21.9	1.00	20.00	0	110	58.2	128				
1,4-Dichlorobenzene	22.0	1.00	20.00	0	110	60.1	123				
n-Butylbenzene	22.3	1.00	20.00	0	111	54.6	135				
1,2-Dichlorobenzene	22.3	1.00	20.00	0	112	65.4	133				
1,2-Dibromo-3-chloropropane	22.8	1.00	20.00	0	114	51.8	142				
1,2,4-Trimethylbenzene	21.7	1.00	20.00	0	109	63.7	132				
Hexachloro-1,3-butadiene	22.3	4.00	20.00	0	112	58.1	130				
Naphthalene	22.7	1.00	20.00	0	114	50.7	154				B
1,2,3-Trichlorobenzene	22.6	4.00	20.00	0	113	57	131				
Surr: Dibromofluoromethane	27.6		25.00		110	45.4	152				
Surr: Toluene-d8	25.3		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.6		25.00		102	64.2	128				

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804405-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/28/2018** SeqNo: **834365**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	24.2	1.00	20.00	0	121	33.3	122	25.68	5.97	30	
Chloromethane	23.1	2.00	20.00	0	115	39.7	143	22.96	0.441	30	
Vinyl chloride	22.6	0.200	20.00	0	113	41	165	25.36	11.4	30	
Bromomethane	22.1	1.00	20.00	0	110	31.5	135	22.63	2.46	30	
Trichlorofluoromethane (CFC-11)	22.6	1.00	20.00	0	113	54.7	138	24.75	9.14	30	
Chloroethane	23.8	1.00	20.00	0	119	49.9	143	26.85	11.8	30	
1,1-Dichloroethene	22.1	1.00	20.00	0	110	51.6	164	24.54	10.6	30	
Methylene chloride	20.3	1.00	20.00	0	101	61.6	135	22.97	12.4	30	
trans-1,2-Dichloroethene	21.2	1.00	20.00	0	106	63.5	138	23.92	11.9	30	
Methyl tert-butyl ether (MTBE)	20.7	1.00	20.00	0	104	60.9	132	23.21	11.2	30	
1,1-Dichloroethane	22.5	1.00	20.00	0	112	55.7	151	25.51	12.7	30	
2,2-Dichloropropane	17.1	2.00	20.00	0	85.3	37.7	150	18.47	7.98	30	
cis-1,2-Dichloroethene	21.0	1.00	20.00	0	105	60	154	23.32	10.5	30	
Chloroform	23.6	1.00	20.00	2.502	106	48.1	140	26.17	10.2	30	
1,1,1-Trichloroethane (TCA)	21.8	1.00	20.00	0	109	64.2	146	24.13	10.2	30	
1,1-Dichloropropene	22.0	1.00	20.00	0	110	73.8	136	24.42	10.3	30	
Carbon tetrachloride	21.4	1.00	20.00	0	107	62.7	146	23.42	9.10	30	
1,2-Dichloroethane (EDC)	20.6	1.00	20.00	0	103	63.4	137	22.57	9.00	30	
Benzene	21.6	1.00	20.00	0	108	65.4	138	24.16	11.4	30	
Trichloroethene (TCE)	20.8	0.500	20.00	0	104	60.4	134	23.38	11.5	30	
1,2-Dichloropropane	20.8	1.00	20.00	0	104	62.6	138	22.85	9.21	30	
Bromodichloromethane	19.6	1.00	20.00	0	97.9	59.4	139	21.72	10.4	30	
Dibromomethane	20.1	1.00	20.00	0	100	58.7	148	22.87	13.0	30	
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	91.2	63.8	132	20.43	11.3	30	
Toluene	20.7	1.00	20.00	0	104	52	147	23.46	12.4	30	
trans-1,3-Dichloropropylene	18.2	1.00	20.00	0	91.2	57.7	125	20.46	11.5	30	
1,1,2-Trichloroethane	20.2	1.00	20.00	0	101	57.5	153	22.74	11.9	30	
1,3-Dichloropropane	18.6	1.00	20.00	0	92.9	54.1	157	20.98	12.1	30	
Tetrachloroethene (PCE)	21.0	1.00	20.00	0	105	50.3	133	23.70	11.9	30	
Dibromochloromethane	19.2	1.00	20.00	0	96.2	61.6	139	21.60	11.5	30	
1,2-Dibromoethane (EDB)	20.2	0.250	20.00	0	101	63.2	134	22.86	12.5	30	

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804405-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/26/2018** RunNo: **43142**
Client ID: **BATCH** Batch ID: **20523** Analysis Date: **4/28/2018** SeqNo: **834365**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	20.8	1.00	20.00	0	104	65.8	134	22.49	8.00	30	
1,1,1,2-Tetrachloroethane	20.6	1.00	20.00	0	103	65.4	135	22.48	8.59	30	
Ethylbenzene	21.1	1.00	20.00	0	106	64.5	136	23.08	8.89	30	
m,p-Xylene	42.5	1.00	40.00	0	106	63.3	135	45.84	7.47	30	
o-Xylene	20.8	1.00	20.00	0	104	64.8	150	22.85	9.62	30	
Styrene	20.7	1.00	20.00	0	103	52.9	163	22.18	7.12	30	
Isopropylbenzene	21.5	1.00	20.00	0	108	56	147	23.45	8.55	30	
Bromoform	17.3	2.00	20.00	0	86.5	57.7	139	18.43	6.40	30	
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	59.8	146	21.82	7.68	30	
n-Propylbenzene	20.9	1.00	20.00	0	105	57.6	142	22.99	9.49	30	
Bromobenzene	20.3	1.00	20.00	0	101	69.3	157	22.26	9.40	30	
1,3,5-Trimethylbenzene	20.0	1.00	20.00	0	100	59.9	136	22.12	10.1	30	
2-Chlorotoluene	20.7	1.00	20.00	0	104	61.7	134	23.28	11.7	30	
4-Chlorotoluene	18.7	1.00	20.00	0	93.4	58.4	134	20.07	7.17	30	
tert-Butylbenzene	20.6	1.00	20.00	0	103	66.8	141	22.18	7.24	30	
1,2,3-Trichloropropane	16.8	1.00	20.00	0	83.9	62.4	129	20.36	19.3	30	
1,2,4-Trichlorobenzene	20.4	2.00	20.00	0	102	50.9	133	21.51	5.12	30	
sec-Butylbenzene	21.0	1.00	20.00	0	105	56	146	22.63	7.59	30	
4-Isopropyltoluene	20.5	1.00	20.00	0	102	56.4	136	21.72	5.92	30	
1,3-Dichlorobenzene	19.9	1.00	20.00	0	99.3	58.2	128	21.92	9.93	30	
1,4-Dichlorobenzene	20.1	1.00	20.00	0	101	60.1	123	22.00	8.92	30	
n-Butylbenzene	20.9	1.00	20.00	0	104	54.6	135	22.28	6.52	30	
1,2-Dichlorobenzene	20.5	1.00	20.00	0	102	65.4	133	22.34	8.81	30	
1,2-Dibromo-3-chloropropane	20.6	1.00	20.00	0	103	51.8	142	22.75	9.92	30	
1,2,4-Trimethylbenzene	19.8	1.00	20.00	0	98.9	63.7	132	21.71	9.29	30	
Hexachloro-1,3-butadiene	21.8	4.00	20.00	0	109	58.1	130	22.32	2.12	30	
Naphthalene	22.3	1.00	20.00	0	111	50.7	154	22.72	1.91	30	B
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	57	131	22.63	5.52	30	
Surr: Dibromofluoromethane	27.5		25.00		110	45.4	152		0		
Surr: Toluene-d8	25.2		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.9		25.00		104	64.2	128		0		

Work Order: 1804368
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804405-002AMSD**	SampType: **MSD**			Units: **µg/L**		Prep Date: **4/26/2018**			RunNo: **43142**		
Client ID: **BATCH**	Batch ID: **20523**					Analysis Date: **4/28/2018**			SeqNo: **834365**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1804368**
Logged by:	**Brianna Barnes**	Date Received:	**4/24/2018 8:12:00 AM**

Chain of Custody

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

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
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	4.6
Sample	3.1
Temp Blank	5.1

* 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: 4/20/18 Page: 1 of:

Laboratory Project No (internal): 1804308

Special Remarks:

Project Name: MUSC

Project No: 1358.001.01.009

Collected by: C. DeBoer

Location: Normandy Park

Report To (PM): Matt Dahl

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

PM Email: mdahl@pesenv.com

Client: PES Environmental, Inc

Address: 1215 4th Ave Suite 1350

City, State, Zip: Seattle, WA 98161

Telephone: (206)529-3480

Fax: (206)529-3485

	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-22-GW	4/20/18	955	GW	X													
2	SB-23-GW	4/20/18	1150	GW	X													
3	SB-24-GW	4/23/18	1015	GW	X													
4	SB-25-GW	4/23/18	1400	GW	X													
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

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	4/24/18 710	x	4/24/18 0452
Relinquished	Date/Time	Received	Date/Time
x		x	

MEMORANDUM

TO: Project File **DATE:** June 12, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: 1358.001.01.003

TASK: April 20 and 23, 2018 Groundwater Samples

LAB: Fremont Work Order Number 1804368

Four (4) groundwater samples were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on April 20 and 23, 2018. Samples associated with Work Order Number 1804368 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Fremont Analytical (Fremont) of Seattle, Washington.

The monitoring event occurred between April 16 and 25, 2018. Sample results associated with this monitoring event include four work orders (1804291, 1804329, 1804368, and 1804398). The quality assurance review of the laboratory data for Work Order Number 1804368 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies are identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler and sample temperatures at the time of receipt were measured at 4.6 degrees Centigrade

(°C) and 3.1°C, respectively. The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

Holding Times

USEPA Method 8260C:
All samples were analyzed for VOCs within the EPA recommended holding time of 14 days (preserved waters). All holding time criteria were met.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Fremont's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by Fremont for bromoform associated with analytical batch 20523 (analyzed on April 27, 2018). These results are qualified by the laboratory "Q-" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated bromoform results with laboratory qualified (Q-) results are estimated and qualified (J/UJ).**

Method Blank Results

Laboratory method blank was included with the analytical batch per method requirement. The target analytes (VOCs) were not detected in the method blanks at concentrations at or above the reporting limits (RLs) with one exception:

- Naphthalene was detected at the reporting limit in the method blank. No action was required as naphthalene was not detected in the associated samples.

Trip Blank Results

A trip blank was not collected.

Equipment Blank Results

Equipment blanks were not collected.

Field Duplicate Analyses

Field duplicate samples were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C:
Laboratory duplicate analysis was performed on non-client samples. Results are comparable and within 30% relative percent difference (RPD).

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blank, laboratory duplicates, matrix spike samples, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's are within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on non-client sample. MS/MSD % Rs and RPDs are within the laboratory control limits with the following exception:

- Analytical Batch 20523: MS % recovery for dichlorodifluoromethane (CFC-12) is above laboratory acceptance criteria and laboratory qualified (S). No action was taken since the spike was performed on a non-client sample and LCS result is acceptable.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260C VOC analyses were reported based on laboratory RLs. The RLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804368-001
Matrix: Groundwater
Client Sample ID: **SB-22-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloromethane	ND		2.00		µg/L	1	4/27/2018 7:35:39 PM
Vinyl chloride	ND		0.200		µg/L	1	4/27/2018 7:35:39 PM
Bromomethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloroethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Methylene chloride	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
2,2-Dichloropropane	ND		2.00		µg/L	1	4/27/2018 7:35:39 PM
cis-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Chloroform	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Carbon tetrachloride	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Benzene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromodichloromethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Dibromomethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Toluene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Tetrachloroethene (PCE)	8.91		1.00		µg/L	1	4/27/2018 7:35:39 PM
Dibromochloromethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	4/27/2018 7:35:39 PM
Chlorobenzene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Ethylbenzene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
m,p-Xylene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
o-Xylene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Styrene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Isopropylbenzene	ND		1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromoform	ND	UJ	2.00	Q-	µg/L	1	4/27/2018 7:35:39 PM

JC 6/5/18

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804368-001
Matrix: Groundwater
Client Sample ID: **SB-22-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20523		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 7:35:39 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 7:35:39 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 7:35:39 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 7:35:39 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	4/27/2018 7:35:39 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 7:35:39 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	4/27/2018 7:35:39 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804368-002
Matrix: Groundwater
Client Sample ID: **SB-23-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloromethane	ND		2.00		µg/L	1	4/27/2018 8:06:10 PM
Vinyl chloride	ND		0.200		µg/L	1	4/27/2018 8:06:10 PM
Bromomethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloroethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Methylene chloride	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
2,2-Dichloropropane	ND		2.00		µg/L	1	4/27/2018 8:06:10 PM
cis-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Chloroform	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Carbon tetrachloride	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Benzene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromodichloromethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Dibromomethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Toluene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Tetrachloroethene (PCE)	6.78		1.00		µg/L	1	4/27/2018 8:06:10 PM
Dibromochloromethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	4/27/2018 8:06:10 PM
Chlorobenzene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Ethylbenzene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
m,p-Xylene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
o-Xylene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Styrene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Isopropylbenzene	ND		1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromoform	ND	UJ	2.00	Q-	µg/L	1	4/27/2018 8:06:10 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/20/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804368-002
Matrix: Groundwater
Client Sample ID: **SB-23-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20523		Analyst: TN
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 8:06:10 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 8:06:10 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 8:06:10 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 8:06:10 PM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	4/27/2018 8:06:10 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 8:06:10 PM
Surr: 1-Bromo-4-fluorobenzene	99.7	64.2 - 128		%Rec	1	4/27/2018 8:06:10 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804368-003
Matrix: Groundwater
Client Sample ID: **SB-24-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloromethane	ND		2.00		µg/L	1	4/27/2018 8:36:35 PM
Vinyl chloride	ND		0.200		µg/L	1	4/27/2018 8:36:35 PM
Bromomethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloroethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Methylene chloride	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
2,2-Dichloropropane	ND		2.00		µg/L	1	4/27/2018 8:36:35 PM
cis-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Chloroform	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Carbon tetrachloride	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Benzene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromodichloromethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Dibromomethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Toluene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Tetrachloroethene (PCE)	10.8		1.00		µg/L	1	4/27/2018 8:36:35 PM
Dibromochloromethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	4/27/2018 8:36:35 PM
Chlorobenzene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Ethylbenzene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
m,p-Xylene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
o-Xylene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Styrene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Isopropylbenzene	ND		1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromoform	ND	UJ	2.00	Q-	µg/L	1	4/27/2018 8:36:35 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804368-003
Matrix: Groundwater
Client Sample ID: **SB-24-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 8:36:35 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 8:36:35 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 8:36:35 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 8:36:35 PM
Surr: Dibromofluoromethane	98.8	45.4 - 152		%Rec	1	4/27/2018 8:36:35 PM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	4/27/2018 8:36:35 PM
Surr: 1-Bromo-4-fluorobenzene	98.9	64.2 - 128		%Rec	1	4/27/2018 8:36:35 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 2:00:00 PM
Project: MVSC
Lab ID: 1804368-004
Matrix: Groundwater
Client Sample ID: **SB-25-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloromethane	ND		2.00		µg/L	1	4/27/2018 9:07:02 PM
Vinyl chloride	ND		0.200		µg/L	1	4/27/2018 9:07:02 PM
Bromomethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Trichlorofluoromethane (CFC-11)	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloroethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Methylene chloride	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
trans-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Methyl tert-butyl ether (MTBE)	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloroethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
2,2-Dichloropropane	ND		2.00		µg/L	1	4/27/2018 9:07:02 PM
cis-1,2-Dichloroethene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Chloroform	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,1-Trichloroethane (TCA)	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Carbon tetrachloride	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichloroethane (EDC)	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Benzene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Trichloroethene (TCE)	ND		0.500		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromodichloromethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Dibromomethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
cis-1,3-Dichloropropene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Toluene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
trans-1,3-Dichloropropylene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,2-Trichloroethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3-Dichloropropane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Tetrachloroethene (PCE)	1.65		1.00		µg/L	1	4/27/2018 9:07:02 PM
Dibromochloromethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dibromoethane (EDB)	ND		0.250		µg/L	1	4/27/2018 9:07:02 PM
Chlorobenzene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
1,1,1,2-Tetrachloroethane	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Ethylbenzene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
m,p-Xylene	1.64		1.00		µg/L	1	4/27/2018 9:07:02 PM
o-Xylene	1.24		1.00		µg/L	1	4/27/2018 9:07:02 PM
Styrene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Isopropylbenzene	ND		1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromoform	ND	UJ	2.00	Q-	µg/L	1	4/27/2018 9:07:02 PM

Analytical Report

Work Order: **1804368**
Date Reported: **5/1/2018**

Client: PES Environmental, Inc.
Collection Date: 4/23/2018 2:00:00 PM
Project: MVSC
Lab ID: 1804368-004
Matrix: Groundwater
Client Sample ID: **SB-25-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20523 Analyst: TN

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
n-Propylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Bromobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
2-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
4-Chlorotoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
tert-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	4/27/2018 9:07:02 PM
sec-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
n-Butylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	4/27/2018 9:07:02 PM
Naphthalene	ND	1.00		µg/L	1	4/27/2018 9:07:02 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	4/27/2018 9:07:02 PM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	4/27/2018 9:07:02 PM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	4/27/2018 9:07:02 PM
Surr: 1-Bromo-4-fluorobenzene	103	64.2 - 128		%Rec	1	4/27/2018 9:07:02 PM

NOTES:
Q- - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria - low bias

JC 6/5/18

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: MVSC
Work Order Number: 1804398

May 11, 2018

Attention Matt Dahl:

Fremont Analytical, Inc. received 23 sample(s) on 4/26/2018 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: *05/11/2018*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1804398

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1804398-001	SB-26-2	04/24/2018 8:20 AM	04/26/2018 8:50 AM
1804398-002	SB-26-4	04/24/2018 8:25 AM	04/26/2018 8:50 AM
1804398-003	SB-26-10	04/24/2018 8:30 AM	04/26/2018 8:50 AM
1804398-004	SB-26-20	04/24/2018 8:40 AM	04/26/2018 8:50 AM
1804398-005	SB-26-30	04/24/2018 8:50 AM	04/26/2018 8:50 AM
1804398-006	SB-26-40	04/24/2018 9:00 AM	04/26/2018 8:50 AM
1804398-007	SB-27-2	04/24/2018 9:30 AM	04/26/2018 8:50 AM
1804398-008	SB-27-4	04/24/2018 9:35 AM	04/26/2018 8:50 AM
1804398-009	SB-27-10	04/24/2018 9:55 AM	04/26/2018 8:50 AM
1804398-010	SB-27-20	04/24/2018 10:05 AM	04/26/2018 8:50 AM
1804398-011	SB-27-30	04/24/2018 10:15 AM	04/26/2018 8:50 AM
1804398-012	SB-27-40	04/24/2018 10:30 AM	04/26/2018 8:50 AM
1804398-013	SB-28-30	04/24/2018 11:25 AM	04/26/2018 8:50 AM
1804398-014	SB-28-20	04/24/2018 11:15 AM	04/26/2018 8:50 AM
1804398-015	SB-28-40	04/24/2018 11:40 AM	04/26/2018 8:50 AM
1804398-016	SB-29-GW	04/24/2018 2:40 PM	04/26/2018 8:50 AM
1804398-017	SB-30-30	04/25/2018 11:30 AM	04/26/2018 8:50 AM
1804398-018	SB-30-35	04/25/2018 11:40 AM	04/26/2018 8:50 AM
1804398-019	SB-30-40	04/25/2018 11:50 AM	04/26/2018 8:50 AM
1804398-020	SB-14a-40	04/25/2018 10:05 AM	04/26/2018 8:50 AM
1804398-021	SB-13b-36	04/25/2018 2:05 PM	04/26/2018 8:50 AM
1804398-022	SB-13b-40	04/25/2018 2:20 PM	04/26/2018 8:50 AM
1804398-023	SB-27-8	04/24/2018 9:50 AM	04/26/2018 8:50 AM

Case Narrative

WO#: **1804398**
Date: **5/11/2018**

CLIENT: PES Environmental, Inc.
Project: MVSC

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: 4/24/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804398-001
Matrix: Soil
Client Sample ID: **SB-26-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Chloromethane	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Vinyl chloride	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Bromomethane	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Trichlorofluoromethane (CFC-11)	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Chloroethane	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1-Dichloroethene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Methylene chloride	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
trans-1,2-Dichloroethene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1-Dichloroethane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
2,2-Dichloropropane	ND	0.134		mg/Kg-dry	1	5/2/2018 8:42:34 PM
cis-1,2-Dichloroethene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Chloroform	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1,1-Trichloroethane (TCA)	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1-Dichloropropene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Carbon tetrachloride	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2-Dichloroethane (EDC)	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Benzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Trichloroethene (TCE)	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2-Dichloropropane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Bromodichloromethane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Dibromomethane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
cis-1,3-Dichloropropene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Toluene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
trans-1,3-Dichloropropylene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1,2-Trichloroethane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,3-Dichloropropane	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Tetrachloroethene (PCE)	0.0960	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Dibromochloromethane	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2-Dibromoethane (EDB)	ND	0.00671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Chlorobenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,1,1,2-Tetrachloroethane	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Ethylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
m,p-Xylene	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
o-Xylene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Styrene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Isopropylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Bromoform	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:20:00 AM
Project: MVSC
Lab ID: 1804398-001
Matrix: Soil
Client Sample ID: **SB-26-2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
n-Propylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Bromobenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,3,5-Trimethylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
2-Chlorotoluene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
4-Chlorotoluene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
tert-Butylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2,3-Trichloropropane	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2,4-Trichlorobenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
sec-Butylbenzene	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
4-Isopropyltoluene	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,3-Dichlorobenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,4-Dichlorobenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
n-Butylbenzene	ND	0.0335		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2-Dichlorobenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2-Dibromo-3-chloropropane	ND	0.671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2,4-Trimethylbenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Hexachlorobutadiene	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Naphthalene	ND	0.0671		mg/Kg-dry	1	5/2/2018 8:42:34 PM
1,2,3-Trichlorobenzene	ND	0.0268		mg/Kg-dry	1	5/2/2018 8:42:34 PM
Surr: Dibromofluoromethane	95.7	56.5 - 129		%Rec	1	5/2/2018 8:42:34 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	5/2/2018 8:42:34 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	43.2 - 143		%Rec	1	5/2/2018 8:42:34 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	19.2	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:25:00 AM
Project: MVSC
Lab ID: 1804398-002
Matrix: Soil
Client Sample ID: **SB-26-4**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Chloromethane	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Vinyl chloride	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Bromomethane	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Trichlorofluoromethane (CFC-11)	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Chloroethane	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1-Dichloroethene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Methylene chloride	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
trans-1,2-Dichloroethene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1-Dichloroethane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
2,2-Dichloropropane	ND	0.117		mg/Kg-dry	1	5/2/2018 9:13:00 PM
cis-1,2-Dichloroethene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Chloroform	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1-Dichloropropene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Carbon tetrachloride	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2-Dichloroethane (EDC)	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Benzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Trichloroethene (TCE)	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2-Dichloropropane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Bromodichloromethane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Dibromomethane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
cis-1,3-Dichloropropene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Toluene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
trans-1,3-Dichloropropylene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1,2-Trichloroethane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,3-Dichloropropane	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Tetrachloroethene (PCE)	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Dibromochloromethane	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2-Dibromoethane (EDB)	ND	0.00584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Chlorobenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Ethylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
m,p-Xylene	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
o-Xylene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Styrene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Isopropylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Bromoform	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:25:00 AM
Project: MVSC
Lab ID: 1804398-002
Matrix: Soil
Client Sample ID: **SB-26-4**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
n-Propylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Bromobenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,3,5-Trimethylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
2-Chlorotoluene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
4-Chlorotoluene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
tert-Butylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2,3-Trichloropropane	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2,4-Trichlorobenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
sec-Butylbenzene	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
4-Isopropyltoluene	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,3-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,4-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
n-Butylbenzene	ND	0.0292		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2-Dichlorobenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2-Dibromo-3-chloropropane	ND	0.584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2,4-Trimethylbenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Hexachlorobutadiene	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Naphthalene	ND	0.0584		mg/Kg-dry	1	5/2/2018 9:13:00 PM
1,2,3-Trichlorobenzene	ND	0.0234		mg/Kg-dry	1	5/2/2018 9:13:00 PM
Surr: Dibromofluoromethane	95.6	56.5 - 129		%Rec	1	5/2/2018 9:13:00 PM
Surr: Toluene-d8	98.5	64.5 - 151		%Rec	1	5/2/2018 9:13:00 PM
Surr: 1-Bromo-4-fluorobenzene	99.4	43.2 - 143		%Rec	1	5/2/2018 9:13:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	16.2	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:30:00 AM
Project: MVSC
Lab ID: 1804398-003
Matrix: Soil
Client Sample ID: **SB-26-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Chloromethane	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Vinyl chloride	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Bromomethane	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Trichlorofluoromethane (CFC-11)	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Chloroethane	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1-Dichloroethene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Methylene chloride	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
trans-1,2-Dichloroethene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Methyl tert-butyl ether (MTBE)	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1-Dichloroethane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
2,2-Dichloropropane	ND	0.173		mg/Kg-dry	1	5/2/2018 10:13:51 PM
cis-1,2-Dichloroethene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Chloroform	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1,1-Trichloroethane (TCA)	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1-Dichloropropene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Carbon tetrachloride	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2-Dichloroethane (EDC)	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Benzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Trichloroethene (TCE)	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2-Dichloropropane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Bromodichloromethane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Dibromomethane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
cis-1,3-Dichloropropene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Toluene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
trans-1,3-Dichloropropylene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1,2-Trichloroethane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,3-Dichloropropane	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Tetrachloroethene (PCE)	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Dibromochloromethane	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2-Dibromoethane (EDB)	ND	0.00866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Chlorobenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,1,1,2-Tetrachloroethane	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Ethylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
m,p-Xylene	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
o-Xylene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Styrene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Isopropylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Bromoform	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:30:00 AM
Project: MVSC
Lab ID: 1804398-003
Matrix: Soil
Client Sample ID: **SB-26-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
n-Propylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Bromobenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,3,5-Trimethylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
2-Chlorotoluene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
4-Chlorotoluene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
tert-Butylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2,3-Trichloropropane	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2,4-Trichlorobenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
sec-Butylbenzene	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
4-Isopropyltoluene	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,3-Dichlorobenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,4-Dichlorobenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
n-Butylbenzene	ND	0.0433		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2-Dichlorobenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2-Dibromo-3-chloropropane	ND	0.866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2,4-Trimethylbenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Hexachlorobutadiene	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Naphthalene	ND	0.0866		mg/Kg-dry	1	5/2/2018 10:13:51 PM
1,2,3-Trichlorobenzene	ND	0.0347		mg/Kg-dry	1	5/2/2018 10:13:51 PM
Surr: Dibromofluoromethane	101	56.5 - 129		%Rec	1	5/2/2018 10:13:51 PM
Surr: Toluene-d8	100	64.5 - 151		%Rec	1	5/2/2018 10:13:51 PM
Surr: 1-Bromo-4-fluorobenzene	99.9	43.2 - 143		%Rec	1	5/2/2018 10:13:51 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	15.9	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:40:00 AM
Project: MVSC
Lab ID: 1804398-004
Matrix: Soil
Client Sample ID: **SB-26-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Chloromethane	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Vinyl chloride	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Bromomethane	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Chloroethane	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1-Dichloroethene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Methylene chloride	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
trans-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1-Dichloroethane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
2,2-Dichloropropane	ND	0.125		mg/Kg-dry	1	5/8/2018 4:46:59 PM
cis-1,2-Dichloroethene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Chloroform	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1-Dichloropropene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Carbon tetrachloride	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2-Dichloroethane (EDC)	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Benzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Trichloroethene (TCE)	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2-Dichloropropane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Bromodichloromethane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Dibromomethane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
cis-1,3-Dichloropropene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Toluene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
trans-1,3-Dichloropropylene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1,2-Trichloroethane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,3-Dichloropropane	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Tetrachloroethene (PCE)	0.0763	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Dibromochloromethane	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2-Dibromoethane (EDB)	ND	0.00627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Chlorobenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,1,1,2-Tetrachloroethane	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Ethylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
m,p-Xylene	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
o-Xylene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Styrene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Isopropylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Bromoform	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:40:00 AM
Project: MVSC
Lab ID: 1804398-004
Matrix: Soil
Client Sample ID: **SB-26-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
n-Propylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Bromobenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,3,5-Trimethylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
2-Chlorotoluene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
4-Chlorotoluene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
tert-Butylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2,3-Trichloropropane	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2,4-Trichlorobenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
sec-Butylbenzene	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
4-Isopropyltoluene	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,3-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,4-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
n-Butylbenzene	ND	0.0313		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2-Dichlorobenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2-Dibromo-3-chloropropane	ND	0.627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2,4-Trimethylbenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Hexachlorobutadiene	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Naphthalene	ND	0.0627		mg/Kg-dry	1	5/8/2018 4:46:59 PM
1,2,3-Trichlorobenzene	ND	0.0251		mg/Kg-dry	1	5/8/2018 4:46:59 PM
Surr: Dibromofluoromethane	94.8	56.5 - 129		%Rec	1	5/8/2018 4:46:59 PM
Surr: Toluene-d8	100	64.5 - 151		%Rec	1	5/8/2018 4:46:59 PM
Surr: 1-Bromo-4-fluorobenzene	91.2	43.2 - 143		%Rec	1	5/8/2018 4:46:59 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	6.58	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:50:00 AM
Project: MVSC
Lab ID: 1804398-005
Matrix: Soil
Client Sample ID: **SB-26-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Chloromethane	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Vinyl chloride	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Bromomethane	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Trichlorofluoromethane (CFC-11)	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Chloroethane	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1-Dichloroethene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Methylene chloride	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
trans-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Methyl tert-butyl ether (MTBE)	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1-Dichloroethane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
2,2-Dichloropropane	ND	0.123		mg/Kg-dry	1	5/8/2018 5:17:27 PM
cis-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Chloroform	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1,1-Trichloroethane (TCA)	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1-Dichloropropene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Carbon tetrachloride	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2-Dichloroethane (EDC)	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Benzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Trichloroethene (TCE)	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2-Dichloropropane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Bromodichloromethane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Dibromomethane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
cis-1,3-Dichloropropene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Toluene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
trans-1,3-Dichloropropylene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1,2-Trichloroethane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,3-Dichloropropane	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Tetrachloroethene (PCE)	0.0647	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Dibromochloromethane	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2-Dibromoethane (EDB)	ND	0.00617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Chlorobenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,1,1,2-Tetrachloroethane	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Ethylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
m,p-Xylene	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
o-Xylene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Styrene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Isopropylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Bromoform	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 8:50:00 AM
Project: MVSC
Lab ID: 1804398-005
Matrix: Soil
Client Sample ID: **SB-26-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
n-Propylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Bromobenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,3,5-Trimethylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
2-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
4-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
tert-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2,3-Trichloropropane	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2,4-Trichlorobenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
sec-Butylbenzene	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
4-Isopropyltoluene	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,3-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,4-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
n-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2-Dibromo-3-chloropropane	ND	0.617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2,4-Trimethylbenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Hexachlorobutadiene	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Naphthalene	ND	0.0617		mg/Kg-dry	1	5/8/2018 5:17:27 PM
1,2,3-Trichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/8/2018 5:17:27 PM
Surr: Dibromofluoromethane	94.5	56.5 - 129		%Rec	1	5/8/2018 5:17:27 PM
Surr: Toluene-d8	99.8	64.5 - 151		%Rec	1	5/8/2018 5:17:27 PM
Surr: 1-Bromo-4-fluorobenzene	91.3	43.2 - 143		%Rec	1	5/8/2018 5:17:27 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	13.4	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:00:00 AM
Project: MVSC
Lab ID: 1804398-006
Matrix: Soil
Client Sample ID: **SB-26-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
Dichlorodifluoromethane (CFC-12)	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Chloromethane	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Vinyl chloride	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Bromomethane	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Trichlorofluoromethane (CFC-11)	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Chloroethane	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Methylene chloride	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
trans-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Methyl tert-butyl ether (MTBE)	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1-Dichloroethane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
2,2-Dichloropropane	ND	0.136		mg/Kg-dry	1	5/8/2018 6:18:04 PM
cis-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Chloroform	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1,1-Trichloroethane (TCA)	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1-Dichloropropene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Carbon tetrachloride	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2-Dichloroethane (EDC)	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Benzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Trichloroethene (TCE)	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2-Dichloropropane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Bromodichloromethane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Dibromomethane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
cis-1,3-Dichloropropene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Toluene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
trans-1,3-Dichloropropylene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1,2-Trichloroethane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,3-Dichloropropane	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Tetrachloroethene (PCE)	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Dibromochloromethane	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2-Dibromoethane (EDB)	ND	0.00681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Chlorobenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,1,1,2-Tetrachloroethane	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Ethylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
m,p-Xylene	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
o-Xylene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Styrene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Isopropylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Bromoform	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:00:00 AM
Project: MVSC
Lab ID: 1804398-006
Matrix: Soil
Client Sample ID: **SB-26-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
n-Propylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Bromobenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,3,5-Trimethylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
2-Chlorotoluene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
4-Chlorotoluene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
tert-Butylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2,3-Trichloropropane	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2,4-Trichlorobenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
sec-Butylbenzene	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
4-Isopropyltoluene	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,3-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,4-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
n-Butylbenzene	ND	0.0340		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2-Dibromo-3-chloropropane	ND	0.681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2,4-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Hexachlorobutadiene	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Naphthalene	ND	0.0681		mg/Kg-dry	1	5/8/2018 6:18:04 PM
1,2,3-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/8/2018 6:18:04 PM
Surr: Dibromofluoromethane	92.3	56.5 - 129		%Rec	1	5/8/2018 6:18:04 PM
Surr: Toluene-d8	98.3	64.5 - 151		%Rec	1	5/8/2018 6:18:04 PM
Surr: 1-Bromo-4-fluorobenzene	95.1	43.2 - 143		%Rec	1	5/8/2018 6:18:04 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	14.7	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:30:00 AM
Project: MVSC
Lab ID: 1804398-007
Matrix: Soil
Client Sample ID: **SB-27-2**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Chloromethane	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Vinyl chloride	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Bromomethane	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Trichlorofluoromethane (CFC-11)	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Chloroethane	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1-Dichloroethene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Methylene chloride	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
trans-1,2-Dichloroethene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Methyl tert-butyl ether (MTBE)	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1-Dichloroethane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
2,2-Dichloropropane	ND	0.236		mg/Kg-dry	1	5/2/2018 10:44:18 PM
cis-1,2-Dichloroethene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Chloroform	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1,1-Trichloroethane (TCA)	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1-Dichloropropene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Carbon tetrachloride	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2-Dichloroethane (EDC)	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Benzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Trichloroethene (TCE)	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2-Dichloropropane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Bromodichloromethane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Dibromomethane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
cis-1,3-Dichloropropene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Toluene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
trans-1,3-Dichloropropylene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1,2-Trichloroethane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,3-Dichloropropane	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Tetrachloroethene (PCE)	0.0800	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Dibromochloromethane	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2-Dibromoethane (EDB)	ND	0.0118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Chlorobenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,1,1,2-Tetrachloroethane	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Ethylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
m,p-Xylene	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
o-Xylene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Styrene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Isopropylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Bromoform	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:30:00 AM
Project: MVSC
Lab ID: 1804398-007
Matrix: Soil
Client Sample ID: **SB-27-2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
n-Propylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Bromobenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,3,5-Trimethylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
2-Chlorotoluene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
4-Chlorotoluene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
tert-Butylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2,3-Trichloropropane	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2,4-Trichlorobenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
sec-Butylbenzene	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
4-Isopropyltoluene	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,3-Dichlorobenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,4-Dichlorobenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
n-Butylbenzene	ND	0.0591		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2-Dichlorobenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2-Dibromo-3-chloropropane	ND	1.18		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2,4-Trimethylbenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Hexachlorobutadiene	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Naphthalene	ND	0.118		mg/Kg-dry	1	5/2/2018 10:44:18 PM
1,2,3-Trichlorobenzene	ND	0.0473		mg/Kg-dry	1	5/2/2018 10:44:18 PM
Surr: Dibromofluoromethane	95.7	56.5 - 129		%Rec	1	5/2/2018 10:44:18 PM
Surr: Toluene-d8	99.3	64.5 - 151		%Rec	1	5/2/2018 10:44:18 PM
Surr: 1-Bromo-4-fluorobenzene	97.1	43.2 - 143		%Rec	1	5/2/2018 10:44:18 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	22.0	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:35:00 AM
Project: MVSC
Lab ID: 1804398-008
Matrix: Soil
Client Sample ID: **SB-27-4**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloromethane	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Vinyl chloride	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromomethane	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloroethane	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloroethene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Methylene chloride	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
trans-1,2-Dichloroethene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloroethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
2,2-Dichloropropane	ND	0.170		mg/Kg-dry	1	5/2/2018 11:14:44 PM
cis-1,2-Dichloroethene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloroform	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloropropene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Carbon tetrachloride	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichloroethane (EDC)	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Benzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Trichloroethene (TCE)	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichloropropane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromodichloromethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Dibromomethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
cis-1,3-Dichloropropene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Toluene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
trans-1,3-Dichloropropylene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,2-Trichloroethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3-Dichloropropane	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Tetrachloroethene (PCE)	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Dibromochloromethane	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dibromoethane (EDB)	ND	0.00852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chlorobenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Ethylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
m,p-Xylene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
o-Xylene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Styrene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Isopropylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromoform	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:35:00 AM
Project: MVSC
Lab ID: 1804398-008
Matrix: Soil
Client Sample ID: **SB-27-4**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
n-Propylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3,5-Trimethylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
2-Chlorotoluene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
4-Chlorotoluene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
tert-Butylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,3-Trichloropropane	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,4-Trichlorobenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
sec-Butylbenzene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
4-Isopropyltoluene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,4-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
n-Butylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dibromo-3-chloropropane	ND	0.852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,4-Trimethylbenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Hexachlorobutadiene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Naphthalene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,3-Trichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Surr: Dibromofluoromethane	93.8	56.5 - 129		%Rec	1	5/2/2018 11:14:44 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	5/2/2018 11:14:44 PM
Surr: 1-Bromo-4-fluorobenzene	93.3	43.2 - 143		%Rec	1	5/2/2018 11:14:44 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	7.97	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804398-009
Matrix: Soil
Client Sample ID: **SB-27-10**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Chloromethane	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Vinyl chloride	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Bromomethane	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Trichlorofluoromethane (CFC-11)	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Chloroethane	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1-Dichloroethene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Methylene chloride	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
trans-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Methyl tert-butyl ether (MTBE)	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1-Dichloroethane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
2,2-Dichloropropane	ND	0.136		mg/Kg-dry	1	5/2/2018 11:44:56 PM
cis-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Chloroform	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1,1-Trichloroethane (TCA)	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1-Dichloropropene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Carbon tetrachloride	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2-Dichloroethane (EDC)	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Benzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Trichloroethene (TCE)	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2-Dichloropropane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Bromodichloromethane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Dibromomethane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
cis-1,3-Dichloropropene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Toluene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
trans-1,3-Dichloropropylene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1,2-Trichloroethane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,3-Dichloropropane	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Tetrachloroethene (PCE)	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Dibromochloromethane	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2-Dibromoethane (EDB)	ND	0.00679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Chlorobenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,1,1,2-Tetrachloroethane	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Ethylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
m,p-Xylene	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
o-Xylene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Styrene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Isopropylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Bromoform	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:55:00 AM
Project: MVSC
Lab ID: 1804398-009
Matrix: Soil
Client Sample ID: **SB-27-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
n-Propylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Bromobenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,3,5-Trimethylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
2-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
4-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
tert-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2,3-Trichloropropane	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2,4-Trichlorobenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
sec-Butylbenzene	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
4-Isopropyltoluene	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,3-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,4-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
n-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2-Dibromo-3-chloropropane	ND	0.679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2,4-Trimethylbenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Hexachlorobutadiene	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Naphthalene	ND	0.0679		mg/Kg-dry	1	5/2/2018 11:44:56 PM
1,2,3-Trichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/2/2018 11:44:56 PM
Surr: Dibromofluoromethane	93.4	56.5 - 129		%Rec	1	5/2/2018 11:44:56 PM
Surr: Toluene-d8	97.3	64.5 - 151		%Rec	1	5/2/2018 11:44:56 PM
Surr: 1-Bromo-4-fluorobenzene	97.9	43.2 - 143		%Rec	1	5/2/2018 11:44:56 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	16.8	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:05:00 AM
Project: MVSC
Lab ID: 1804398-010
Matrix: Soil
Client Sample ID: **SB-27-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Chloromethane	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Vinyl chloride	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Bromomethane	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Trichlorofluoromethane (CFC-11)	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Chloroethane	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1-Dichloroethene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Methylene chloride	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
trans-1,2-Dichloroethene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Methyl tert-butyl ether (MTBE)	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1-Dichloroethane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
2,2-Dichloropropane	ND	0.176		mg/Kg-dry	1	5/8/2018 6:48:16 PM
cis-1,2-Dichloroethene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Chloroform	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1,1-Trichloroethane (TCA)	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1-Dichloropropene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Carbon tetrachloride	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2-Dichloroethane (EDC)	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Benzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Trichloroethene (TCE)	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2-Dichloropropane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Bromodichloromethane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Dibromomethane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
cis-1,3-Dichloropropene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Toluene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
trans-1,3-Dichloropropylene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1,2-Trichloroethane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,3-Dichloropropane	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Tetrachloroethene (PCE)	0.0942	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Dibromochloromethane	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2-Dibromoethane (EDB)	ND	0.00880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Chlorobenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,1,1,2-Tetrachloroethane	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Ethylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
m,p-Xylene	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
o-Xylene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Styrene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Isopropylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Bromoform	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:05:00 AM
Project: MVSC
Lab ID: 1804398-010
Matrix: Soil
Client Sample ID: **SB-27-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
n-Propylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Bromobenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,3,5-Trimethylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
2-Chlorotoluene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
4-Chlorotoluene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
tert-Butylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2,3-Trichloropropane	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2,4-Trichlorobenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
sec-Butylbenzene	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
4-Isopropyltoluene	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,3-Dichlorobenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,4-Dichlorobenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
n-Butylbenzene	ND	0.0440		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2-Dichlorobenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2-Dibromo-3-chloropropane	ND	0.880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2,4-Trimethylbenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Hexachlorobutadiene	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Naphthalene	ND	0.0880		mg/Kg-dry	1	5/8/2018 6:48:16 PM
1,2,3-Trichlorobenzene	ND	0.0352		mg/Kg-dry	1	5/8/2018 6:48:16 PM
Surr: Dibromofluoromethane	90.9	56.5 - 129		%Rec	1	5/8/2018 6:48:16 PM
Surr: Toluene-d8	97.6	64.5 - 151		%Rec	1	5/8/2018 6:48:16 PM
Surr: 1-Bromo-4-fluorobenzene	94.3	43.2 - 143		%Rec	1	5/8/2018 6:48:16 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	18.9	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804398-011
Matrix: Soil
Client Sample ID: **SB-27-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Chloromethane	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Vinyl chloride	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Bromomethane	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Trichlorofluoromethane (CFC-11)	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Chloroethane	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1-Dichloroethene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Methylene chloride	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
trans-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Methyl tert-butyl ether (MTBE)	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1-Dichloroethane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
2,2-Dichloropropane	ND	0.115		mg/Kg-dry	1	5/8/2018 7:18:33 PM
cis-1,2-Dichloroethene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Chloroform	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1,1-Trichloroethane (TCA)	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1-Dichloropropene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Carbon tetrachloride	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2-Dichloroethane (EDC)	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Benzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Trichloroethene (TCE)	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2-Dichloropropane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Bromodichloromethane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Dibromomethane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
cis-1,3-Dichloropropene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Toluene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
trans-1,3-Dichloropropylene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1,2-Trichloroethane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,3-Dichloropropane	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Tetrachloroethene (PCE)	0.118	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Dibromochloromethane	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2-Dibromoethane (EDB)	ND	0.00577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Chlorobenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,1,1,2-Tetrachloroethane	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Ethylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
m,p-Xylene	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
o-Xylene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Styrene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Isopropylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Bromoform	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:15:00 AM
Project: MVSC
Lab ID: 1804398-011
Matrix: Soil
Client Sample ID: **SB-27-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
n-Propylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Bromobenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,3,5-Trimethylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
2-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
4-Chlorotoluene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
tert-Butylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2,3-Trichloropropane	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2,4-Trichlorobenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
sec-Butylbenzene	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
4-Isopropyltoluene	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,3-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,4-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
n-Butylbenzene	ND	0.0288		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2-Dichlorobenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2-Dibromo-3-chloropropane	ND	0.577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2,4-Trimethylbenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Hexachlorobutadiene	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Naphthalene	ND	0.0577		mg/Kg-dry	1	5/8/2018 7:18:33 PM
1,2,3-Trichlorobenzene	ND	0.0231		mg/Kg-dry	1	5/8/2018 7:18:33 PM
Surr: Dibromofluoromethane	93.6	56.5 - 129		%Rec	1	5/8/2018 7:18:33 PM
Surr: Toluene-d8	100	64.5 - 151		%Rec	1	5/8/2018 7:18:33 PM
Surr: 1-Bromo-4-fluorobenzene	93.8	43.2 - 143		%Rec	1	5/8/2018 7:18:33 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	7.12	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804398-012
Matrix: Soil
Client Sample ID: **SB-27-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Chloromethane	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Vinyl chloride	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Bromomethane	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Trichlorofluoromethane (CFC-11)	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Chloroethane	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1-Dichloroethene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Methylene chloride	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
trans-1,2-Dichloroethene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1-Dichloroethane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
2,2-Dichloropropane	ND	0.211		mg/Kg-dry	1	5/8/2018 8:19:06 PM
cis-1,2-Dichloroethene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Chloroform	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1-Dichloropropene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Carbon tetrachloride	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2-Dichloroethane (EDC)	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Benzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Trichloroethene (TCE)	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2-Dichloropropane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Bromodichloromethane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Dibromomethane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
cis-1,3-Dichloropropene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Toluene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
trans-1,3-Dichloropropylene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1,2-Trichloroethane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,3-Dichloropropane	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Tetrachloroethene (PCE)	0.169	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Dibromochloromethane	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2-Dibromoethane (EDB)	ND	0.0106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Chlorobenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,1,1,2-Tetrachloroethane	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Ethylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
m,p-Xylene	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
o-Xylene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Styrene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Isopropylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Bromoform	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 10:30:00 AM
Project: MVSC
Lab ID: 1804398-012
Matrix: Soil
Client Sample ID: **SB-27-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
n-Propylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Bromobenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,3,5-Trimethylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
2-Chlorotoluene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
4-Chlorotoluene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
tert-Butylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2,3-Trichloropropane	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2,4-Trichlorobenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
sec-Butylbenzene	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
4-Isopropyltoluene	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,3-Dichlorobenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,4-Dichlorobenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
n-Butylbenzene	ND	0.0529		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2-Dichlorobenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2-Dibromo-3-chloropropane	ND	1.06		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2,4-Trimethylbenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Hexachlorobutadiene	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Naphthalene	ND	0.106		mg/Kg-dry	1	5/8/2018 8:19:06 PM
1,2,3-Trichlorobenzene	ND	0.0423		mg/Kg-dry	1	5/8/2018 8:19:06 PM
Surr: Dibromofluoromethane	91.6	56.5 - 129		%Rec	1	5/8/2018 8:19:06 PM
Surr: Toluene-d8	98.4	64.5 - 151		%Rec	1	5/8/2018 8:19:06 PM
Surr: 1-Bromo-4-fluorobenzene	92.4	43.2 - 143		%Rec	1	5/8/2018 8:19:06 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	10.7	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:25:00 AM
Project: MVSC
Lab ID: 1804398-013
Matrix: Soil
Client Sample ID: **SB-28-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Chloromethane	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Vinyl chloride	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Bromomethane	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Trichlorofluoromethane (CFC-11)	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Chloroethane	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Methylene chloride	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
trans-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Methyl tert-butyl ether (MTBE)	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1-Dichloroethane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
2,2-Dichloropropane	ND	0.136		mg/Kg-dry	1	5/3/2018 12:15:25 AM
cis-1,2-Dichloroethene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Chloroform	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1,1-Trichloroethane (TCA)	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1-Dichloropropene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Carbon tetrachloride	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2-Dichloroethane (EDC)	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Benzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Trichloroethene (TCE)	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2-Dichloropropane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Bromodichloromethane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Dibromomethane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
cis-1,3-Dichloropropene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Toluene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
trans-1,3-Dichloropropylene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1,2-Trichloroethane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,3-Dichloropropane	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Tetrachloroethene (PCE)	0.0784	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Dibromochloromethane	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2-Dibromoethane (EDB)	ND	0.00681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Chlorobenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,1,1,2-Tetrachloroethane	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Ethylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
m,p-Xylene	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
o-Xylene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Styrene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Isopropylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Bromoform	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:25:00 AM
Project: MVSC
Lab ID: 1804398-013
Matrix: Soil
Client Sample ID: **SB-28-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
n-Propylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Bromobenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,3,5-Trimethylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
2-Chlorotoluene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
4-Chlorotoluene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
tert-Butylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2,3-Trichloropropane	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2,4-Trichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
sec-Butylbenzene	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
4-Isopropyltoluene	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,3-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,4-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
n-Butylbenzene	ND	0.0341		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2-Dichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2-Dibromo-3-chloropropane	ND	0.681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2,4-Trimethylbenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Hexachlorobutadiene	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Naphthalene	ND	0.0681		mg/Kg-dry	1	5/3/2018 12:15:25 AM
1,2,3-Trichlorobenzene	ND	0.0272		mg/Kg-dry	1	5/3/2018 12:15:25 AM
Surr: Dibromofluoromethane	94.5	56.5 - 129		%Rec	1	5/3/2018 12:15:25 AM
Surr: Toluene-d8	97.5	64.5 - 151		%Rec	1	5/3/2018 12:15:25 AM
Surr: 1-Bromo-4-fluorobenzene	98.1	43.2 - 143		%Rec	1	5/3/2018 12:15:25 AM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	8.39	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:15:00 AM
Project: MVSC
Lab ID: 1804398-014
Matrix: Soil
Client Sample ID: **SB-28-20**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Chloromethane	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Vinyl chloride	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Bromomethane	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Trichlorofluoromethane (CFC-11)	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Chloroethane	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1-Dichloroethene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Methylene chloride	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
trans-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Methyl tert-butyl ether (MTBE)	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1-Dichloroethane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
2,2-Dichloropropane	ND	0.129		mg/Kg-dry	1	5/3/2018 12:45:52 AM
cis-1,2-Dichloroethene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Chloroform	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1,1-Trichloroethane (TCA)	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1-Dichloropropene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Carbon tetrachloride	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2-Dichloroethane (EDC)	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Benzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Trichloroethene (TCE)	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2-Dichloropropane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Bromodichloromethane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Dibromomethane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
cis-1,3-Dichloropropene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Toluene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
trans-1,3-Dichloropropylene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1,2-Trichloroethane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,3-Dichloropropane	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Tetrachloroethene (PCE)	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Dibromochloromethane	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2-Dibromoethane (EDB)	ND	0.00647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Chlorobenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,1,1,2-Tetrachloroethane	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Ethylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
m,p-Xylene	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
o-Xylene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Styrene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Isopropylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Bromoform	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:15:00 AM
Project: MVSC
Lab ID: 1804398-014
Matrix: Soil
Client Sample ID: **SB-28-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
n-Propylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Bromobenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,3,5-Trimethylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
2-Chlorotoluene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
4-Chlorotoluene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
tert-Butylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2,3-Trichloropropane	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2,4-Trichlorobenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
sec-Butylbenzene	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
4-Isopropyltoluene	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,3-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,4-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
n-Butylbenzene	ND	0.0323		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2-Dichlorobenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2-Dibromo-3-chloropropane	ND	0.647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2,4-Trimethylbenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Hexachlorobutadiene	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Naphthalene	ND	0.0647		mg/Kg-dry	1	5/3/2018 12:45:52 AM
1,2,3-Trichlorobenzene	ND	0.0259		mg/Kg-dry	1	5/3/2018 12:45:52 AM
Surr: Dibromofluoromethane	92.8	56.5 - 129		%Rec	1	5/3/2018 12:45:52 AM
Surr: Toluene-d8	96.0	64.5 - 151		%Rec	1	5/3/2018 12:45:52 AM
Surr: 1-Bromo-4-fluorobenzene	96.5	43.2 - 143		%Rec	1	5/3/2018 12:45:52 AM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	17.5	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-015
Matrix: Soil
Client Sample ID: **SB-28-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20625 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Chloromethane	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Vinyl chloride	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Bromomethane	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Trichlorofluoromethane (CFC-11)	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Chloroethane	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1-Dichloroethene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Methylene chloride	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
trans-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Methyl tert-butyl ether (MTBE)	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1-Dichloroethane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
2,2-Dichloropropane	ND	0.130		mg/Kg-dry	1	5/8/2018 8:49:22 PM
cis-1,2-Dichloroethene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Chloroform	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1,1-Trichloroethane (TCA)	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1-Dichloropropene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Carbon tetrachloride	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2-Dichloroethane (EDC)	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Benzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Trichloroethene (TCE)	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2-Dichloropropane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Bromodichloromethane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Dibromomethane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
cis-1,3-Dichloropropene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Toluene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
trans-1,3-Dichloropropylene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1,2-Trichloroethane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,3-Dichloropropane	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Tetrachloroethene (PCE)	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Dibromochloromethane	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2-Dibromoethane (EDB)	ND	0.00650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Chlorobenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,1,1,2-Tetrachloroethane	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Ethylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
m,p-Xylene	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
o-Xylene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Styrene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Isopropylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Bromoform	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-015
Matrix: Soil
Client Sample ID: **SB-28-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20625		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
n-Propylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Bromobenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,3,5-Trimethylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
2-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
4-Chlorotoluene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
tert-Butylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2,3-Trichloropropane	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2,4-Trichlorobenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
sec-Butylbenzene	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
4-Isopropyltoluene	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,3-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,4-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
n-Butylbenzene	ND	0.0325		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2-Dichlorobenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2-Dibromo-3-chloropropane	ND	0.650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2,4-Trimethylbenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Hexachlorobutadiene	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Naphthalene	ND	0.0650		mg/Kg-dry	1	5/8/2018 8:49:22 PM
1,2,3-Trichlorobenzene	ND	0.0260		mg/Kg-dry	1	5/8/2018 8:49:22 PM
Surr: Dibromofluoromethane	92.5	56.5 - 129		%Rec	1	5/8/2018 8:49:22 PM
Surr: Toluene-d8	97.9	64.5 - 151		%Rec	1	5/8/2018 8:49:22 PM
Surr: 1-Bromo-4-fluorobenzene	93.9	43.2 - 143		%Rec	1	5/8/2018 8:49:22 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	9.64	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 2:40:00 PM
Project: MVSC
Lab ID: 1804398-016
Matrix: Groundwater
Client Sample ID: **SB-29-GW**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20551 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Chloromethane	ND	2.00		µg/L	1	5/1/2018 6:57:19 AM
Vinyl chloride	ND	0.200		µg/L	1	5/1/2018 6:57:19 AM
Bromomethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Chloroethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Methylene chloride	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	5/1/2018 6:57:19 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Chloroform	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Carbon tetrachloride	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Benzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	5/1/2018 6:57:19 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Bromodichloromethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Dibromomethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Toluene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Tetrachloroethene (PCE)	13.7	1.00		µg/L	1	5/1/2018 6:57:19 AM
Dibromochloromethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	5/1/2018 6:57:19 AM
Chlorobenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Ethylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
m,p-Xylene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
o-Xylene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Styrene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Isopropylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Bromoform	ND	2.00		µg/L	1	5/1/2018 6:57:19 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 2:40:00 PM
Project: MVSC
Lab ID: 1804398-016
Matrix: Groundwater
Client Sample ID: **SB-29-GW**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20551		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
n-Propylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Bromobenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
2-Chlorotoluene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
4-Chlorotoluene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
tert-Butylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	5/1/2018 6:57:19 AM
sec-Butylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
n-Butylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	5/1/2018 6:57:19 AM
Naphthalene	ND	1.00		µg/L	1	5/1/2018 6:57:19 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	5/1/2018 6:57:19 AM
Surr: Dibromofluoromethane	106	45.4 - 152		%Rec	1	5/1/2018 6:57:19 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	5/1/2018 6:57:19 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2 - 128		%Rec	1	5/1/2018 6:57:19 AM

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:30:00 AM
Project: MVSC
Lab ID: 1804398-017
Matrix: Soil
Client Sample ID: **SB-30-30**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Chloromethane	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Vinyl chloride	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Bromomethane	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Trichlorofluoromethane (CFC-11)	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Chloroethane	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1-Dichloroethene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Methylene chloride	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
trans-1,2-Dichloroethene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Methyl tert-butyl ether (MTBE)	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1-Dichloroethane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
2,2-Dichloropropane	ND	0.158		mg/Kg-dry	1	5/3/2018 1:16:24 AM
cis-1,2-Dichloroethene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Chloroform	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1,1-Trichloroethane (TCA)	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1-Dichloropropene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Carbon tetrachloride	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2-Dichloroethane (EDC)	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Benzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Trichloroethene (TCE)	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2-Dichloropropane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Bromodichloromethane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Dibromomethane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
cis-1,3-Dichloropropene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Toluene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
trans-1,3-Dichloropropylene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1,2-Trichloroethane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,3-Dichloropropane	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Tetrachloroethene (PCE)	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Dibromochloromethane	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2-Dibromoethane (EDB)	ND	0.00791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Chlorobenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,1,1,2-Tetrachloroethane	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Ethylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
m,p-Xylene	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
o-Xylene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Styrene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Isopropylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Bromoform	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:30:00 AM
Project: MVSC
Lab ID: 1804398-017
Matrix: Soil
Client Sample ID: **SB-30-30**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
n-Propylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Bromobenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,3,5-Trimethylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
2-Chlorotoluene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
4-Chlorotoluene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
tert-Butylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2,3-Trichloropropane	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2,4-Trichlorobenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
sec-Butylbenzene	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
4-Isopropyltoluene	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,3-Dichlorobenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,4-Dichlorobenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
n-Butylbenzene	ND	0.0395		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2-Dichlorobenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2-Dibromo-3-chloropropane	ND	0.791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2,4-Trimethylbenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Hexachlorobutadiene	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Naphthalene	ND	0.0791		mg/Kg-dry	1	5/3/2018 1:16:24 AM
1,2,3-Trichlorobenzene	ND	0.0316		mg/Kg-dry	1	5/3/2018 1:16:24 AM
Surr: Dibromofluoromethane	94.0	56.5 - 129		%Rec	1	5/3/2018 1:16:24 AM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	5/3/2018 1:16:24 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	43.2 - 143		%Rec	1	5/3/2018 1:16:24 AM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	20.3	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-018
Matrix: Soil
Client Sample ID: **SB-30-35**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloromethane	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Vinyl chloride	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromomethane	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Trichlorofluoromethane (CFC-11)	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloroethane	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloroethene	ND	0.0271	Q-	mg/Kg-dry	1	5/3/2018 5:19:46 AM
Methylene chloride	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
trans-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Methyl tert-butyl ether (MTBE)	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloroethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
2,2-Dichloropropane	ND	0.136		mg/Kg-dry	1	5/3/2018 5:19:46 AM
cis-1,2-Dichloroethene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloroform	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,1-Trichloroethane (TCA)	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloropropene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Carbon tetrachloride	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichloroethane (EDC)	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Benzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Trichloroethene (TCE)	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichloropropane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromodichloromethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Dibromomethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
cis-1,3-Dichloropropene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Toluene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
trans-1,3-Dichloropropylene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,2-Trichloroethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3-Dichloropropane	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Tetrachloroethene (PCE)	0.142	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Dibromochloromethane	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dibromoethane (EDB)	ND	0.00678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chlorobenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,1,2-Tetrachloroethane	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Ethylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
m,p-Xylene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
o-Xylene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Styrene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Isopropylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromoform	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-018
Matrix: Soil
Client Sample ID: **SB-30-35**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
n-Propylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3,5-Trimethylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
2-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
4-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
tert-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,3-Trichloropropane	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,4-Trichlorobenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
sec-Butylbenzene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
4-Isopropyltoluene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,4-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
n-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dibromo-3-chloropropane	ND	0.678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,4-Trimethylbenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Hexachlorobutadiene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Naphthalene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,3-Trichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Surr: Dibromofluoromethane	95.0	56.5 - 129		%Rec	1	5/3/2018 5:19:46 AM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	5/3/2018 5:19:46 AM
Surr: 1-Bromo-4-fluorobenzene	95.8	43.2 - 143		%Rec	1	5/3/2018 5:19:46 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: R43138		Analyst: EAS
Percent Moisture	14.4	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804398-019
Matrix: Soil
Client Sample ID: **SB-30-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloromethane	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Vinyl chloride	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromomethane	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Trichlorofluoromethane (CFC-11)	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloroethane	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloroethene	ND	0.0263	Q-	mg/Kg-dry	1	5/3/2018 5:50:13 AM
Methylene chloride	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
trans-1,2-Dichloroethene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Methyl tert-butyl ether (MTBE)	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloroethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
2,2-Dichloropropane	ND	0.131		mg/Kg-dry	1	5/3/2018 5:50:13 AM
cis-1,2-Dichloroethene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloroform	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,1-Trichloroethane (TCA)	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloropropene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Carbon tetrachloride	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichloroethane (EDC)	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Benzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Trichloroethene (TCE)	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichloropropane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromodichloromethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Dibromomethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
cis-1,3-Dichloropropene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Toluene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
trans-1,3-Dichloropropylene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,2-Trichloroethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3-Dichloropropane	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Tetrachloroethene (PCE)	0.0665	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Dibromochloromethane	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dibromoethane (EDB)	ND	0.00656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chlorobenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,1,2-Tetrachloroethane	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Ethylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
m,p-Xylene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
o-Xylene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Styrene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Isopropylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromoform	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804398-019
Matrix: Soil
Client Sample ID: **SB-30-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
n-Propylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3,5-Trimethylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
2-Chlorotoluene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
4-Chlorotoluene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
tert-Butylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,3-Trichloropropane	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,4-Trichlorobenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
sec-Butylbenzene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
4-Isopropyltoluene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,4-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
n-Butylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dibromo-3-chloropropane	ND	0.656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,4-Trimethylbenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Hexachlorobutadiene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Naphthalene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,3-Trichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	5/3/2018 5:50:13 AM
Surr: Toluene-d8	99.3	64.5 - 151		%Rec	1	5/3/2018 5:50:13 AM
Surr: 1-Bromo-4-fluorobenzene	94.2	43.2 - 143		%Rec	1	5/3/2018 5:50:13 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: R43138		Analyst: EAS
Percent Moisture	18.0	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 10:05:00 AM
Project: MVSC
Lab ID: 1804398-020
Matrix: Soil
Client Sample ID: **SB-14a-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20637 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Chloromethane	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Vinyl chloride	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Bromomethane	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Trichlorofluoromethane (CFC-11)	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Chloroethane	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1-Dichloroethene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Methylene chloride	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
trans-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Methyl tert-butyl ether (MTBE)	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1-Dichloroethane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
2,2-Dichloropropane	ND	0.120		mg/Kg-dry	1	5/9/2018 3:28:14 PM
cis-1,2-Dichloroethene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Chloroform	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1,1-Trichloroethane (TCA)	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1-Dichloropropene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Carbon tetrachloride	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2-Dichloroethane (EDC)	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Benzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Trichloroethene (TCE)	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2-Dichloropropane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Bromodichloromethane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Dibromomethane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
cis-1,3-Dichloropropene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Toluene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
trans-1,3-Dichloropropylene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1,2-Trichloroethane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,3-Dichloropropane	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Tetrachloroethene (PCE)	0.105	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Dibromochloromethane	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2-Dibromoethane (EDB)	ND	0.00600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Chlorobenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,1,1,2-Tetrachloroethane	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Ethylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
m,p-Xylene	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
o-Xylene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Styrene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Isopropylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Bromoform	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM

Client: PES Environmental, Inc. **Collection Date:** 4/25/2018 10:05:00 AM
Project: MVSC
Lab ID: 1804398-020 **Matrix:** Soil
Client Sample ID: **SB-14a-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20637		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
n-Propylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Bromobenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,3,5-Trimethylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
2-Chlorotoluene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
4-Chlorotoluene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
tert-Butylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2,3-Trichloropropane	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2,4-Trichlorobenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
sec-Butylbenzene	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
4-Isopropyltoluene	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,3-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,4-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
n-Butylbenzene	ND	0.0300		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2-Dichlorobenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2-Dibromo-3-chloropropane	ND	0.600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2,4-Trimethylbenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Hexachlorobutadiene	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Naphthalene	ND	0.0600		mg/Kg-dry	1	5/9/2018 3:28:14 PM
1,2,3-Trichlorobenzene	ND	0.0240		mg/Kg-dry	1	5/9/2018 3:28:14 PM
Surr: Dibromofluoromethane	93.0	56.5 - 129		%Rec	1	5/9/2018 3:28:14 PM
Surr: Toluene-d8	99.6	64.5 - 151		%Rec	1	5/9/2018 3:28:14 PM
Surr: 1-Bromo-4-fluorobenzene	95.2	43.2 - 143		%Rec	1	5/9/2018 3:28:14 PM
Sample Moisture (Percent Moisture)				Batch ID: R43369		Analyst: CG
Percent Moisture	13.9	0.500		wt%	1	5/9/2018 11:01:58 AM

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:05:00 PM
Project: MVSC
Lab ID: 1804398-021
Matrix: Soil
Client Sample ID: **SB-13b-36**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloromethane	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Vinyl chloride	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromomethane	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Trichlorofluoromethane (CFC-11)	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloroethane	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloroethene	ND	0.0247	Q-	mg/Kg-dry	1	5/3/2018 6:20:34 AM
Methylene chloride	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
trans-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Methyl tert-butyl ether (MTBE)	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloroethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
2,2-Dichloropropane	ND	0.124		mg/Kg-dry	1	5/3/2018 6:20:34 AM
cis-1,2-Dichloroethene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloroform	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,1-Trichloroethane (TCA)	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloropropene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Carbon tetrachloride	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichloroethane (EDC)	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Benzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Trichloroethene (TCE)	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichloropropane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromodichloromethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Dibromomethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
cis-1,3-Dichloropropene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Toluene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
trans-1,3-Dichloropropylene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,2-Trichloroethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3-Dichloropropane	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Tetrachloroethene (PCE)	0.0829	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Dibromochloromethane	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dibromoethane (EDB)	ND	0.00619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chlorobenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,1,2-Tetrachloroethane	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Ethylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
m,p-Xylene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
o-Xylene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Styrene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Isopropylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromoform	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:05:00 PM
Project: MVSC
Lab ID: 1804398-021
Matrix: Soil
Client Sample ID: **SB-13b-36**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
n-Propylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3,5-Trimethylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
2-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
4-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
tert-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,3-Trichloropropane	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,4-Trichlorobenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
sec-Butylbenzene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
4-Isopropyltoluene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,4-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
n-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dibromo-3-chloropropane	ND	0.619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,4-Trimethylbenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Hexachlorobutadiene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Naphthalene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,3-Trichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Surr: Dibromofluoromethane	94.4	56.5 - 129		%Rec	1	5/3/2018 6:20:34 AM
Surr: Toluene-d8	99.4	64.5 - 151		%Rec	1	5/3/2018 6:20:34 AM
Surr: 1-Bromo-4-fluorobenzene	91.5	43.2 - 143		%Rec	1	5/3/2018 6:20:34 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: R43138		Analyst: EAS
Percent Moisture	9.17	0.500		wt%	1	4/27/2018 9:29:37 AM

Client: PES Environmental, Inc. **Collection Date:** 4/25/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804398-022 **Matrix:** Soil
Client Sample ID: **SB-13b-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloromethane	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Vinyl chloride	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromomethane	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Trichlorofluoromethane (CFC-11)	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloroethane	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloroethene	ND	0.0188	Q-	mg/Kg-dry	1	5/3/2018 6:51:01 AM
Methylene chloride	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
trans-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Methyl tert-butyl ether (MTBE)	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloroethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
2,2-Dichloropropane	ND	0.0940		mg/Kg-dry	1	5/3/2018 6:51:01 AM
cis-1,2-Dichloroethene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloroform	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,1-Trichloroethane (TCA)	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloropropene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Carbon tetrachloride	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichloroethane (EDC)	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Benzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Trichloroethene (TCE)	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichloropropane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromodichloromethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Dibromomethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
cis-1,3-Dichloropropene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Toluene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
trans-1,3-Dichloropropylene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,2-Trichloroethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3-Dichloropropane	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Tetrachloroethene (PCE)	0.128	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Dibromochloromethane	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dibromoethane (EDB)	ND	0.00470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chlorobenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,1,2-Tetrachloroethane	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Ethylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
m,p-Xylene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
o-Xylene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Styrene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Isopropylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromoform	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804398-022
Matrix: Soil
Client Sample ID: **SB-13b-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
n-Propylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3,5-Trimethylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
2-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
4-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
tert-Butylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,3-Trichloropropane	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,4-Trichlorobenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
sec-Butylbenzene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
4-Isopropyltoluene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
n-Butylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dibromo-3-chloropropane	ND	0.470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Hexachlorobutadiene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Naphthalene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Surr: Dibromofluoromethane	92.8	56.5 - 129		%Rec	1	5/3/2018 6:51:01 AM
Surr: Toluene-d8	96.2	64.5 - 151		%Rec	1	5/3/2018 6:51:01 AM
Surr: 1-Bromo-4-fluorobenzene	95.6	43.2 - 143		%Rec	1	5/3/2018 6:51:01 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: R43138		Analyst: EAS
Percent Moisture	6.93	0.500		wt%	1	4/27/2018 9:29:37 AM

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1804398-004ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **5/9/2018**		RunNo: **43369**		
Client ID: **SB-26-20**	Batch ID: **R43369**					Analysis Date: **5/9/2018**		SeqNo: **838291**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	6.95	0.500						6.580	5.51	20	

Sample ID **1805080-001ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **5/9/2018**		RunNo: **43369**		
Client ID: **BATCH**	Batch ID: **R43369**					Analysis Date: **5/9/2018**		SeqNo: **838301**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	10.8	0.500						9.378	13.9	20	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1804413-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **4/27/2018** RunNo: **43138**
Client ID: **BATCH** Batch ID: **R43138** Analysis Date: **4/27/2018** SeqNo: **833861**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	15.1	0.500						14.34	5.25	20	

Sample ID **1804398-022ADUP** SampType: **DUP** Units: **wt%** Prep Date: **4/27/2018** RunNo: **43138**
Client ID: **SB-13b-40** Batch ID: **R43138** Analysis Date: **4/27/2018** SeqNo: **833879**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	7.04	0.500						6.933	1.61	20	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20637** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **LCSS** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.905	0.0200	1.000	0	90.5	14.3	167				
Chloromethane	0.908	0.0500	1.000	0	90.8	32	156				
Vinyl chloride	0.976	0.0250	1.000	0	97.6	43.4	151				
Bromomethane	0.932	0.0500	1.000	0	93.2	35	155				
Trichlorofluoromethane (CFC-11)	1.09	0.0200	1.000	0	109	33.8	156				
Chloroethane	1.06	0.0500	1.000	0	106	33.1	147				
1,1-Dichloroethene	1.03	0.0200	1.000	0	103	39	144				
Methylene chloride	0.983	0.0200	1.000	0	98.3	46.3	140				
trans-1,2-Dichloroethene	0.990	0.0200	1.000	0	99.0	68	130				
Methyl tert-butyl ether (MTBE)	1.03	0.0500	1.000	0	103	44.1	152				
1,1-Dichloroethane	0.988	0.0200	1.000	0	98.8	61.9	137				
2,2-Dichloropropane	1.20	0.100	1.000	0	120	35.5	186				
cis-1,2-Dichloroethene	0.983	0.0200	1.000	0	98.3	71.3	135				
Chloroform	0.989	0.0200	1.000	0	98.9	69	145				
1,1,1-Trichloroethane (TCA)	0.981	0.0250	1.000	0	98.1	69	132				
1,1-Dichloropropene	0.999	0.0200	1.000	0	99.9	72.7	131				
Carbon tetrachloride	0.977	0.0250	1.000	0	97.7	63.4	137				
1,2-Dichloroethane (EDC)	0.996	0.0200	1.000	0	99.6	50.9	162				
Benzene	0.993	0.0200	1.000	0	99.3	64.3	133				
Trichloroethene (TCE)	1.01	0.0200	1.000	0	101	65.5	137				
1,2-Dichloropropane	0.980	0.0200	1.000	0	98.0	63.2	142				
Bromodichloromethane	1.00	0.0200	1.000	0	100	53.4	131				
Dibromomethane	0.989	0.0200	1.000	0	98.9	60.1	146				
cis-1,3-Dichloropropene	1.01	0.0200	1.000	0	101	59.1	143				
Toluene	1.00	0.0200	1.000	0	100	67.3	138				
trans-1,3-Dichloropropylene	0.963	0.0200	1.000	0	96.3	49.2	149				
1,1,2-Trichloroethane	1.01	0.0200	1.000	0	101	56.9	147				
1,3-Dichloropropane	0.999	0.0250	1.000	0	99.9	56.1	153				
Tetrachloroethene (PCE)	1.02	0.0250	1.000	0	102	52.7	150				
Dibromochloromethane	1.03	0.0250	1.000	0	103	70.6	144				
1,2-Dibromoethane (EDB)	1.03	0.00500	1.000	0	103	50.5	154				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20637** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **LCSS** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838897**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.996	0.0250	1.000	0	99.6	84.9	125				
1,1,1,2-Tetrachloroethane	0.953	0.0250	1.000	0	95.3	65.9	141				
Ethylbenzene	1.05	0.0250	1.000	0	105	74	129				
m,p-Xylene	2.05	0.0500	2.000	0	103	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	1.01	0.0500	1.000	0	101	44.3	130				
1,1,2,2-Tetrachloroethane	0.957	0.0200	1.000	0	95.7	44.8	165				
n-Propylbenzene	1.01	0.0250	1.000	0	101	75.8	139				
Bromobenzene	0.967	0.0200	1.000	0	96.7	49.2	144				
1,3,5-Trimethylbenzene	0.979	0.0250	1.000	0	97.9	76.5	135				
2-Chlorotoluene	0.971	0.0250	1.000	0	97.1	76.7	129				
4-Chlorotoluene	0.963	0.0250	1.000	0	96.3	77.5	125				
tert-Butylbenzene	0.985	0.0250	1.000	0	98.5	66.2	130				
1,2,3-Trichloropropane	0.971	0.0250	1.000	0	97.1	67.9	136				
1,2,4-Trichlorobenzene	1.07	0.0250	1.000	0	107	65.5	150				
sec-Butylbenzene	1.01	0.0500	1.000	0	101	75.6	133				
4-Isopropyltoluene	1.01	0.0500	1.000	0	101	76.8	131				
1,3-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.8	128				
1,4-Dichlorobenzene	1.03	0.0200	1.000	0	103	72.6	126				
n-Butylbenzene	1.09	0.0250	1.000	0	109	78.4	140				
1,2-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.8	126				
1,2-Dibromo-3-chloropropane	1.04	0.500	1.000	0	104	40.2	155				
1,2,4-Trimethylbenzene	0.977	0.0200	1.000	0	97.7	77.5	129				
Hexachlorobutadiene	1.08	0.0500	1.000	0	108	42	151				
Naphthalene	1.05	0.0500	1.000	0	105	46.5	167				
1,2,3-Trichlorobenzene	1.07	0.0200	1.000	0	107	64.5	149				
Surr: Dibromofluoromethane	1.29		1.250		103	56.5	129				
Surr: Toluene-d8	1.25		1.250		99.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.21		1.250		96.8	43.2	143				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20637**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **5/9/2018**		RunNo: **43392**	
Client ID:	**LCSS**	Batch ID: **20637**					Analysis Date: **5/9/2018**		SeqNo: **838897**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-20637**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **5/9/2018**		RunNo: **43392**	
Client ID:	**MBLKS**	Batch ID: **20637**					Analysis Date: **5/9/2018**		SeqNo: **838898**	
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									
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	0.0200									
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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20637** SampType: **MBLK** Units: **mg/Kg** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **MBLKS** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838898**

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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20637** SampType: **MBLK** Units: **mg/Kg** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **MBLKS** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838898**

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	ND	0.0200									
Surr: Dibromofluoromethane	1.14		1.250		91.1	56.5	129				
Surr: Toluene-d8	1.24		1.250		99.0	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.13		1.250		90.0	43.2	143				

Sample ID **1805039-014BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838882**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0204						0		30	
Chloromethane	ND	0.0510						0		30	
Vinyl chloride	ND	0.0255						0		30	
Bromomethane	ND	0.0510						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0204						0		30	
Chloroethane	ND	0.0510						0		30	
1,1-Dichloroethene	ND	0.0204						0		30	
Methylene chloride	ND	0.0204						0		30	
trans-1,2-Dichloroethene	ND	0.0204						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0510						0		30	
1,1-Dichloroethane	ND	0.0204						0		30	
2,2-Dichloropropane	ND	0.102						0		30	
cis-1,2-Dichloroethene	ND	0.0204						0		30	
Chloroform	ND	0.0204						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0255						0		30	
1,1-Dichloropropene	ND	0.0204						0		30	
Carbon tetrachloride	ND	0.0255						0		30	
1,2-Dichloroethane (EDC)	ND	0.0204						0		30	
Benzene	ND	0.0204						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-014BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838882**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0204						0		30	
1,2-Dichloropropane	ND	0.0204						0		30	
Bromodichloromethane	ND	0.0204						0		30	
Dibromomethane	ND	0.0204						0		30	
cis-1,3-Dichloropropene	ND	0.0204						0		30	
Toluene	ND	0.0204						0		30	
trans-1,3-Dichloropropylene	ND	0.0204						0		30	
1,1,2-Trichloroethane	ND	0.0204						0		30	
1,3-Dichloropropane	ND	0.0255						0		30	
Tetrachloroethene (PCE)	ND	0.0255						0		30	
Dibromochloromethane	ND	0.0255						0		30	
1,2-Dibromoethane (EDB)	ND	0.00510						0		30	
Chlorobenzene	ND	0.0255						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0255						0		30	
Ethylbenzene	ND	0.0255						0		30	
m,p-Xylene	ND	0.0510						0		30	
o-Xylene	ND	0.0255						0		30	
Styrene	ND	0.0255						0		30	
Isopropylbenzene	ND	0.0255						0		30	
Bromoform	ND	0.0510						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0204						0		30	
n-Propylbenzene	ND	0.0255						0		30	
Bromobenzene	ND	0.0204						0		30	
1,3,5-Trimethylbenzene	ND	0.0255						0		30	
2-Chlorotoluene	ND	0.0255						0		30	
4-Chlorotoluene	ND	0.0255						0		30	
tert-Butylbenzene	ND	0.0255						0		30	
1,2,3-Trichloropropane	ND	0.0255						0		30	
1,2,4-Trichlorobenzene	ND	0.0255						0		30	
sec-Butylbenzene	ND	0.0510						0		30	
4-Isopropyltoluene	ND	0.0510						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-014BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838882**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0204						0		30	
1,4-Dichlorobenzene	ND	0.0204						0		30	
n-Butylbenzene	ND	0.0255						0		30	
1,2-Dichlorobenzene	ND	0.0204						0		30	
1,2-Dibromo-3-chloropropane	ND	0.510						0		30	
1,2,4-Trimethylbenzene	ND	0.0204						0		30	
Hexachlorobutadiene	ND	0.0510						0		30	
Naphthalene	ND	0.0510						0		30	
1,2,3-Trichlorobenzene	ND	0.0204						0		30	
Surr: Dibromofluoromethane	1.19		1.276		93.2	56.5	129		0		
Surr: Toluene-d8	1.30		1.276		102	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.21		1.276		95.1	43.2	143		0		

Sample ID **1805039-019BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838886**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.806	0.0195	0.9740	0	82.8	43.5	121				
Chloromethane	0.807	0.0487	0.9740	0	82.9	45	130				
Vinyl chloride	0.932	0.0243	0.9740	0	95.7	43.6	150				
Bromomethane	1.18	0.0487	0.9740	0	121	21.3	120				S
Trichlorofluoromethane (CFC-11)	1.34	0.0195	0.9740	0	138	35	131				S
Chloroethane	1.23	0.0487	0.9740	0	127	31.9	123				S
1,1-Dichloroethene	0.987	0.0195	0.9740	0	101	47.3	147				
Methylene chloride	1.05	0.0195	0.9740	0	108	54.7	142				
trans-1,2-Dichloroethene	0.970	0.0195	0.9740	0	99.6	52	136				
Methyl tert-butyl ether (MTBE)	0.972	0.0487	0.9740	0	99.8	58.5	167				
1,1-Dichloroethane	0.975	0.0195	0.9740	0	100	51.8	141				
2,2-Dichloropropane	0.860	0.0974	0.9740	0	88.3	36	123				
cis-1,2-Dichloroethene	0.973	0.0195	0.9740	0	99.9	58.6	136				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-019BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838886**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	0.973	0.0195	0.9740	0	99.9	53.2	129				
1,1,1-Trichloroethane (TCA)	0.936	0.0243	0.9740	0	96.1	58.3	145				
1,1-Dichloropropene	0.982	0.0195	0.9740	0	101	55.1	138				
Carbon tetrachloride	0.923	0.0243	0.9740	0	94.7	53.3	144				
1,2-Dichloroethane (EDC)	0.971	0.0195	0.9740	0	99.7	51.3	139				
Benzene	0.985	0.0195	0.9740	0	101	63.5	133				
Trichloroethene (TCE)	0.979	0.0195	0.9740	0	101	61.6	147				
1,2-Dichloropropane	0.973	0.0195	0.9740	0	99.9	59	136				
Bromodichloromethane	0.960	0.0195	0.9740	0	98.5	50.7	141				
Dibromomethane	0.964	0.0195	0.9740	0	98.9	50.6	137				
cis-1,3-Dichloropropene	0.908	0.0195	0.9740	0	93.3	50.4	138				
Toluene	0.982	0.0195	0.9740	0	101	63.4	132				
trans-1,3-Dichloropropylene	0.852	0.0195	0.9740	0	87.5	44.1	147				
1,1,2-Trichloroethane	0.979	0.0195	0.9740	0	100	51.6	137				
1,3-Dichloropropane	0.981	0.0243	0.9740	0	101	53.1	134				
Tetrachloroethene (PCE)	0.993	0.0243	0.9740	0	102	35.6	158				
Dibromochloromethane	0.964	0.0243	0.9740	0	99.0	55.3	140				
1,2-Dibromoethane (EDB)	0.992	0.00487	0.9740	0	102	50.4	136				
Chlorobenzene	0.982	0.0243	0.9740	0	101	60	133				
1,1,1,2-Tetrachloroethane	0.912	0.0243	0.9740	0	93.6	53.1	142				
Ethylbenzene	1.02	0.0243	0.9740	0	105	54.5	134				
m,p-Xylene	1.99	0.0487	1.948	0	102	53.1	132				
o-Xylene	0.940	0.0243	0.9740	0	96.6	53.3	139				
Styrene	0.946	0.0243	0.9740	0	97.1	51.1	132				
Isopropylbenzene	0.966	0.0243	0.9740	0	99.2	58.9	138				
Bromoform	0.905	0.0487	0.9740	0	92.9	57.9	130				
1,1,2,2-Tetrachloroethane	0.914	0.0195	0.9740	0	93.9	51.9	131				
n-Propylbenzene	0.974	0.0243	0.9740	0	100	53.6	140				
Bromobenzene	0.930	0.0195	0.9740	0	95.5	54.2	140				
1,3,5-Trimethylbenzene	0.951	0.0243	0.9740	0	97.7	51.8	136				
2-Chlorotoluene	0.953	0.0243	0.9740	0	97.8	51.6	136				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-019BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838886**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	0.946	0.0243	0.9740	0	97.1	50.1	139				
tert-Butylbenzene	0.945	0.0243	0.9740	0	97.1	50.5	135				
1,2,3-Trichloropropane	0.900	0.0243	0.9740	0	92.4	50.5	131				
1,2,4-Trichlorobenzene	0.991	0.0243	0.9740	0	102	50.8	130				
sec-Butylbenzene	0.976	0.0487	0.9740	0	100	52.6	141				
4-Isopropyltoluene	0.974	0.0487	0.9740	0	100	52.9	134				
1,3-Dichlorobenzene	0.997	0.0195	0.9740	0	102	52.6	131				
1,4-Dichlorobenzene	0.989	0.0195	0.9740	0	102	52.9	129				
n-Butylbenzene	1.02	0.0243	0.9740	0	105	52.6	130				
1,2-Dichlorobenzene	0.999	0.0195	0.9740	0	103	55.8	129				
1,2-Dibromo-3-chloropropane	0.899	0.487	0.9740	0	92.3	40.5	131				
1,2,4-Trimethylbenzene	0.952	0.0195	0.9740	0	97.8	50.6	137				
Hexachlorobutadiene	1.02	0.0487	0.9740	0	105	40.6	158				
Naphthalene	0.966	0.0487	0.9740	0	99.2	52.3	124				
1,2,3-Trichlorobenzene	1.00	0.0195	0.9740	0	103	54.4	124				
Surr: Dibromofluoromethane	1.26		1.217		103	56.5	129				
Surr: Toluene-d8	1.23		1.217		101	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.18		1.217		96.9	43.2	143				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID **1805039-019BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838887**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.782	0.0195	0.9740	0	80.3	43.5	121	0.8063	3.08	30	
Chloromethane	0.911	0.0487	0.9740	0	93.6	45	130	0.8071	12.1	30	
Vinyl chloride	0.940	0.0243	0.9740	0	96.5	43.6	150	0.9318	0.849	30	
Bromomethane	1.19	0.0487	0.9740	0	122	21.3	120	1.182	0.462	30	S
Trichlorofluoromethane (CFC-11)	1.29	0.0195	0.9740	0	132	35	131	1.344	4.30	30	S
Chloroethane	1.29	0.0487	0.9740	0	132	31.9	123	1.233	4.14	30	S

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-019BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838887**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.943	0.0195	0.9740	0	96.8	47.3	147	0.9874	4.64	30	
Methylene chloride	1.03	0.0195	0.9740	0	106	54.7	142	1.050	2.04	30	
trans-1,2-Dichloroethene	0.929	0.0195	0.9740	0	95.4	52	136	0.9699	4.30	30	
Methyl tert-butyl ether (MTBE)	0.940	0.0487	0.9740	0	96.5	58.5	167	0.9719	3.31	30	
1,1-Dichloroethane	0.930	0.0195	0.9740	0	95.5	51.8	141	0.9745	4.64	30	
2,2-Dichloropropane	0.845	0.0974	0.9740	0	86.7	36	123	0.8596	1.73	30	
cis-1,2-Dichloroethene	0.929	0.0195	0.9740	0	95.3	58.6	136	0.9733	4.71	30	
Chloroform	0.935	0.0195	0.9740	0	96.0	53.2	129	0.9731	4.02	30	
1,1,1-Trichloroethane (TCA)	0.905	0.0243	0.9740	0	92.9	58.3	145	0.9358	3.37	30	
1,1-Dichloropropene	0.923	0.0195	0.9740	0	94.8	55.1	138	0.9818	6.17	30	
Carbon tetrachloride	0.898	0.0243	0.9740	0	92.2	53.3	144	0.9226	2.65	30	
1,2-Dichloroethane (EDC)	0.937	0.0195	0.9740	0	96.2	51.3	139	0.9707	3.56	30	
Benzene	0.928	0.0195	0.9740	0	95.3	63.5	133	0.9851	5.94	30	
Trichloroethene (TCE)	0.939	0.0195	0.9740	0	96.5	61.6	147	0.9794	4.16	30	
1,2-Dichloropropane	0.937	0.0195	0.9740	0	96.2	59	136	0.9727	3.77	30	
Bromodichloromethane	0.950	0.0195	0.9740	0	97.6	50.7	141	0.9597	0.982	30	
Dibromomethane	0.930	0.0195	0.9740	0	95.5	50.6	137	0.9636	3.51	30	
cis-1,3-Dichloropropene	0.903	0.0195	0.9740	0	92.7	50.4	138	0.9085	0.588	30	
Toluene	0.954	0.0195	0.9740	0	98.0	63.4	132	0.9823	2.88	30	
trans-1,3-Dichloropropylene	0.844	0.0195	0.9740	0	86.7	44.1	147	0.8520	0.927	30	
1,1,2-Trichloroethane	0.955	0.0195	0.9740	0	98.1	51.6	137	0.9788	2.44	30	
1,3-Dichloropropane	0.950	0.0243	0.9740	0	97.5	53.1	134	0.9815	3.27	30	
Tetrachloroethene (PCE)	0.967	0.0243	0.9740	0	99.2	35.6	158	0.9935	2.74	30	
Dibromochloromethane	0.955	0.0243	0.9740	0	98.0	55.3	140	0.9642	0.972	30	
1,2-Dibromoethane (EDB)	0.966	0.00487	0.9740	0	99.2	50.4	136	0.9920	2.65	30	
Chlorobenzene	0.933	0.0243	0.9740	0	95.8	60	133	0.9822	5.16	30	
1,1,1,2-Tetrachloroethane	0.886	0.0243	0.9740	0	91.0	53.1	142	0.9116	2.86	30	
Ethylbenzene	0.972	0.0243	0.9740	0	99.8	54.5	134	1.018	4.64	30	
m,p-Xylene	1.91	0.0487	1.948	0	97.8	53.1	132	1.993	4.48	30	
o-Xylene	0.950	0.0243	0.9740	0	97.6	53.3	139	0.9404	1.06	30	
Styrene	0.948	0.0243	0.9740	0	97.4	51.1	132	0.9459	0.262	30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805039-019BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/9/2018** SeqNo: **838887**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	0.932	0.0243	0.9740	0	95.7	58.9	138	0.9658	3.58	30	
Bromoform	0.899	0.0487	0.9740	0	92.3	57.9	130	0.9051	0.677	30	
1,1,2,2-Tetrachloroethane	0.862	0.0195	0.9740	0	88.5	51.9	131	0.9143	5.85	30	
n-Propylbenzene	0.938	0.0243	0.9740	0	96.3	53.6	140	0.9740	3.76	30	
Bromobenzene	0.897	0.0195	0.9740	0	92.1	54.2	140	0.9303	3.67	30	
1,3,5-Trimethylbenzene	0.916	0.0243	0.9740	0	94.0	51.8	136	0.9514	3.81	30	
2-Chlorotoluene	0.917	0.0243	0.9740	0	94.2	51.6	136	0.9529	3.84	30	
4-Chlorotoluene	0.911	0.0243	0.9740	0	93.5	50.1	139	0.9458	3.78	30	
tert-Butylbenzene	0.909	0.0243	0.9740	0	93.4	50.5	135	0.9454	3.90	30	
1,2,3-Trichloropropane	0.840	0.0243	0.9740	0	86.2	50.5	131	0.8999	6.93	30	
1,2,4-Trichlorobenzene	0.979	0.0243	0.9740	0	100	50.8	130	0.9907	1.21	30	
sec-Butylbenzene	0.935	0.0487	0.9740	0	96.0	52.6	141	0.9758	4.27	30	
4-Isopropyltoluene	0.939	0.0487	0.9740	0	96.4	52.9	134	0.9741	3.68	30	
1,3-Dichlorobenzene	0.969	0.0195	0.9740	0	99.5	52.6	131	0.9974	2.89	30	
1,4-Dichlorobenzene	0.966	0.0195	0.9740	0	99.2	52.9	129	0.9893	2.37	30	
n-Butylbenzene	1.00	0.0243	0.9740	0	103	52.6	130	1.020	1.68	30	
1,2-Dichlorobenzene	0.961	0.0195	0.9740	0	98.7	55.8	129	0.9995	3.93	30	
1,2-Dibromo-3-chloropropane	0.904	0.487	0.9740	0	92.8	40.5	131	0.8986	0.585	30	
1,2,4-Trimethylbenzene	0.915	0.0195	0.9740	0	94.0	50.6	137	0.9521	3.93	30	
Hexachlorobutadiene	1.04	0.0487	0.9740	0	107	40.6	158	1.021	1.92	30	
Naphthalene	0.947	0.0487	0.9740	0	97.2	52.3	124	0.9657	1.97	30	
1,2,3-Trichlorobenzene	0.982	0.0195	0.9740	0	101	54.4	124	1.003	2.05	30	
Surr: Dibromofluoromethane	1.28		1.217		105	56.5	129		0		
Surr: Toluene-d8	1.25		1.217		103	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.19		1.217		97.5	43.2	143		0		

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805080-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/10/2018** SeqNo: **838891**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0204						0		30	
Chloromethane	ND	0.0510						0		30	
Vinyl chloride	ND	0.0255						0		30	
Bromomethane	ND	0.0510						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0204						0		30	
Chloroethane	ND	0.0510						0		30	
1,1-Dichloroethene	ND	0.0204						0		30	Q
Methylene chloride	ND	0.0204						0		30	
trans-1,2-Dichloroethene	ND	0.0204						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0510						0		30	
1,1-Dichloroethane	ND	0.0204						0		30	
2,2-Dichloropropane	ND	0.102						0		30	
cis-1,2-Dichloroethene	ND	0.0204						0		30	
Chloroform	ND	0.0204						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0255						0		30	
1,1-Dichloropropene	ND	0.0204						0		30	
Carbon tetrachloride	ND	0.0255						0		30	
1,2-Dichloroethane (EDC)	ND	0.0204						0		30	
Benzene	ND	0.0204						0		30	
Trichloroethene (TCE)	ND	0.0204						0		30	
1,2-Dichloropropane	ND	0.0204						0		30	
Bromodichloromethane	ND	0.0204						0		30	
Dibromomethane	ND	0.0204						0		30	
cis-1,3-Dichloropropene	ND	0.0204						0		30	
Toluene	ND	0.0204						0		30	
trans-1,3-Dichloropropylene	ND	0.0204						0		30	
1,1,2-Trichloroethane	ND	0.0204						0		30	
1,3-Dichloropropane	ND	0.0255						0		30	
Tetrachloroethene (PCE)	ND	0.0255						0		30	
Dibromochloromethane	ND	0.0255						0		30	
1,2-Dibromoethane (EDB)	ND	0.00510						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805080-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/9/2018** RunNo: **43392**
Client ID: **BATCH** Batch ID: **20637** Analysis Date: **5/10/2018** SeqNo: **838891**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	0.0255						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0255						0		30	
Ethylbenzene	ND	0.0255						0		30	
m,p-Xylene	ND	0.0510						0		30	
o-Xylene	ND	0.0255						0		30	
Styrene	ND	0.0255						0		30	
Isopropylbenzene	ND	0.0255						0		30	
Bromoform	ND	0.0510						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0204						0		30	
n-Propylbenzene	0.0470	0.0255						0.04402	6.56	30	
Bromobenzene	ND	0.0204						0		30	
1,3,5-Trimethylbenzene	0.0531	0.0255						0.04811	9.92	30	
2-Chlorotoluene	ND	0.0255						0		30	
4-Chlorotoluene	ND	0.0255						0		30	
tert-Butylbenzene	ND	0.0255						0		30	
1,2,3-Trichloropropane	ND	0.0255						0		30	
1,2,4-Trichlorobenzene	ND	0.0255						0		30	
sec-Butylbenzene	ND	0.0510						0		30	
4-Isopropyltoluene	ND	0.0510						0		30	
1,3-Dichlorobenzene	ND	0.0204						0		30	
1,4-Dichlorobenzene	ND	0.0204						0		30	
n-Butylbenzene	ND	0.0255						0		30	
1,2-Dichlorobenzene	ND	0.0204						0		30	
1,2-Dibromo-3-chloropropane	ND	0.510						0		30	
1,2,4-Trimethylbenzene	0.0289	0.0204						0	200	30	
Hexachlorobutadiene	ND	0.0510						0		30	
Naphthalene	ND	0.0510						0		30	
1,2,3-Trichlorobenzene	ND	0.0204						0		30	
Surr: Dibromofluoromethane	1.22		1.276		95.3	56.5	129		0		
Surr: Toluene-d8	1.29		1.276		101	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.19		1.276		93.5	43.2	143		0		

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805080-002BDUP**	SampType: **DUP**		Units: **mg/Kg-dry**	Prep Date: **5/9/2018**		RunNo: **43392**	
Client ID: **BATCH**	Batch ID: **20637**			Analysis Date: **5/10/2018**		SeqNo: **838891**	

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 (<20%RSD, <20% Drift)

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20625** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **LCSS** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838172**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.01	0.0200	1.000	0	101	14.3	167				
Chloromethane	0.896	0.0500	1.000	0	89.6	32	156				
Vinyl chloride	0.903	0.0250	1.000	0	90.3	43.4	151				
Bromomethane	0.871	0.0500	1.000	0	87.1	35	155				
Trichlorofluoromethane (CFC-11)	0.938	0.0200	1.000	0	93.8	33.8	156				
Chloroethane	0.879	0.0500	1.000	0	87.9	33.1	147				
1,1-Dichloroethene	0.881	0.0200	1.000	0	88.1	39	144				
Methylene chloride	1.01	0.0200	1.000	0	101	46.3	140				
trans-1,2-Dichloroethene	1.01	0.0200	1.000	0	101	68	130				
Methyl tert-butyl ether (MTBE)	1.03	0.0500	1.000	0	103	44.1	152				
1,1-Dichloroethane	1.01	0.0200	1.000	0	101	61.9	137				
2,2-Dichloropropane	1.11	0.100	1.000	0	111	35.5	186				
cis-1,2-Dichloroethene	1.02	0.0200	1.000	0	102	71.3	135				
Chloroform	1.02	0.0200	1.000	0	102	69	145				
1,1,1-Trichloroethane (TCA)	0.990	0.0250	1.000	0	99.0	69	132				
1,1-Dichloropropene	1.02	0.0200	1.000	0	102	72.7	131				
Carbon tetrachloride	0.986	0.0250	1.000	0	98.6	63.4	137				
1,2-Dichloroethane (EDC)	1.03	0.0200	1.000	0	103	50.9	162				
Benzene	1.03	0.0200	1.000	0	103	64.3	133				
Trichloroethene (TCE)	1.03	0.0200	1.000	0	103	65.5	137				
1,2-Dichloropropane	1.02	0.0200	1.000	0	102	63.2	142				
Bromodichloromethane	1.06	0.0200	1.000	0	106	53.4	131				
Dibromomethane	1.04	0.0200	1.000	0	104	60.1	146				
cis-1,3-Dichloropropene	1.03	0.0200	1.000	0	103	59.1	143				
Toluene	1.03	0.0200	1.000	0	103	67.3	138				
trans-1,3-Dichloropropylene	0.967	0.0200	1.000	0	96.7	49.2	149				
1,1,2-Trichloroethane	1.05	0.0200	1.000	0	105	56.9	147				
1,3-Dichloropropane	1.04	0.0250	1.000	0	104	56.1	153				
Tetrachloroethene (PCE)	1.03	0.0250	1.000	0	103	52.7	150				
Dibromochloromethane	1.07	0.0250	1.000	0	107	70.6	144				
1,2-Dibromoethane (EDB)	1.07	0.00500	1.000	0	107	50.5	154				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20625** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **LCSS** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838172**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.02	0.0250	1.000	0	102	84.9	125				
1,1,1,2-Tetrachloroethane	0.985	0.0250	1.000	0	98.5	65.9	141				
Ethylbenzene	1.07	0.0250	1.000	0	107	74	129				
m,p-Xylene	2.04	0.0500	2.000	0	102	70	124				
o-Xylene	0.978	0.0250	1.000	0	97.8	68.1	139				
Styrene	0.980	0.0250	1.000	0	98.0	73.3	146				
Isopropylbenzene	1.01	0.0250	1.000	0	101	70	130				
Bromoform	1.03	0.0500	1.000	0	103	44.3	130				
1,1,2,2-Tetrachloroethane	0.994	0.0200	1.000	0	99.4	44.8	165				
n-Propylbenzene	1.01	0.0250	1.000	0	101	75.8	139				
Bromobenzene	0.960	0.0200	1.000	0	96.0	49.2	144				
1,3,5-Trimethylbenzene	0.979	0.0250	1.000	0	97.9	76.5	135				
2-Chlorotoluene	0.973	0.0250	1.000	0	97.3	76.7	129				
4-Chlorotoluene	0.964	0.0250	1.000	0	96.4	77.5	125				
tert-Butylbenzene	0.972	0.0250	1.000	0	97.2	66.2	130				
1,2,3-Trichloropropane	0.985	0.0250	1.000	0	98.5	67.9	136				
1,2,4-Trichlorobenzene	1.09	0.0250	1.000	0	109	65.5	150				
sec-Butylbenzene	0.993	0.0500	1.000	0	99.3	75.6	133				
4-Isopropyltoluene	0.995	0.0500	1.000	0	99.5	76.8	131				
1,3-Dichlorobenzene	1.08	0.0200	1.000	0	108	72.8	128				
1,4-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.6	126				
n-Butylbenzene	1.10	0.0250	1.000	0	110	78.4	140				
1,2-Dichlorobenzene	1.07	0.0200	1.000	0	107	72.8	126				
1,2-Dibromo-3-chloropropane	1.12	0.500	1.000	0	112	40.2	155				
1,2,4-Trimethylbenzene	0.977	0.0200	1.000	0	97.7	77.5	129				
Hexachlorobutadiene	1.10	0.0500	1.000	0	110	42	151				
Naphthalene	1.12	0.0500	1.000	0	112	46.5	167				
1,2,3-Trichlorobenzene	1.11	0.0200	1.000	0	111	64.5	149				
Surr: Dibromofluoromethane	1.31		1.250		105	56.5	129				
Surr: Toluene-d8	1.26		1.250		101	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		95.9	43.2	143				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20625**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **5/8/2018**		RunNo: **43361**	
Client ID:	**LCSS**	Batch ID: **20625**					Analysis Date: **5/8/2018**		SeqNo: **838172**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-20625**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **5/8/2018**		RunNo: **43361**	
Client ID:	**MBLKS**	Batch ID: **20625**					Analysis Date: **5/8/2018**		SeqNo: **838173**	
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									
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	0.0200									
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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20625** SampType: **MBLK** Units: **mg/Kg** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **MBLKS** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838173**

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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20625**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **5/8/2018**	RunNo: **43361**
Client ID: **MBLKS**	Batch ID: **20625**		Analysis Date: **5/8/2018**	SeqNo: **838173**

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	ND	0.0200									
Surr: Dibromofluoromethane	1.16		1.250		93.1	56.5	129				
Surr: Toluene-d8	1.24		1.250		99.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.13		1.250		90.4	43.2	143				

Sample ID **1804398-005BDUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **5/8/2018**	RunNo: **43361**
Client ID: **SB-26-30**	Batch ID: **20625**		Analysis Date: **5/8/2018**	SeqNo: **838146**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0247						0		30	
Chloromethane	ND	0.0617						0		30	
Vinyl chloride	ND	0.0309						0		30	
Bromomethane	ND	0.0617						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0247						0		30	
Chloroethane	ND	0.0617						0		30	
1,1-Dichloroethene	ND	0.0247						0		30	
Methylene chloride	ND	0.0247						0		30	
trans-1,2-Dichloroethene	ND	0.0247						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0617						0		30	
1,1-Dichloroethane	ND	0.0247						0		30	
2,2-Dichloropropane	ND	0.123						0		30	
cis-1,2-Dichloroethene	ND	0.0247						0		30	
Chloroform	ND	0.0247						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0309						0		30	
1,1-Dichloropropene	ND	0.0247						0		30	
Carbon tetrachloride	ND	0.0309						0		30	
1,2-Dichloroethane (EDC)	ND	0.0247						0		30	
Benzene	ND	0.0247						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-005BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **SB-26-30** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838146**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0247						0		30	
1,2-Dichloropropane	ND	0.0247						0		30	
Bromodichloromethane	ND	0.0247						0		30	
Dibromomethane	ND	0.0247						0		30	
cis-1,3-Dichloropropene	ND	0.0247						0		30	
Toluene	ND	0.0247						0		30	
trans-1,3-Dichloropropylene	ND	0.0247						0		30	
1,1,2-Trichloroethane	ND	0.0247						0		30	
1,3-Dichloropropane	ND	0.0309						0		30	
Tetrachloroethene (PCE)	0.0672	0.0309						0.06465	3.83	30	
Dibromochloromethane	ND	0.0309						0		30	
1,2-Dibromoethane (EDB)	ND	0.00617						0		30	
Chlorobenzene	ND	0.0309						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0309						0		30	
Ethylbenzene	ND	0.0309						0		30	
m,p-Xylene	ND	0.0617						0		30	
o-Xylene	ND	0.0309						0		30	
Styrene	ND	0.0309						0		30	
Isopropylbenzene	ND	0.0309						0		30	
Bromoform	ND	0.0617						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0247						0		30	
n-Propylbenzene	ND	0.0309						0		30	
Bromobenzene	ND	0.0247						0		30	
1,3,5-Trimethylbenzene	ND	0.0309						0		30	
2-Chlorotoluene	ND	0.0309						0		30	
4-Chlorotoluene	ND	0.0309						0		30	
tert-Butylbenzene	ND	0.0309						0		30	
1,2,3-Trichloropropane	ND	0.0309						0		30	
1,2,4-Trichlorobenzene	ND	0.0309						0		30	
sec-Butylbenzene	ND	0.0617						0		30	
4-Isopropyltoluene	ND	0.0617						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-005BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **SB-26-30** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838146**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0247						0		30	
1,4-Dichlorobenzene	ND	0.0247						0		30	
n-Butylbenzene	ND	0.0309						0		30	
1,2-Dichlorobenzene	ND	0.0247						0		30	
1,2-Dibromo-3-chloropropane	ND	0.617						0		30	
1,2,4-Trimethylbenzene	ND	0.0247						0		30	
Hexachlorobutadiene	ND	0.0617						0		30	
Naphthalene	ND	0.0617						0		30	
1,2,3-Trichlorobenzene	ND	0.0247						0		30	
Surr: Dibromofluoromethane	1.44		1.543		93.3	56.5	129		0		
Surr: Toluene-d8	1.53		1.543		99.4	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.42		1.543		92.1	43.2	143		0		

Sample ID **1804398-011BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **SB-27-30** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838150**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0231						0		30	
Chloromethane	ND	0.0577						0		30	
Vinyl chloride	ND	0.0288						0		30	
Bromomethane	ND	0.0577						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0231						0		30	
Chloroethane	ND	0.0577						0		30	
1,1-Dichloroethene	ND	0.0231						0		30	
Methylene chloride	ND	0.0231						0		30	
trans-1,2-Dichloroethene	ND	0.0231						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0577						0		30	
1,1-Dichloroethane	ND	0.0231						0		30	
2,2-Dichloropropane	ND	0.115						0		30	
cis-1,2-Dichloroethene	ND	0.0231						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-011BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **SB-27-30** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838150**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	0.0231						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0288						0		30	
1,1-Dichloropropene	ND	0.0231						0		30	
Carbon tetrachloride	ND	0.0288						0		30	
1,2-Dichloroethane (EDC)	ND	0.0231						0		30	
Benzene	ND	0.0231						0		30	
Trichloroethene (TCE)	ND	0.0231						0		30	
1,2-Dichloropropane	ND	0.0231						0		30	
Bromodichloromethane	ND	0.0231						0		30	
Dibromomethane	ND	0.0231						0		30	
cis-1,3-Dichloropropene	ND	0.0231						0		30	
Toluene	ND	0.0231						0		30	
trans-1,3-Dichloropropylene	ND	0.0231						0		30	
1,1,2-Trichloroethane	ND	0.0231						0		30	
1,3-Dichloropropane	ND	0.0288						0		30	
Tetrachloroethene (PCE)	0.126	0.0288						0.1177	6.68	30	
Dibromochloromethane	ND	0.0288						0		30	
1,2-Dibromoethane (EDB)	ND	0.00577						0		30	
Chlorobenzene	ND	0.0288						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0288						0		30	
Ethylbenzene	ND	0.0288						0		30	
m,p-Xylene	ND	0.0577						0		30	
o-Xylene	ND	0.0288						0		30	
Styrene	ND	0.0288						0		30	
Isopropylbenzene	ND	0.0288						0		30	
Bromoform	ND	0.0577						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0231						0		30	
n-Propylbenzene	ND	0.0288						0		30	
Bromobenzene	ND	0.0231						0		30	
1,3,5-Trimethylbenzene	ND	0.0288						0		30	
2-Chlorotoluene	ND	0.0288						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-011BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **SB-27-30** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838150**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	0.0288						0		30	
tert-Butylbenzene	ND	0.0288						0		30	
1,2,3-Trichloropropane	ND	0.0288						0		30	
1,2,4-Trichlorobenzene	ND	0.0288						0		30	
sec-Butylbenzene	ND	0.0577						0		30	
4-Isopropyltoluene	ND	0.0577						0		30	
1,3-Dichlorobenzene	ND	0.0231						0		30	
1,4-Dichlorobenzene	ND	0.0231						0		30	
n-Butylbenzene	ND	0.0288						0		30	
1,2-Dichlorobenzene	ND	0.0231						0		30	
1,2-Dibromo-3-chloropropane	ND	0.577						0		30	
1,2,4-Trimethylbenzene	ND	0.0231						0		30	
Hexachlorobutadiene	ND	0.0577						0		30	
Naphthalene	ND	0.0577						0		30	
1,2,3-Trichlorobenzene	ND	0.0231						0		30	
Surr: Dibromofluoromethane	1.34		1.442		93.1	56.5	129		0		
Surr: Toluene-d8	1.43		1.442		99.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.36		1.442		94.6	43.2	143		0		

Sample ID **1805090-009BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838163**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.949	0.0195	0.9760	0	97.2	43.5	121				
Chloromethane	0.670	0.0488	0.9760	0	68.7	45	130				
Vinyl chloride	0.813	0.0244	0.9760	0	83.3	43.6	150				
Bromomethane	0.954	0.0488	0.9760	0	97.8	21.3	120				
Trichlorofluoromethane (CFC-11)	0.919	0.0195	0.9760	0	94.2	35	131				
Chloroethane	0.995	0.0488	0.9760	0	102	31.9	123				
1,1-Dichloroethene	0.849	0.0195	0.9760	0	87.0	47.3	147				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805090-009BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838163**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	0.972	0.0195	0.9760	0.05501	93.9	54.7	142				
trans-1,2-Dichloroethene	0.901	0.0195	0.9760	0	92.3	52	136				
Methyl tert-butyl ether (MTBE)	0.918	0.0488	0.9760	0	94.1	58.5	167				
1,1-Dichloroethane	0.911	0.0195	0.9760	0	93.4	51.8	141				
2,2-Dichloropropane	0.798	0.0976	0.9760	0	81.8	36	123				
cis-1,2-Dichloroethene	0.908	0.0195	0.9760	0	93.1	58.6	136				
Chloroform	0.925	0.0195	0.9760	0	94.8	53.2	129				
1,1,1-Trichloroethane (TCA)	0.876	0.0244	0.9760	0	89.7	58.3	145				
1,1-Dichloropropene	0.912	0.0195	0.9760	0	93.5	55.1	138				
Carbon tetrachloride	0.863	0.0244	0.9760	0	88.4	53.3	144				
1,2-Dichloroethane (EDC)	0.920	0.0195	0.9760	0	94.3	51.3	139				
Benzene	0.914	0.0195	0.9760	0	93.7	63.5	133				
Trichloroethene (TCE)	0.917	0.0195	0.9760	0	93.9	61.6	147				
1,2-Dichloropropane	0.906	0.0195	0.9760	0	92.8	59	136				
Bromodichloromethane	0.931	0.0195	0.9760	0	95.4	50.7	141				
Dibromomethane	0.920	0.0195	0.9760	0	94.2	50.6	137				
cis-1,3-Dichloropropene	0.874	0.0195	0.9760	0	89.5	50.4	138				
Toluene	0.924	0.0195	0.9760	0	94.7	63.4	132				
trans-1,3-Dichloropropylene	0.817	0.0195	0.9760	0	83.7	44.1	147				
1,1,2-Trichloroethane	0.943	0.0195	0.9760	0	96.6	51.6	137				
1,3-Dichloropropane	0.923	0.0244	0.9760	0	94.6	53.1	134				
Tetrachloroethene (PCE)	0.918	0.0244	0.9760	0	94.1	35.6	158				
Dibromochloromethane	0.951	0.0244	0.9760	0	97.4	55.3	140				
1,2-Dibromoethane (EDB)	0.954	0.00488	0.9760	0	97.8	50.4	136				
Chlorobenzene	0.930	0.0244	0.9760	0	95.2	60	133				
1,1,1,2-Tetrachloroethane	0.893	0.0244	0.9760	0	91.5	53.1	142				
Ethylbenzene	0.955	0.0244	0.9760	0	97.9	54.5	134				
m,p-Xylene	1.88	0.0488	1.952	0	96.4	53.1	132				
o-Xylene	0.933	0.0244	0.9760	0	95.6	53.3	139				
Styrene	0.945	0.0244	0.9760	0	96.8	51.1	132				
Isopropylbenzene	0.967	0.0244	0.9760	0	99.1	58.9	138				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805090-009BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838163**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	0.980	0.0488	0.9760	0	100	57.9	130				
1,1,2,2-Tetrachloroethane	0.929	0.0195	0.9760	0	95.2	51.9	131				
n-Propylbenzene	0.964	0.0244	0.9760	0.07108	91.5	53.6	140				
Bromobenzene	0.943	0.0195	0.9760	0	96.6	54.2	140				
1,3,5-Trimethylbenzene	0.953	0.0244	0.9760	0	97.6	51.8	136				
2-Chlorotoluene	0.958	0.0244	0.9760	0	98.2	51.6	136				
4-Chlorotoluene	0.955	0.0244	0.9760	0	97.8	50.1	139				
tert-Butylbenzene	0.928	0.0244	0.9760	0	95.1	50.5	135				
1,2,3-Trichloropropane	0.913	0.0244	0.9760	0	93.5	50.5	131				
1,2,4-Trichlorobenzene	0.950	0.0244	0.9760	0	97.4	50.8	130				
sec-Butylbenzene	0.958	0.0488	0.9760	0	98.2	52.6	141				
4-Isopropyltoluene	0.958	0.0488	0.9760	0	98.2	52.9	134				
1,3-Dichlorobenzene	0.942	0.0195	0.9760	0	96.5	52.6	131				
1,4-Dichlorobenzene	0.973	0.0195	0.9760	0	99.7	52.9	129				
n-Butylbenzene	0.965	0.0244	0.9760	0	98.8	52.6	130				
1,2-Dichlorobenzene	0.952	0.0195	0.9760	0	97.5	55.8	129				
1,2-Dibromo-3-chloropropane	0.922	0.488	0.9760	0	94.4	40.5	131				
1,2,4-Trimethylbenzene	0.949	0.0195	0.9760	0	97.2	50.6	137				
Hexachlorobutadiene	0.940	0.0488	0.9760	0	96.3	40.6	158				
Naphthalene	0.937	0.0488	0.9760	0.02352	93.6	52.3	124				
1,2,3-Trichlorobenzene	0.949	0.0195	0.9760	0	97.2	54.4	124				
Surr: Dibromofluoromethane	1.27		1.220		104	56.5	129				
Surr: Toluene-d8	1.22		1.220		99.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.26		1.220		103	43.2	143				

Sample ID **1805090-009BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838164**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.961	0.0195	0.9760	0	98.5	43.5	121	0.9491	1.28	30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805090-009BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838164**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloromethane	0.744	0.0488	0.9760	0	76.2	45	130	0.6701	10.5	30	
Vinyl chloride	0.841	0.0244	0.9760	0	86.2	43.6	150	0.8129	3.45	30	
Bromomethane	0.999	0.0488	0.9760	0	102	21.3	120	0.9545	4.59	30	
Trichlorofluoromethane (CFC-11)	1.04	0.0195	0.9760	0	107	35	131	0.9193	12.8	30	
Chloroethane	1.08	0.0488	0.9760	0	110	31.9	123	0.9946	7.79	30	
1,1-Dichloroethene	0.895	0.0195	0.9760	0	91.7	47.3	147	0.8490	5.23	30	
Methylene chloride	1.01	0.0195	0.9760	0.05501	97.8	54.7	142	0.9717	3.80	30	
trans-1,2-Dichloroethene	0.936	0.0195	0.9760	0	95.9	52	136	0.9011	3.85	30	
Methyl tert-butyl ether (MTBE)	0.966	0.0488	0.9760	0	98.9	58.5	167	0.9185	5.02	30	
1,1-Dichloroethane	0.943	0.0195	0.9760	0	96.6	51.8	141	0.9112	3.42	30	
2,2-Dichloropropane	0.862	0.0976	0.9760	0	88.3	36	123	0.7981	7.71	30	
cis-1,2-Dichloroethene	0.951	0.0195	0.9760	0	97.4	58.6	136	0.9083	4.57	30	
Chloroform	0.964	0.0195	0.9760	0	98.8	53.2	129	0.9253	4.10	30	
1,1,1-Trichloroethane (TCA)	0.926	0.0244	0.9760	0	94.9	58.3	145	0.8759	5.54	30	
1,1-Dichloropropene	0.946	0.0195	0.9760	0	96.9	55.1	138	0.9123	3.61	30	
Carbon tetrachloride	0.914	0.0244	0.9760	0	93.6	53.3	144	0.8626	5.74	30	
1,2-Dichloroethane (EDC)	0.968	0.0195	0.9760	0	99.1	51.3	139	0.9205	4.99	30	
Benzene	0.957	0.0195	0.9760	0	98.0	63.5	133	0.9142	4.55	30	
Trichloroethene (TCE)	0.958	0.0195	0.9760	0	98.2	61.6	147	0.9170	4.37	30	
1,2-Dichloropropane	0.969	0.0195	0.9760	0	99.2	59	136	0.9057	6.72	30	
Bromodichloromethane	0.983	0.0195	0.9760	0	101	50.7	141	0.9310	5.48	30	
Dibromomethane	0.970	0.0195	0.9760	0	99.4	50.6	137	0.9196	5.31	30	
cis-1,3-Dichloropropene	0.927	0.0195	0.9760	0	95.0	50.4	138	0.8736	5.98	30	
Toluene	0.960	0.0195	0.9760	0	98.4	63.4	132	0.9244	3.77	30	
trans-1,3-Dichloropropylene	0.869	0.0195	0.9760	0	89.0	44.1	147	0.8169	6.14	30	
1,1,2-Trichloroethane	0.965	0.0195	0.9760	0	98.8	51.6	137	0.9432	2.24	30	
1,3-Dichloropropane	0.965	0.0244	0.9760	0	98.9	53.1	134	0.9229	4.50	30	
Tetrachloroethene (PCE)	0.959	0.0244	0.9760	0	98.3	35.6	158	0.9180	4.38	30	
Dibromochloromethane	0.971	0.0244	0.9760	0	99.5	55.3	140	0.9506	2.12	30	
1,2-Dibromoethane (EDB)	0.961	0.00488	0.9760	0	98.4	50.4	136	0.9541	0.669	30	
Chlorobenzene	0.971	0.0244	0.9760	0	99.5	60	133	0.9297	4.38	30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805090-009BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/8/2018** RunNo: **43361**
Client ID: **BATCH** Batch ID: **20625** Analysis Date: **5/8/2018** SeqNo: **838164**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.950	0.0244	0.9760	0	97.4	53.1	142	0.8928	6.24	30	
Ethylbenzene	1.00	0.0244	0.9760	0	103	54.5	134	0.9553	4.69	30	
m,p-Xylene	1.97	0.0488	1.952	0	101	53.1	132	1.882	4.69	30	
o-Xylene	0.970	0.0244	0.9760	0	99.4	53.3	139	0.9330	3.90	30	
Styrene	0.976	0.0244	0.9760	0	100	51.1	132	0.9447	3.30	30	
Isopropylbenzene	1.01	0.0244	0.9760	0	103	58.9	138	0.9670	4.10	30	
Bromoform	0.589	0.0488	0.9760	0	60.3	57.9	130	0.9799	49.9	30	R
1,1,2,2-Tetrachloroethane	0.962	0.0195	0.9760	0	98.6	51.9	131	0.9293	3.45	30	
n-Propylbenzene	1.00	0.0244	0.9760	0.07108	95.3	53.6	140	0.9640	3.81	30	
Bromobenzene	0.970	0.0195	0.9760	0	99.3	54.2	140	0.9433	2.76	30	
1,3,5-Trimethylbenzene	0.977	0.0244	0.9760	0	100	51.8	136	0.9527	2.57	30	
2-Chlorotoluene	0.991	0.0244	0.9760	0	102	51.6	136	0.9584	3.36	30	
4-Chlorotoluene	0.988	0.0244	0.9760	0	101	50.1	139	0.9549	3.42	30	
tert-Butylbenzene	0.962	0.0244	0.9760	0	98.6	50.5	135	0.9279	3.63	30	
1,2,3-Trichloropropane	0.958	0.0244	0.9760	0	98.2	50.5	131	0.9129	4.86	30	
1,2,4-Trichlorobenzene	1.03	0.0244	0.9760	0	106	50.8	130	0.9504	8.29	30	
sec-Butylbenzene	1.00	0.0488	0.9760	0	103	52.6	141	0.9584	4.30	30	
4-Isopropyltoluene	0.969	0.0488	0.9760	0	99.2	52.9	134	0.9580	1.09	30	
1,3-Dichlorobenzene	0.984	0.0195	0.9760	0	101	52.6	131	0.9421	4.35	30	
1,4-Dichlorobenzene	1.01	0.0195	0.9760	0	104	52.9	129	0.9726	3.83	30	
n-Butylbenzene	1.01	0.0244	0.9760	0	104	52.6	130	0.9646	4.91	30	
1,2-Dichlorobenzene	1.00	0.0195	0.9760	0	103	55.8	129	0.9519	5.21	30	
1,2-Dibromo-3-chloropropane	1.02	0.488	0.9760	0	104	40.5	131	0.9218	9.68	30	
1,2,4-Trimethylbenzene	0.985	0.0195	0.9760	0	101	50.6	137	0.9490	3.72	30	
Hexachlorobutadiene	1.03	0.0488	0.9760	0	106	40.6	158	0.9403	9.53	30	
Naphthalene	1.03	0.0488	0.9760	0.02352	103	52.3	124	0.9374	9.35	30	
1,2,3-Trichlorobenzene	1.02	0.0195	0.9760	0	105	54.4	124	0.9491	7.26	30	
Surr: Dibromofluoromethane	1.28		1.220		105	56.5	129		0		
Surr: Toluene-d8	1.22		1.220		100	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.24		1.220		102	43.2	143		0		

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1805090-009BMSD**	SampType: **MSD**			Units: **mg/Kg-dry**	Prep Date: **5/8/2018**			RunNo: **43361**	
Client ID: **BATCH**	Batch ID: **20625**				Analysis Date: **5/8/2018**			SeqNo: **838164**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20566** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **LCSS** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **836001**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.668	0.0200	1.000	0	66.8	14.3	167				
Chloromethane	0.829	0.0500	1.000	0	82.9	32	156				
Vinyl chloride	0.811	0.0250	1.000	0	81.1	43.4	151				
Bromomethane	0.982	0.0500	1.000	0	98.2	35	155				
Trichlorofluoromethane (CFC-11)	0.835	0.0200	1.000	0	83.5	33.8	156				
Chloroethane	0.781	0.0500	1.000	0	78.1	33.1	147				
1,1-Dichloroethene	0.887	0.0200	1.000	0	88.7	39	144				
Methylene chloride	0.915	0.0200	1.000	0	91.5	46.3	140				
trans-1,2-Dichloroethene	0.921	0.0200	1.000	0	92.1	68	130				
Methyl tert-butyl ether (MTBE)	0.927	0.0500	1.000	0	92.7	44.1	152				
1,1-Dichloroethane	0.914	0.0200	1.000	0	91.4	61.9	137				
2,2-Dichloropropane	0.840	0.100	1.000	0	84.0	35.5	186				
cis-1,2-Dichloroethene	0.917	0.0200	1.000	0	91.7	71.3	135				
Chloroform	0.928	0.0200	1.000	0	92.8	69	145				
1,1,1-Trichloroethane (TCA)	0.903	0.0250	1.000	0	90.3	69	132				
1,1-Dichloropropene	0.898	0.0200	1.000	0	89.8	72.7	131				
Carbon tetrachloride	0.899	0.0250	1.000	0	89.9	63.4	137				
1,2-Dichloroethane (EDC)	0.918	0.0200	1.000	0	91.8	50.9	162				
Benzene	0.921	0.0200	1.000	0	92.1	64.3	133				
Trichloroethene (TCE)	0.906	0.0200	1.000	0	90.6	65.5	137				
1,2-Dichloropropane	0.906	0.0200	1.000	0	90.6	63.2	142				
Bromodichloromethane	0.970	0.0200	1.000	0	97.0	53.4	131				
Dibromomethane	0.914	0.0200	1.000	0	91.4	60.1	146				
cis-1,3-Dichloropropene	0.897	0.0200	1.000	0	89.7	59.1	143				
Toluene	0.915	0.0200	1.000	0	91.5	67.3	138				
trans-1,3-Dichloropropylene	0.872	0.0200	1.000	0	87.2	49.2	149				
1,1,2-Trichloroethane	0.935	0.0200	1.000	0	93.5	56.9	147				
1,3-Dichloropropane	0.888	0.0250	1.000	0	88.8	56.1	153				
Tetrachloroethene (PCE)	0.907	0.0250	1.000	0	90.7	52.7	150				
Dibromochloromethane	0.970	0.0250	1.000	0	97.0	70.6	144				
1,2-Dibromoethane (EDB)	0.907	0.00500	1.000	0	90.7	50.5	154				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20566** SampType: **LCS** Units: **mg/Kg** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **LCSS** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **836001**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	0.936	0.0250	1.000	0	93.6	84.9	125				
1,1,1,2-Tetrachloroethane	0.935	0.0250	1.000	0	93.5	65.9	141				
Ethylbenzene	0.962	0.0250	1.000	0	96.2	74	129				
m,p-Xylene	1.88	0.0500	2.000	0	93.8	70	124				
o-Xylene	0.917	0.0250	1.000	0	91.7	68.1	139				
Styrene	0.936	0.0250	1.000	0	93.6	73.3	146				
Isopropylbenzene	0.973	0.0250	1.000	0	97.3	70	130				
Bromoform	0.644	0.0500	1.000	0	64.4	44.3	130				
1,1,2,2-Tetrachloroethane	0.916	0.0200	1.000	0	91.6	44.8	165				
n-Propylbenzene	0.972	0.0250	1.000	0	97.2	75.8	139				
Bromobenzene	0.948	0.0200	1.000	0	94.8	49.2	144				
1,3,5-Trimethylbenzene	0.961	0.0250	1.000	0	96.1	76.5	135				
2-Chlorotoluene	0.886	0.0250	1.000	0	88.6	76.7	129				
4-Chlorotoluene	0.962	0.0250	1.000	0	96.2	77.5	125				
tert-Butylbenzene	0.923	0.0250	1.000	0	92.3	66.2	130				
1,2,3-Trichloropropane	1.16	0.0250	1.000	0	116	67.9	136				
1,2,4-Trichlorobenzene	0.976	0.0250	1.000	0	97.6	65.5	150				
sec-Butylbenzene	0.983	0.0500	1.000	0	98.3	75.6	133				
4-Isopropyltoluene	0.990	0.0500	1.000	0	99.0	76.8	131				
1,3-Dichlorobenzene	0.946	0.0200	1.000	0	94.6	72.8	128				
1,4-Dichlorobenzene	1.02	0.0200	1.000	0	102	72.6	126				
n-Butylbenzene	0.940	0.0250	1.000	0	94.0	78.4	140				
1,2-Dichlorobenzene	0.967	0.0200	1.000	0	96.7	72.8	126				
1,2-Dibromo-3-chloropropane	0.982	0.500	1.000	0	98.2	40.2	155				
1,2,4-Trimethylbenzene	0.978	0.0200	1.000	0	97.8	77.5	129				
Hexachlorobutadiene	0.974	0.0500	1.000	0	97.4	42	151				
Naphthalene	0.958	0.0500	1.000	0	95.8	46.5	167				
1,2,3-Trichlorobenzene	0.966	0.0200	1.000	0	96.6	64.5	149				
Surr: Dibromofluoromethane	1.29		1.250		103	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.8	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.25		1.250		100	43.2	143				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20566**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **5/1/2018**		RunNo: **43244**	
Client ID:	**LCSS**	Batch ID: **20566**					Analysis Date: **5/2/2018**		SeqNo: **836001**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-20566**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **5/1/2018**		RunNo: **43244**	
Client ID:	**MBLKS**	Batch ID: **20566**					Analysis Date: **5/2/2018**		SeqNo: **836002**	
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									
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	0.0200									
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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20566** SampType: **MBLK** Units: **mg/Kg** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **MBLKS** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **836002**

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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20566** SampType: **MBLK** Units: **mg/Kg** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **MBLKS** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **836002**

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	ND	0.0200									
Surr: Dibromofluoromethane	1.20		1.250		95.7	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.5	43.2	143				

Sample ID **1804398-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-26-4** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **835978**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0234						0		30	
Chloromethane	ND	0.0584						0		30	
Vinyl chloride	ND	0.0292						0		30	
Bromomethane	ND	0.0584						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0234						0		30	
Chloroethane	ND	0.0584						0		30	
1,1-Dichloroethene	ND	0.0234						0		30	
Methylene chloride	ND	0.0234						0		30	
trans-1,2-Dichloroethene	ND	0.0234						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0584						0		30	
1,1-Dichloroethane	ND	0.0234						0		30	
2,2-Dichloropropane	ND	0.117						0		30	
cis-1,2-Dichloroethene	ND	0.0234						0		30	
Chloroform	ND	0.0234						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0292						0		30	
1,1-Dichloropropene	ND	0.0234						0		30	
Carbon tetrachloride	ND	0.0292						0		30	
1,2-Dichloroethane (EDC)	ND	0.0234						0		30	
Benzene	ND	0.0234						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-26-4** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **835978**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0234						0		30	
1,2-Dichloropropane	ND	0.0234						0		30	
Bromodichloromethane	ND	0.0234						0		30	
Dibromomethane	ND	0.0234						0		30	
cis-1,3-Dichloropropene	ND	0.0234						0		30	
Toluene	ND	0.0234						0		30	
trans-1,3-Dichloropropylene	ND	0.0234						0		30	
1,1,2-Trichloroethane	ND	0.0234						0		30	
1,3-Dichloropropane	ND	0.0292						0		30	
Tetrachloroethene (PCE)	ND	0.0292						0		30	
Dibromochloromethane	ND	0.0292						0		30	
1,2-Dibromoethane (EDB)	ND	0.00584						0		30	
Chlorobenzene	ND	0.0292						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0292						0		30	
Ethylbenzene	ND	0.0292						0		30	
m,p-Xylene	ND	0.0584						0		30	
o-Xylene	ND	0.0292						0		30	
Styrene	ND	0.0292						0		30	
Isopropylbenzene	ND	0.0292						0		30	
Bromoform	ND	0.0584						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0234						0		30	
n-Propylbenzene	ND	0.0292						0		30	
Bromobenzene	ND	0.0234						0		30	
1,3,5-Trimethylbenzene	ND	0.0292						0		30	
2-Chlorotoluene	ND	0.0292						0		30	
4-Chlorotoluene	ND	0.0292						0		30	
tert-Butylbenzene	ND	0.0292						0		30	
1,2,3-Trichloropropane	ND	0.0292						0		30	
1,2,4-Trichlorobenzene	ND	0.0292						0		30	
sec-Butylbenzene	ND	0.0584						0		30	
4-Isopropyltoluene	ND	0.0584						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-26-4** Batch ID: **20566** Analysis Date: **5/2/2018** SeqNo: **835978**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0234						0		30	
1,4-Dichlorobenzene	ND	0.0234						0		30	
n-Butylbenzene	ND	0.0292						0		30	
1,2-Dichlorobenzene	ND	0.0234						0		30	
1,2-Dibromo-3-chloropropane	ND	0.584						0		30	
1,2,4-Trimethylbenzene	ND	0.0234						0		30	
Hexachlorobutadiene	ND	0.0584						0		30	
Naphthalene	ND	0.0584						0		30	
1,2,3-Trichlorobenzene	ND	0.0234						0		30	
Surr: Dibromofluoromethane	1.40		1.460		96.0	56.5	129		0		
Surr: Toluene-d8	1.44		1.460		98.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.45		1.460		99.5	43.2	143		0		

Sample ID **1804398-017BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-30-30** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835987**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0316						0		30	
Chloromethane	ND	0.0791						0		30	
Vinyl chloride	ND	0.0395						0		30	
Bromomethane	ND	0.0791						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0316						0		30	
Chloroethane	ND	0.0791						0		30	
1,1-Dichloroethene	ND	0.0316						0		30	
Methylene chloride	ND	0.0316						0		30	
trans-1,2-Dichloroethene	ND	0.0316						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0791						0		30	
1,1-Dichloroethane	ND	0.0316						0		30	
2,2-Dichloropropane	ND	0.158						0		30	
cis-1,2-Dichloroethene	ND	0.0316						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-017BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-30-30** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835987**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	0.0316						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0395						0		30	
1,1-Dichloropropene	ND	0.0316						0		30	
Carbon tetrachloride	ND	0.0395						0		30	
1,2-Dichloroethane (EDC)	ND	0.0316						0		30	
Benzene	ND	0.0316						0		30	
Trichloroethene (TCE)	ND	0.0316						0		30	
1,2-Dichloropropane	ND	0.0316						0		30	
Bromodichloromethane	ND	0.0316						0		30	
Dibromomethane	ND	0.0316						0		30	
cis-1,3-Dichloropropene	ND	0.0316						0		30	
Toluene	ND	0.0316						0		30	
trans-1,3-Dichloropropylene	ND	0.0316						0		30	
1,1,2-Trichloroethane	ND	0.0316						0		30	
1,3-Dichloropropane	ND	0.0395						0		30	
Tetrachloroethene (PCE)	ND	0.0395						0		30	
Dibromochloromethane	ND	0.0395						0		30	
1,2-Dibromoethane (EDB)	ND	0.00791						0		30	
Chlorobenzene	ND	0.0395						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0395						0		30	
Ethylbenzene	ND	0.0395						0		30	
m,p-Xylene	ND	0.0791						0		30	
o-Xylene	ND	0.0395						0		30	
Styrene	ND	0.0395						0		30	
Isopropylbenzene	ND	0.0395						0		30	
Bromoform	ND	0.0791						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0316						0		30	
n-Propylbenzene	ND	0.0395						0		30	
Bromobenzene	ND	0.0316						0		30	
1,3,5-Trimethylbenzene	ND	0.0395						0		30	
2-Chlorotoluene	ND	0.0395						0		30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-017BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-30-30** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835987**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	0.0395						0		30	
tert-Butylbenzene	ND	0.0395						0		30	
1,2,3-Trichloropropane	ND	0.0395						0		30	
1,2,4-Trichlorobenzene	ND	0.0395						0		30	
sec-Butylbenzene	ND	0.0791						0		30	
4-Isopropyltoluene	ND	0.0791						0		30	
1,3-Dichlorobenzene	ND	0.0316						0		30	
1,4-Dichlorobenzene	ND	0.0316						0		30	
n-Butylbenzene	ND	0.0395						0		30	
1,2-Dichlorobenzene	ND	0.0316						0		30	
1,2-Dibromo-3-chloropropane	ND	0.791						0		30	
1,2,4-Trimethylbenzene	ND	0.0316						0		30	
Hexachlorobutadiene	ND	0.0791						0		30	
Naphthalene	ND	0.0791						0		30	
1,2,3-Trichlorobenzene	ND	0.0316						0		30	
Surr: Dibromofluoromethane	1.82		1.977		92.0	56.5	129		0		
Surr: Toluene-d8	1.92		1.977		97.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.92		1.977		96.9	43.2	143		0		

Sample ID **1804398-008BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-27-4** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	2.23	0.0341	1.705	0	131	43.5	121				S
Chloromethane	1.55	0.0852	1.705	0	90.9	45	130				
Vinyl chloride	1.70	0.0426	1.705	0	99.6	43.6	150				
Bromomethane	1.80	0.0852	1.705	0	106	21.3	120				
Trichlorofluoromethane (CFC-11)	1.93	0.0341	1.705	0	113	35	131				
Chloroethane	1.76	0.0852	1.705	0	103	31.9	123				
1,1-Dichloroethene	1.55	0.0341	1.705	0	90.6	47.3	147				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-008BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-27-4** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	1.57	0.0341	1.705	0	91.9	54.7	142				
trans-1,2-Dichloroethene	1.57	0.0341	1.705	0	91.9	52	136				
Methyl tert-butyl ether (MTBE)	1.56	0.0852	1.705	0	91.7	58.5	167				
1,1-Dichloroethane	1.55	0.0341	1.705	0	90.9	51.8	141				
2,2-Dichloropropane	0.487	0.170	1.705	0	28.6	36	123				S
cis-1,2-Dichloroethene	1.55	0.0341	1.705	0	90.8	58.6	136				
Chloroform	1.57	0.0341	1.705	0	92.1	53.2	129				
1,1,1-Trichloroethane (TCA)	1.54	0.0426	1.705	0	90.1	58.3	145				
1,1-Dichloropropene	1.54	0.0341	1.705	0	90.3	55.1	138				
Carbon tetrachloride	1.54	0.0426	1.705	0	90.2	53.3	144				
1,2-Dichloroethane (EDC)	1.57	0.0341	1.705	0	92.2	51.3	139				
Benzene	1.57	0.0341	1.705	0	92.2	63.5	133				
Trichloroethene (TCE)	1.55	0.0341	1.705	0	90.7	61.6	147				
1,2-Dichloropropane	1.53	0.0341	1.705	0	89.5	59	136				
Bromodichloromethane	1.60	0.0341	1.705	0	93.6	50.7	141				
Dibromomethane	1.60	0.0341	1.705	0	94.1	50.6	137				
cis-1,3-Dichloropropene	1.24	0.0341	1.705	0	72.7	50.4	138				
Toluene	1.56	0.0341	1.705	0	91.3	63.4	132				
trans-1,3-Dichloropropylene	1.19	0.0341	1.705	0	70.0	44.1	147				
1,1,2-Trichloroethane	1.67	0.0341	1.705	0	97.7	51.6	137				
1,3-Dichloropropane	1.62	0.0426	1.705	0	95.0	53.1	134				
Tetrachloroethene (PCE)	1.59	0.0426	1.705	0	93.5	35.6	158				
Dibromochloromethane	1.65	0.0426	1.705	0	96.9	55.3	140				
1,2-Dibromoethane (EDB)	1.64	0.00852	1.705	0	96.1	50.4	136				
Chlorobenzene	1.60	0.0426	1.705	0	93.8	60	133				
1,1,1,2-Tetrachloroethane	1.53	0.0426	1.705	0	89.8	53.1	142				
Ethylbenzene	1.64	0.0426	1.705	0	96.4	54.5	134				
m,p-Xylene	3.18	0.0852	3.410	0	93.2	53.1	132				
o-Xylene	1.52	0.0426	1.705	0	89.2	53.3	139				
Styrene	1.54	0.0426	1.705	0	90.6	51.1	132				
Isopropylbenzene	1.59	0.0426	1.705	0	93.1	58.9	138				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-008BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-27-4** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835982**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	1.60	0.0852	1.705	0	93.8	57.9	130				
1,1,2,2-Tetrachloroethane	1.55	0.0341	1.705	0	91.0	51.9	131				
n-Propylbenzene	1.59	0.0426	1.705	0	93.2	53.6	140				
Bromobenzene	1.54	0.0341	1.705	0	90.6	54.2	140				
1,3,5-Trimethylbenzene	1.59	0.0426	1.705	0	93.0	51.8	136				
2-Chlorotoluene	1.41	0.0426	1.705	0	82.6	51.6	136				
4-Chlorotoluene	1.52	0.0426	1.705	0	89.4	50.1	139				
tert-Butylbenzene	1.58	0.0426	1.705	0	92.4	50.5	135				
1,2,3-Trichloropropane	1.77	0.0426	1.705	0	104	50.5	131				
1,2,4-Trichlorobenzene	1.57	0.0426	1.705	0	91.9	50.8	130				
sec-Butylbenzene	1.60	0.0852	1.705	0	93.9	52.6	141				
4-Isopropyltoluene	1.60	0.0852	1.705	0	94.1	52.9	134				
1,3-Dichlorobenzene	1.65	0.0341	1.705	0	96.8	52.6	131				
1,4-Dichlorobenzene	1.60	0.0341	1.705	0	94.1	52.9	129				
n-Butylbenzene	1.50	0.0426	1.705	0	88.1	52.6	130				
1,2-Dichlorobenzene	1.63	0.0341	1.705	0	95.4	55.8	129				
1,2-Dibromo-3-chloropropane	1.60	0.852	1.705	0	93.9	40.5	131				
1,2,4-Trimethylbenzene	1.63	0.0341	1.705	0	95.4	50.6	137				
Hexachlorobutadiene	1.53	0.0852	1.705	0	89.7	40.6	158				
Naphthalene	1.65	0.0852	1.705	0	96.9	52.3	124				
1,2,3-Trichlorobenzene	1.63	0.0341	1.705	0	95.6	54.4	124				
Surr: Dibromofluoromethane	2.16		2.131		102	56.5	129				
Surr: Toluene-d8	2.10		2.131		98.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	2.07		2.131		97.0	43.2	143				

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-008BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-27-4** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835983**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	2.56	0.0341	1.705	0	150	43.5	121	2.233	13.6	30	S
Chloromethane	1.81	0.0852	1.705	0	106	45	130	1.550	15.4	30	
Vinyl chloride	1.93	0.0426	1.705	0	113	43.6	150	1.698	12.9	30	
Bromomethane	1.93	0.0852	1.705	0	113	21.3	120	1.804	6.84	30	
Trichlorofluoromethane (CFC-11)	2.15	0.0341	1.705	0	126	35	131	1.929	10.8	30	
Chloroethane	2.06	0.0852	1.705	0	121	31.9	123	1.761	15.9	30	
1,1-Dichloroethene	1.75	0.0341	1.705	0	103	47.3	147	1.545	12.4	30	
Methylene chloride	1.71	0.0341	1.705	0	101	54.7	142	1.567	8.98	30	
trans-1,2-Dichloroethene	1.75	0.0341	1.705	0	103	52	136	1.567	11.1	30	
Methyl tert-butyl ether (MTBE)	1.63	0.0852	1.705	0	95.9	58.5	167	1.563	4.51	30	
1,1-Dichloroethane	1.70	0.0341	1.705	0	99.5	51.8	141	1.549	9.07	30	
2,2-Dichloropropane	0.537	0.170	1.705	0	31.5	36	123	0.4874	9.69	30	S
cis-1,2-Dichloroethene	1.69	0.0341	1.705	0	99.3	58.6	136	1.548	8.97	30	
Chloroform	1.71	0.0341	1.705	0	100	53.2	129	1.570	8.40	30	
1,1,1-Trichloroethane (TCA)	1.75	0.0426	1.705	0	103	58.3	145	1.535	13.2	30	
1,1-Dichloropropene	1.78	0.0341	1.705	0	104	55.1	138	1.540	14.3	30	
Carbon tetrachloride	1.81	0.0426	1.705	0	106	53.3	144	1.538	16.4	30	
1,2-Dichloroethane (EDC)	1.64	0.0341	1.705	0	96.5	51.3	139	1.572	4.52	30	
Benzene	1.72	0.0341	1.705	0	101	63.5	133	1.572	9.11	30	
Trichloroethene (TCE)	1.74	0.0341	1.705	0	102	61.6	147	1.547	11.7	30	
1,2-Dichloropropane	1.65	0.0341	1.705	0	96.8	59	136	1.525	7.89	30	
Bromodichloromethane	1.71	0.0341	1.705	0	101	50.7	141	1.596	7.16	30	
Dibromomethane	1.65	0.0341	1.705	0	96.9	50.6	137	1.604	2.98	30	
cis-1,3-Dichloropropene	1.33	0.0341	1.705	0	77.8	50.4	138	1.239	6.83	30	
Toluene	1.70	0.0341	1.705	0	99.5	63.4	132	1.556	8.58	30	
trans-1,3-Dichloropropylene	1.26	0.0341	1.705	0	73.9	44.1	147	1.194	5.32	30	
1,1,2-Trichloroethane	1.70	0.0341	1.705	0	99.7	51.6	137	1.665	2.08	30	
1,3-Dichloropropane	1.69	0.0426	1.705	0	99.4	53.1	134	1.620	4.43	30	
Tetrachloroethene (PCE)	1.77	0.0426	1.705	0	104	35.6	158	1.593	10.8	30	
Dibromochloromethane	1.75	0.0426	1.705	0	103	55.3	140	1.652	5.65	30	
1,2-Dibromoethane (EDB)	1.70	0.00852	1.705	0	99.9	50.4	136	1.639	3.90	30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-008BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **5/1/2018** RunNo: **43244**
Client ID: **SB-27-4** Batch ID: **20566** Analysis Date: **5/3/2018** SeqNo: **835983**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	1.73	0.0426	1.705	0	102	60	133	1.599	8.04	30	
1,1,1,2-Tetrachloroethane	1.67	0.0426	1.705	0	98.0	53.1	142	1.531	8.74	30	
Ethylbenzene	1.81	0.0426	1.705	0	106	54.5	134	1.644	9.41	30	
m,p-Xylene	3.50	0.0852	3.410	0	103	53.1	132	3.179	9.68	30	
o-Xylene	1.72	0.0426	1.705	0	101	53.3	139	1.521	12.2	30	
Styrene	1.74	0.0426	1.705	0	102	51.1	132	1.544	11.7	30	
Isopropylbenzene	1.86	0.0426	1.705	0	109	58.9	138	1.587	15.7	30	
Bromoform	1.74	0.0852	1.705	0	102	57.9	130	1.600	8.61	30	
1,1,2,2-Tetrachloroethane	1.65	0.0341	1.705	0	97.1	51.9	131	1.551	6.45	30	
n-Propylbenzene	1.84	0.0426	1.705	0	108	53.6	140	1.588	14.8	30	
Bromobenzene	1.74	0.0341	1.705	0	102	54.2	140	1.544	11.9	30	
1,3,5-Trimethylbenzene	1.81	0.0426	1.705	0	106	51.8	136	1.585	13.1	30	
2-Chlorotoluene	1.62	0.0426	1.705	0	95.3	51.6	136	1.409	14.3	30	
4-Chlorotoluene	1.76	0.0426	1.705	0	103	50.1	139	1.525	14.6	30	
tert-Butylbenzene	1.78	0.0426	1.705	0	104	50.5	135	1.575	12.0	30	
1,2,3-Trichloropropane	1.90	0.0426	1.705	0	112	50.5	131	1.769	7.23	30	
1,2,4-Trichlorobenzene	1.69	0.0426	1.705	0	99.4	50.8	130	1.567	7.81	30	
sec-Butylbenzene	1.92	0.0852	1.705	0	112	52.6	141	1.601	17.9	30	
4-Isopropyltoluene	1.86	0.0852	1.705	0	109	52.9	134	1.604	14.8	30	
1,3-Dichlorobenzene	1.71	0.0341	1.705	0	100	52.6	131	1.650	3.65	30	
1,4-Dichlorobenzene	1.80	0.0341	1.705	0	105	52.9	129	1.604	11.4	30	
n-Butylbenzene	1.65	0.0426	1.705	0	96.9	52.6	130	1.503	9.44	30	
1,2-Dichlorobenzene	1.76	0.0341	1.705	0	104	55.8	129	1.627	8.13	30	
1,2-Dibromo-3-chloropropane	1.64	0.852	1.705	0	95.9	40.5	131	1.601	2.17	30	
1,2,4-Trimethylbenzene	1.83	0.0341	1.705	0	107	50.6	137	1.626	11.8	30	
Hexachlorobutadiene	1.76	0.0852	1.705	0	103	40.6	158	1.529	14.2	30	
Naphthalene	1.71	0.0852	1.705	0	100	52.3	124	1.652	3.58	30	
1,2,3-Trichlorobenzene	1.71	0.0341	1.705	0	100	54.4	124	1.629	4.82	30	
Surr: Dibromofluoromethane	2.17		2.131		102	56.5	129		0		
Surr: Toluene-d8	2.07		2.131		97.1	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	2.15		2.131		101	43.2	143		0		

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804398-008BMSD**	SampType: **MSD**		Units: **mg/Kg-dry**	Prep Date: **5/1/2018**		RunNo: **43244**	
Client ID: **SB-27-4**	Batch ID: **20566**			Analysis Date: **5/3/2018**		SeqNo: **835983**	

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20551** SampType: **LCS** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **LCSW** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834590**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	22.1	1.00	20.00	0	111	18.7	171				
Chloromethane	22.5	2.00	20.00	0	112	38.5	171				
Vinyl chloride	20.2	0.200	20.00	0	101	48	145				
Bromomethane	22.6	1.00	20.00	0	113	32.5	184				
Trichlorofluoromethane (CFC-11)	17.7	1.00	20.00	0	88.6	43.5	149				
Chloroethane	21.8	1.00	20.00	0	109	43.8	168				
1,1-Dichloroethene	19.1	1.00	20.00	0	95.3	57.5	150				
Methylene chloride	19.5	1.00	20.00	0	97.7	67.1	131				
trans-1,2-Dichloroethene	20.0	1.00	20.00	0	100	71.7	129				
Methyl tert-butyl ether (MTBE)	20.4	1.00	20.00	0	102	58	138				
1,1-Dichloroethane	21.3	1.00	20.00	0	106	67.9	134				
2,2-Dichloropropane	21.8	2.00	20.00	0	109	26.5	185				
cis-1,2-Dichloroethene	19.9	1.00	20.00	0	99.3	70.2	139				
Chloroform	19.8	1.00	20.00	0	99.0	66.3	131				
1,1,1-Trichloroethane (TCA)	19.3	1.00	20.00	0	96.6	63	140				
1,1-Dichloropropene	19.5	1.00	20.00	0	97.4	69.9	124				
Carbon tetrachloride	18.7	1.00	20.00	0	93.4	66.2	134				
1,2-Dichloroethane (EDC)	19.8	1.00	20.00	0	98.8	67	126				
Benzene	20.3	1.00	20.00	0	101	69.3	132				
Trichloroethene (TCE)	19.5	0.500	20.00	0	97.5	65.2	136				
1,2-Dichloropropane	19.9	1.00	20.00	0	99.6	70.5	130				
Bromodichloromethane	19.1	1.00	20.00	0	95.4	67.2	137				
Dibromomethane	19.8	1.00	20.00	0	99.1	69.3	143				
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	95.2	62.6	137				
Toluene	19.9	1.00	20.00	0	99.7	61.3	145				
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.2	56.5	163				
1,1,2-Trichloroethane	19.6	1.00	20.00	0	98.0	71.7	131				
1,3-Dichloropropane	19.4	1.00	20.00	0	96.9	73.5	127				
Tetrachloroethene (PCE)	19.4	1.00	20.00	0	97.2	47.5	147				
Dibromochloromethane	19.4	1.00	20.00	0	97.1	67.2	134				
1,2-Dibromoethane (EDB)	19.6	0.250	20.00	0	98.2	73.6	125				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-20551** SampType: **LCS** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **LCSW** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834590**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	19.7	1.00	20.00	0	98.3	73.9	126				
1,1,1,2-Tetrachloroethane	19.7	1.00	20.00	0	98.7	76.8	124				
Ethylbenzene	19.9	1.00	20.00	0	99.3	72	130				
m,p-Xylene	40.5	1.00	40.00	0	101	70.3	134				
o-Xylene	20.0	1.00	20.00	0	99.9	72.1	131				
Styrene	19.9	1.00	20.00	0	99.3	64.3	140				
Isopropylbenzene	19.7	1.00	20.00	0	98.6	73.9	128				
Bromoform	17.9	2.00	20.00	0	89.7	55.3	141				
1,1,2,2-Tetrachloroethane	19.1	1.00	20.00	0	95.6	62.9	132				
n-Propylbenzene	19.6	1.00	20.00	0	98.0	74.5	127				
Bromobenzene	19.6	1.00	20.00	0	98.0	71	131				
1,3,5-Trimethylbenzene	19.7	1.00	20.00	0	98.4	73.1	128				
2-Chlorotoluene	21.0	1.00	20.00	0	105	70.8	130				
4-Chlorotoluene	17.8	1.00	20.00	0	89.1	70.1	131				
tert-Butylbenzene	18.8	1.00	20.00	0	94.1	68.2	131				
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.3	67.7	131				
1,2,4-Trichlorobenzene	21.7	2.00	20.00	0	108	41	139				
sec-Butylbenzene	19.4	1.00	20.00	0	96.8	72	129				
4-Isopropyltoluene	19.4	1.00	20.00	0	97.1	69.2	130				
1,3-Dichlorobenzene	20.2	1.00	20.00	0	101	80.4	124				
1,4-Dichlorobenzene	20.2	1.00	20.00	0	101	66.8	119				
n-Butylbenzene	20.5	1.00	20.00	0	102	73.8	127				
1,2-Dichlorobenzene	20.7	1.00	20.00	0	104	69.7	119				
1,2-Dibromo-3-chloropropane	20.3	1.00	20.00	0	101	63.1	136				
1,2,4-Trimethylbenzene	19.5	1.00	20.00	0	97.3	73.4	127				
Hexachloro-1,3-butadiene	21.8	4.00	20.00	0	109	58.6	138				
Naphthalene	21.5	1.00	20.00	0	107	41.8	165				
1,2,3-Trichlorobenzene	22.1	4.00	20.00	0	111	35.8	155				
Surr: Dibromofluoromethane	27.1		25.00		109	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.8	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.7		25.00		103	64.2	128				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**LCS-20551**	SampType:	**LCS**		Units:	**µg/L**	Prep Date:	**4/30/2018**	RunNo:	**43179**
Client ID:	**LCSW**	Batch ID:	**20551**				Analysis Date:	**4/30/2018**	SeqNo:	**834590**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**MB-20551**	SampType:	**MBLK**		Units:	**µg/L**	Prep Date:	**4/30/2018**	RunNo:	**43179**
Client ID:	**MBLKW**	Batch ID:	**20551**				Analysis Date:	**4/30/2018**	SeqNo:	**834591**

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									
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									

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20551** SampType: **MBLK** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **MBLKW** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834591**

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	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									

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-20551** SampType: **MBLK** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **MBLKW** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834591**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.7		25.00		99.0	45.4	152				
Surr: Toluene-d8	24.7		25.00		98.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.8		25.00		99.1	64.2	128				

Sample ID **1804408-005ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834588**

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	
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: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804408-005ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834588**

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: 1804398
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804408-005ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **834588**

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	26.0		25.00		104	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.7	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.7	64.2	128		0		

Sample ID **1804389-008AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835090**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	26.1	1.00	20.00	0	131	33.3	122				S
Chloromethane	21.4	2.00	20.00	0	107	39.7	143				
Vinyl chloride	23.3	0.200	20.00	0	117	41	165				
Bromomethane	20.8	1.00	20.00	0	104	31.5	135				
Trichlorofluoromethane (CFC-11)	22.0	1.00	20.00	0	110	54.7	138				
Chloroethane	24.4	1.00	20.00	0	122	49.9	143				
1,1-Dichloroethene	22.4	1.00	20.00	0	112	51.6	164				
Methylene chloride	20.5	1.00	20.00	0	103	61.6	135				
trans-1,2-Dichloroethene	21.8	1.00	20.00	0	109	63.5	138				
Methyl tert-butyl ether (MTBE)	20.8	1.00	20.00	0	104	60.9	132				
1,1-Dichloroethane	23.1	1.00	20.00	0	116	55.7	151				
2,2-Dichloropropane	21.3	2.00	20.00	0	106	37.7	150				
cis-1,2-Dichloroethene	23.5	1.00	20.00	2.412	106	60	154				

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804389-008AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835090**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	21.3	1.00	20.00	0	107	48.1	140				
1,1,1-Trichloroethane (TCA)	21.8	1.00	20.00	0	109	64.2	146				
1,1-Dichloropropene	21.9	1.00	20.00	0	110	73.8	136				
Carbon tetrachloride	21.0	1.00	20.00	0	105	62.7	146				
1,2-Dichloroethane (EDC)	19.8	1.00	20.00	0	98.8	63.4	137				
Benzene	21.3	1.00	20.00	0	106	65.4	138				
Trichloroethene (TCE)	21.3	0.500	20.00	0	107	60.4	134				
1,2-Dichloropropane	20.9	1.00	20.00	0	105	62.6	138				
Bromodichloromethane	19.2	1.00	20.00	0	96.2	59.4	139				
Dibromomethane	19.8	1.00	20.00	0	98.8	58.7	148				
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	94.9	63.8	132				
Toluene	20.9	1.00	20.00	0	105	52	147				
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.0	57.7	125				
1,1,2-Trichloroethane	19.9	1.00	20.00	0	99.3	57.5	153				
1,3-Dichloropropane	19.5	1.00	20.00	0	97.6	54.1	157				
Tetrachloroethene (PCE)	26.0	1.00	20.00	4.256	109	50.3	133				
Dibromochloromethane	19.0	1.00	20.00	0	95.1	61.6	139				
1,2-Dibromoethane (EDB)	19.7	0.250	20.00	0	98.7	63.2	134				
Chlorobenzene	20.5	1.00	20.00	0	103	65.8	134				
1,1,1,2-Tetrachloroethane	20.2	1.00	20.00	0	101	65.4	135				
Ethylbenzene	21.3	1.00	20.00	0	106	64.5	136				
m,p-Xylene	41.8	1.00	40.00	0	105	63.3	135				
o-Xylene	21.0	1.00	20.00	0	105	64.8	150				
Styrene	20.3	1.00	20.00	0	102	52.9	163				
Isopropylbenzene	21.5	1.00	20.00	0	107	56	147				
Bromoform	16.5	2.00	20.00	0	82.6	57.7	139				
1,1,2,2-Tetrachloroethane	19.0	1.00	20.00	0	95.2	59.8	146				
n-Propylbenzene	20.5	1.00	20.00	0	103	57.6	142				
Bromobenzene	20.0	1.00	20.00	0	100	69.3	157				
1,3,5-Trimethylbenzene	20.8	1.00	20.00	0	104	59.9	136				
2-Chlorotoluene	20.9	1.00	20.00	0	105	61.7	134				

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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804389-008AMS** SampType: **MS** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835090**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	19.0	1.00	20.00	0	94.8	58.4	134				
tert-Butylbenzene	20.6	1.00	20.00	0	103	66.8	141				
1,2,3-Trichloropropane	17.7	1.00	20.00	0	88.3	62.4	129				
1,2,4-Trichlorobenzene	21.9	2.00	20.00	0	109	50.9	133				
sec-Butylbenzene	21.4	1.00	20.00	0	107	56	146				
4-Isopropyltoluene	20.9	1.00	20.00	0	104	56.4	136				
1,3-Dichlorobenzene	20.2	1.00	20.00	0	101	58.2	128				
1,4-Dichlorobenzene	20.6	1.00	20.00	0	103	60.1	123				
n-Butylbenzene	22.7	1.00	20.00	0	114	54.6	135				
1,2-Dichlorobenzene	20.6	1.00	20.00	0	103	65.4	133				
1,2-Dibromo-3-chloropropane	18.9	1.00	20.00	0	94.7	51.8	142				
1,2,4-Trimethylbenzene	20.4	1.00	20.00	0	102	63.7	132				
Hexachloro-1,3-butadiene	23.3	4.00	20.00	0	117	58.1	130				
Naphthalene	20.8	1.00	20.00	0	104	50.7	154				
1,2,3-Trichlorobenzene	21.4	4.00	20.00	0	107	57	131				
Surr: Dibromofluoromethane	27.1		25.00		108	45.4	152				
Surr: Toluene-d8	25.0		25.00		100	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128				

NOTES:
S - Outlying spike recovery(ies) observed.

Sample ID **1804389-008AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835091**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	25.9	1.00	20.00	0	129	33.3	122	26.11	0.904	30	S
Chloromethane	23.3	2.00	20.00	0	117	39.7	143	21.40	8.66	30	
Vinyl chloride	23.6	0.200	20.00	0	118	41	165	23.32	1.39	30	
Bromomethane	21.7	1.00	20.00	0	109	31.5	135	20.82	4.23	30	
Trichlorofluoromethane (CFC-11)	22.3	1.00	20.00	0	111	54.7	138	22.01	1.18	30	
Chloroethane	23.6	1.00	20.00	0	118	49.9	143	24.41	3.52	30	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804389-008AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835091**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	22.2	1.00	20.00	0	111	51.6	164	22.37	0.531	30	
Methylene chloride	20.4	1.00	20.00	0	102	61.6	135	20.52	0.552	30	
trans-1,2-Dichloroethene	21.5	1.00	20.00	0	107	63.5	138	21.78	1.53	30	
Methyl tert-butyl ether (MTBE)	20.6	1.00	20.00	0	103	60.9	132	20.82	1.17	30	
1,1-Dichloroethane	22.3	1.00	20.00	0	111	55.7	151	23.13	3.73	30	
2,2-Dichloropropane	21.1	2.00	20.00	0	106	37.7	150	21.26	0.744	30	
cis-1,2-Dichloroethene	23.7	1.00	20.00	2.412	107	60	154	23.53	0.817	30	
Chloroform	20.9	1.00	20.00	0	105	48.1	140	21.34	1.90	30	
1,1,1-Trichloroethane (TCA)	21.8	1.00	20.00	0	109	64.2	146	21.80	0.0286	30	
1,1-Dichloropropene	22.6	1.00	20.00	0	113	73.8	136	21.94	3.11	30	
Carbon tetrachloride	21.7	1.00	20.00	0	108	62.7	146	20.97	3.34	30	
1,2-Dichloroethane (EDC)	19.5	1.00	20.00	0	97.6	63.4	137	19.76	1.17	30	
Benzene	21.0	1.00	20.00	0	105	65.4	138	21.26	1.08	30	
Trichloroethene (TCE)	20.9	0.500	20.00	0	105	60.4	134	21.31	1.68	30	
1,2-Dichloropropane	20.6	1.00	20.00	0	103	62.6	138	20.91	1.30	30	
Bromodichloromethane	19.5	1.00	20.00	0	97.6	59.4	139	19.23	1.47	30	
Dibromomethane	19.3	1.00	20.00	0	96.6	58.7	148	19.77	2.33	30	
cis-1,3-Dichloropropene	19.0	1.00	20.00	0	95.1	63.8	132	18.99	0.213	30	
Toluene	20.8	1.00	20.00	0	104	52	147	20.93	0.549	30	
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.2	57.7	125	18.99	0.224	30	
1,1,2-Trichloroethane	19.8	1.00	20.00	0	98.8	57.5	153	19.86	0.561	30	
1,3-Dichloropropane	19.4	1.00	20.00	0	97.1	54.1	157	19.52	0.502	30	
Tetrachloroethene (PCE)	25.9	1.00	20.00	4.256	108	50.3	133	26.01	0.280	30	
Dibromochloromethane	18.8	1.00	20.00	0	94.1	61.6	139	19.02	1.09	30	
1,2-Dibromoethane (EDB)	19.5	0.250	20.00	0	97.3	63.2	134	19.75	1.47	30	
Chlorobenzene	20.5	1.00	20.00	0	102	65.8	134	20.55	0.267	30	
1,1,1,2-Tetrachloroethane	20.4	1.00	20.00	0	102	65.4	135	20.17	1.01	30	
Ethylbenzene	21.3	1.00	20.00	0	106	64.5	136	21.29	0.0396	30	
m,p-Xylene	42.2	1.00	40.00	0	105	63.3	135	41.82	0.842	30	
o-Xylene	20.8	1.00	20.00	0	104	64.8	150	21.01	0.786	30	
Styrene	19.9	1.00	20.00	0	99.4	52.9	163	20.33	2.28	30	

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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804389-008AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **4/30/2018** SeqNo: **835091**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	21.2	1.00	20.00	0	106	56	147	21.48	1.27	30	
Bromoform	16.8	2.00	20.00	0	83.9	57.7	139	16.52	1.59	30	
1,1,2,2-Tetrachloroethane	19.3	1.00	20.00	0	96.6	59.8	146	19.04	1.42	30	
n-Propylbenzene	21.6	1.00	20.00	0	108	57.6	142	20.55	5.04	30	
Bromobenzene	20.5	1.00	20.00	0	102	69.3	157	20.01	2.20	30	
1,3,5-Trimethylbenzene	21.3	1.00	20.00	0	107	59.9	136	20.80	2.50	30	
2-Chlorotoluene	21.8	1.00	20.00	0	109	61.7	134	20.91	4.06	30	
4-Chlorotoluene	21.9	1.00	20.00	0	109	58.4	134	18.95	14.3	30	
tert-Butylbenzene	21.1	1.00	20.00	0	105	66.8	141	20.57	2.34	30	
1,2,3-Trichloropropane	17.8	1.00	20.00	0	89.2	62.4	129	17.66	0.953	30	
1,2,4-Trichlorobenzene	22.7	2.00	20.00	0	113	50.9	133	21.86	3.58	30	
sec-Butylbenzene	22.0	1.00	20.00	0	110	56	146	21.39	2.76	30	
4-Isopropyltoluene	21.2	1.00	20.00	0	106	56.4	136	20.85	1.66	30	
1,3-Dichlorobenzene	21.2	1.00	20.00	0	106	58.2	128	20.20	4.87	30	
1,4-Dichlorobenzene	21.2	1.00	20.00	0	106	60.1	123	20.63	2.94	30	
n-Butylbenzene	23.1	1.00	20.00	0	115	54.6	135	22.73	1.53	30	
1,2-Dichlorobenzene	21.1	1.00	20.00	0	106	65.4	133	20.60	2.60	30	
1,2-Dibromo-3-chloropropane	19.9	1.00	20.00	0	99.7	51.8	142	18.94	5.18	30	
1,2,4-Trimethylbenzene	20.6	1.00	20.00	0	103	63.7	132	20.42	0.968	30	
Hexachloro-1,3-butadiene	24.1	4.00	20.00	0	120	58.1	130	23.31	3.21	30	
Naphthalene	22.9	1.00	20.00	0	115	50.7	154	20.80	9.81	30	
1,2,3-Trichlorobenzene	22.9	4.00	20.00	0	115	57	131	21.44	6.72	30	
Surr: Dibromofluoromethane	26.8		25.00		107	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.4	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128		0		

NOTES:
S - Outlying spike recovery(ies) observed.

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804411-013ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **5/1/2018** SeqNo: **835097**

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	
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	

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1804411-013ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **4/30/2018** RunNo: **43179**
Client ID: **BATCH** Batch ID: **20551** Analysis Date: **5/1/2018** SeqNo: **835097**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	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	26.5		25.00		106	45.4	152		0		
Surr: Toluene-d8	24.8		25.00		99.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128		0		

Work Order: 1804398
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**1804411-013ADUP**	SampType:	**DUP**		Units:	**µg/L**	Prep Date:	**4/30/2018**		RunNo:	**43179**	
Client ID:	**BATCH**	Batch ID:	**20551**				Analysis Date:	**5/1/2018**		SeqNo:	**835097**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1804398**
Logged by:	**Brianna Barnes**	Date Received:	**4/26/2018 8:50:00 AM**

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified:	Chris DeBoer	Date	4/26/2018
By Whom:	Brianna Barnes	Via:	☑ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:	Extra sample received, not on COC.		
Client Instructions:	Add to COC, keep on hold.		

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	3.1
Sample	3.2
Temp Blank	4.1

* 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: 4/24/18 | Page: 1 of: 3 | Laboratory Project No (internal): 1804398

Project Name: MSC | Special Remarks:

Client: PBS Environmental, Inc | Project No: 1358.001.01.009

Address: 1215 4th Ave Suite 1350 | Collected by: C. A. Ross

City, State, Zip: Seattle, WA 98161 | Location: Normandy Park, WA

Telephone: (206) 529-3990 | Report To (PM): Matt Dahl | Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax: (206) 529-3935 | PM Email: mdahl@pbsenv.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-26-2	4/24/18	820	Soil	X														
2 SB-26-4		825		X														
3 SB-26-10		830		X														
4 SB-26-20		840														X		
5 SB-26-30		850														X		
6 SB-26-40		900														X		
7 SB-27-2		930		X														
8 SB-27-4		935		X														
9 SB-27-10		955		X														
10 SB-27-20	↓	1005	↓													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]	4/26/18 720	x [signature]	4/26/18 0850
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: 4/24/18 Page: 2 of: 2

Project Name: MVSC

Laboratory Project No (internal): 19043990

Special Remarks:

Client: PES Environmental, Inc

Project No:

Address:

Collected by: see Page 1

City, State, Zip: see page 1

Location:

Telephone:

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

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)	40 CFR 261				Comments
1 SB-27-30	4/24/18	1015	Soil												X					
2 SB-27-40		1030													X					
3 SB-28-30		1125		X																
4 SB-28-20		1115		X																
5 SB-28-40		1140													X					
6 SB-29-GW	"	1440	GW	X																
7 SB-30-30	4/25/18	1130	Soil	X																
8 SB-30-35		1140		X																
9 SB-30_40		1150		X																
10 SB-14a-40		1005													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 Chris DeRose	4/26/18 720	x	0650 4/26/18
Relinquished	Date/Time	Received	Date/Time
x		x	

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: 4/25/18 Page: 3 of: 3

Project Name: MUSC

Laboratory Project No (internal): 19004398

Special Remarks:

Client: PES Environmental, Inc

Project No:

Address:

Collected by:

City, State, Zip: see page 1

Location: see page 1

Telephone: see page 1

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-136-36	4/25/18	1405	SO	X													
2	SB-136-40	"	1420	"	X													
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

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 Dekker	4/26/18 720	x [signature]	4/26/18 0850
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: 4/24/18 Page: 1 of: 3

Laboratory Project No (internal): 1804398

Project Name: MGC

Special Remarks: Edits (page 3) per C.D. 4/26 BBB

Project No: 1358.001.011.009

Client: PES Environmental, Inc

Collected by: Chris Bern

Address: 1215 4th Ave Suite 1350

Location: Normandy Park, 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) 529-3790

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)	HOLD	Comments
1 SB-26-2	4/24/18	820	So.	X													
2 SB-26-4		825		X													
3 SB-26-10		830		X													
4 SB-26-~~30~~ 20		840													X		
5 SB-26-30		850													X		
6 SB-26-40		900													X		
7 SB-27-2		930		X													
8 SB-27-4		935		X													
9 SB-27-10		955		X													
10 SB-27-20		1005													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 Chris Bern	4/26/18 720	x [signature]	4/26/18 0850
Relinquished	Date/Time	Received	Date/Time
x		x	

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: 4/24/18 Page: 2 of: 2

Project Name: MUSC

Project No:

Collected by: see page 1

Location:

Report To (PM):

PM Email:

Laboratory Project No (internal): 19043990

Special Remarks:

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Client: PES Environmental, Inc

Address:

City, State, Zip: see page 1

Telephone:

Fax:

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-27-30	4/24/18	1015	so.1												X		
2 SB-27-40		1030													X		
3 SB-28-30		1125		X													
4 SB-28-40		1115		X													
5 SB-28-40		1140													X		
6 SB-29-GW	"	1440	GW	X													
7 SB-30-30	4/25/18	1130	so.1	X													
8 SB-30-35		1140		X													
9 SB-30-40		1150		X													
10 SB-14a-40		1005													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

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***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

Relinquished	Date/Time	Received	Date/Time
x [signature]	4/26/18 720	x [signature] 0650	4/26/18
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: 4/25/18 Page: 3 of 3

Laboratory Project No (internal): 19004398

Project Name: MUSC

Special Remarks:

Client: PES Environmental, Inc

Project No:

Address:

Collected by:

City, State, Zip: see page 1

Location: see page 1

Telephone: see page 1

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-136-36	4/25/18	1405	S	X												
2	SB-136-40	"	1420	"	X												
3	SB-27-8	4/24/18	0950	S												X	
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

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 Detken	4/26/18 720	x [signature]	4/26/18 0750
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: 4/24/18 Page: 1 of: 3

Laboratory Project No (Internal): 1804398

Project Name: MWC

Special Remarks: Edits (page 3) per C.D. 4/26 BBB
Edits page 1 & 2 - MWD 5/7/2018

Project No: 1358.001.011.009

Collected by: C. de Beer

Location: Normandy Park, WA

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Report To (PM): Matt Dahl

PM Email: mdahl@pesenv.com

Client: PES Environmental, Inc

Address: 1215 4th Ave, Suite 1350

City, State, Zip: Seattle, WA 98161

Telephone: (206) 529-3790

Fax: (206) 529-3585

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-26-2	4/24/18	820	So.	X													
2 SB-26-4		825		X													
3 SB-26-10		830		X													
4 SB-26-20		840		X											X		Analyze - MWD 5/7/08
5 SB-26-30		850		X											X		Analyze - MWD 5/7/08
6 SB-26-40		900		X											X		Analyze - MWD 5/7/08
7 SB-27-2		930		X													
8 SB-27-4		935		X													
9 SB-27-10		955		X													
10 SB-27-20	"	1005	"	X											X		Analyze - MWD 5/7/08

*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)

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Relinquished	Date/Time	Received	Date/Time
x Chris DeBeer	4/26/18 720	x [signature]	4/26/18 0850
Relinquished x	Date/Time	Received x	Date/Time

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: 4/24/18 Page: 2 of: 2
Project Name: MUSC
Project No:
Collected by: see page 1
Location:
Report To (PM):
PM Email:
Laboratory Project No (Internal): 19043990
Special Remarks:
Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Client: PES Environmental, Inc
Address: see page 1
City, State, Zip:
Telephone:
Fax:

	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)	#1 D	Comments
1	SB-27-30	4/24/18	1015	Soil	X													X		Analyze - MW 5/7/08
2	SB-27-40		1030		X													X		Analyze - MW 5/7/08
3	SB-28-30		1125		X															
4	SB-28-20		1145		X															
5	SB-28-40		1140		X													X		Analyze - MW 5/7/08
6	SB-29-GW	"	1440	GW	X															
7	SB-30-30	4/25/18	1130	Soil	X															
8	SB-30-35		1140		X															
9	SB-30_40		1150		X															
10	SB-14a-40		1005	"	X													X		Analyze - MW 5/7/08

*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

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***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Turn-around Time:
☒ Standard
☐ 3 Day
☐ 2 Day
☐ Next Day
Same Day ____ (specify)

Relinquished	Date/Time	Received	Date/Time
x Chris DeRon	4/26/18 720	x	0650 4/26/18
Relinquished x	Date/Time	Received x	Date/Time

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: 4/25/18 Page: 3 of 3

Project Name: MUSC

Laboratory Project No (internal): 1904398

Special Remarks:

Client: PES Environmental, Inc

Project No:

Address:

Collected by:

City, State, Zip: see page 1

Location: see page 1

Telephone: see page 1

Report To (PM):

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email:

	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-136-36	4/25/18	1405	S	X																			
2	SB-136-40	↓	1420	↓	X																			
3	SB-27-8	4/24/18	0950	S														X						
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

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- ☒ Standard
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Relinquished	Date/Time	Received	Date/Time
x Chris Dekon	4/26/18 720	x Jack	4/26/18 0850
Relinquished x	Date/Time	Received x	Date/Time

MEMORANDUM

TO: Project File **DATE:** June 12, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center

PROJECT #: 1358.001.01.009

TASK: April 24 and 25, 2018 Soil and Groundwater Samples

LAB: Fremont Work Order Number 1804398

Twenty-two (22) soils and one (1) groundwater sample were collected to evaluate performance of the air sparging and soil vapor extraction remediation system at the Manhattan Village Shopping Centre site in Normandy Park, Washington on April 24 and 25, 2018. Samples associated with Work Order Number 1804398 were analyzed for VOCs by USEPA Method 8260C. Laboratory analytical services were provided by Fremont Analytical (Fremont) of Seattle, Washington.

The monitoring event occurred between April 16 and 25, 2018. Sample results associated with this monitoring event include four work orders (1804291, 1804329, 1804368, and 1804398). The quality assurance review of the laboratory data for Work Order Number 1804398 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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies are identified in the laboratory report.

Sample Collection and Preservation

The samples were stored on ice in the cooler and delivered in good condition to the laboratory. Cooler and sample temperatures at the time of receipt were measured at 3.1 degrees Centigrade (°C) and 3.2°C, respectively. The cooler temperatures were within EPA's recommended temperature preservation range of less than 6.0 °C. Samples were received in good condition. No data were qualified based upon the sample collection and preservation information.

- Fremont's notes on the Sample Log-In Check List Form show that an extra sample was received but was not recorded on the chain of custody (COC). PES confirmed on April 26, 2018 that sample SB-27-8 should be included on the COC and placed the sample on hold.

- Eight samples (SB-26-20, SB-26-30, SB-26-40, SB-27-20, SB-27-30, SB-27-40, SB-28-40, and SB-14a-40) were initially placed on hold and were submitted for VOC analysis per PES's May 7, 2018 request.

Holding Times

USEPA Method 8260C:
All samples were analyzed for VOCs within the EPA recommended holding time of fourteen days (soils and preserved waters). All holding time criteria were met.

Total Solids by USEPA Method 8000D:
Soil samples were analyzed within the USEPA recommended holding time of seven days for total solids with the following exceptions:

- Eight samples (SB-26-20, SB-26-30, SB-26-40, SB-27-20, SB-27-30, SB-27-40, SB-28-40, and SB-14a-40) were analyzed for moisture seven and eight days past recommended holding time. No action was taken since the change in percent moisture is not enough to significantly impact the final results.

Initial and Continuing Calibration

Calibration data for this project are not required for this deliverable however Fremont's notes indicate the following:

- Continuing calibration verification (CCV) issues were noted by Fremont for 1,1-dichloroethene associated with analytical batch 20566 (analyzed on May 3, 2018). These results are qualified by the laboratory "Q-" to indicate that percent difference CCVs are outside of laboratory acceptance criteria**. All associated 1,1-dichloroethene results with laboratory qualified (Q-) results are estimated and qualified (J/UJ).**

Method Blank Results

Laboratory method blanks were included with the analytical batches per method requirement. The target analytes (VOCs) were not detected in the method blanks at concentrations at or above the reporting limits (RLs).

Trip Blank Results

A trip blank was collected but not submitted for analysis.

Equipment Blank Results

Equipment blanks were not collected.

Field Duplicate Analyses

Field duplicate samples were not collected.

Laboratory Duplicate Analyses

USEPA Method 8260C:
Laboratory duplicate analysis was performed on client samples (SB-26-30, SB-27-30, SB-26-4, and SB-30-30) and on non-client samples. Results are comparable and within 30% relative percent difference (RPD).

Total Solids by USEPA Method 8000D:
Laboratory duplicate sample analyses were performed on client and non-client samples within the analytical batches. The primary/duplicate RPDs for total solids analyses are within the laboratory control limit of 20%.

Surrogate Recoveries

The surrogate percent recovery (%R) results for the samples, method blanks, laboratory duplicates, matrix spike samples, and laboratory control samples are within the laboratory surrogate control limits. No data qualifications were warranted.

Laboratory Control Samples

The laboratory control sample (LCS) %R's are within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on client samples SB-17-40 and on non-client samples. MS/MSD % Rs and RPDs are within the laboratory control limits with the following exceptions:

- Analytical Batch 20637 (soil): Batch MS/MSD % recoveries for bromomethane, trichlorofluoromethane (CFC-11), and chloroethane are above laboratory acceptance

criteria and laboratory qualified (S). No action was taken since the spike was performed on a non-client sample, the compounds are within LCS control limit criteria, and batch duplicate results are acceptable.

- Analytical Batch 20625 (soil): Batch sample RPD result for bromoform is above laboratory acceptance criteria and laboratory qualified (R). No action was taken since these compounds were recovered wide but are within recovery criteria.

- Analytical Batch 20566 (soil): Sample SB-27-4 MS/MSD % recoveries for dichlorodifluoromethane (CFC-12) and 2,2-dichloropropane are outside of laboratory acceptance criteria and laboratory qualified (S). Dichlorodifluoromethane (CFC-12) was recovered above criteria and was not detected in sample SB-27-4. No action is required for CFC-12. MS/MSD recoveries for 2,2-dichloropropane are low and below criteria but greater than 10% R. **Sample SB-27-4 result for 2,2-dichloropropane is estimated and qualified (UJ).**

- Analytical Batch 20551 (water): Batch MS/MSD % recoveries for dichlorodifluoromethane (CFC-12) are above laboratory acceptance criteria and laboratory qualified (S). No action was taken since the spike was performed on a non-client sample and LCS result is within laboratory criteria.

Other Quality Control Issues

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

Quantitation Limits

Results of the USEPA 8260C VOC analyses were reported based on laboratory RLs. The RLs indicate the minimum quantity of a target analyte that can be confidently determined by the reference method. The RLs were acceptable for the project; therefore, no data qualifications were warranted.

Data Assessment

Data qualifiers are assigned and laboratory report pages with qualifiers are attached. Assigned qualifiers were added to the electronic data deliverables under the appropriate field. All data, including qualified data, are judged to be acceptable for their intended use.

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:35:00 AM
Project: MVSC
Lab ID: 1804398-008
Matrix: Soil
Client Sample ID: **SB-27-4**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloromethane	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Vinyl chloride	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromomethane	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Trichlorofluoromethane (CFC-11)	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloroethane	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloroethene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Methylene chloride	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
trans-1,2-Dichloroethene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Methyl tert-butyl ether (MTBE)	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloroethane	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
2,2-Dichloropropane	ND	UJ	0.170		mg/Kg-dry	1	5/2/2018 11:14:44 PM
cis-1,2-Dichloroethene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chloroform	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,1-Trichloroethane (TCA)	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1-Dichloropropene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Carbon tetrachloride	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichloroethane (EDC)	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Benzene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Trichloroethene (TCE)	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichloropropane	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromodichloromethane	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Dibromomethane	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
cis-1,3-Dichloropropene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Toluene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
trans-1,3-Dichloropropylene	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,2-Trichloroethane	ND		0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3-Dichloropropane	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Tetrachloroethene (PCE)	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Dibromochloromethane	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dibromoethane (EDB)	ND		0.00852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Chlorobenzene	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,1,1,2-Tetrachloroethane	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Ethylbenzene	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
m,p-Xylene	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
o-Xylene	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Styrene	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Isopropylbenzene	ND		0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromoform	ND		0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/24/2018 9:35:00 AM
Project: MVSC
Lab ID: 1804398-008
Matrix: Soil
Client Sample ID: **SB-27-4**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
n-Propylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Bromobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3,5-Trimethylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
2-Chlorotoluene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
4-Chlorotoluene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
tert-Butylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,3-Trichloropropane	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,4-Trichlorobenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
sec-Butylbenzene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
4-Isopropyltoluene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,3-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,4-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
n-Butylbenzene	ND	0.0426		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2-Dibromo-3-chloropropane	ND	0.852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,4-Trimethylbenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Hexachlorobutadiene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Naphthalene	ND	0.0852		mg/Kg-dry	1	5/2/2018 11:14:44 PM
1,2,3-Trichlorobenzene	ND	0.0341		mg/Kg-dry	1	5/2/2018 11:14:44 PM
Surr: Dibromofluoromethane	93.8	56.5 - 129		%Rec	1	5/2/2018 11:14:44 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	5/2/2018 11:14:44 PM
Surr: 1-Bromo-4-fluorobenzene	93.3	43.2 - 143		%Rec	1	5/2/2018 11:14:44 PM
Sample Moisture (Percent Moisture)				Batch ID: R43138		Analyst: EAS
Percent Moisture	7.97	0.500		wt%	1	4/27/2018 9:29:37 AM

JC 6/6/18

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-018
Matrix: Soil
Client Sample ID: **SB-30-35**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloromethane	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Vinyl chloride	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromomethane	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Trichlorofluoromethane (CFC-11)	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloroethane	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloroethene	ND	UJ	0.0271	Q-	mg/Kg-dry	1	5/3/2018 5:19:46 AM
Methylene chloride	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
trans-1,2-Dichloroethene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Methyl tert-butyl ether (MTBE)	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloroethane	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
2,2-Dichloropropane	ND		0.136		mg/Kg-dry	1	5/3/2018 5:19:46 AM
cis-1,2-Dichloroethene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chloroform	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,1-Trichloroethane (TCA)	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1-Dichloropropene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Carbon tetrachloride	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichloroethane (EDC)	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Benzene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Trichloroethene (TCE)	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichloropropane	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromodichloromethane	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Dibromomethane	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
cis-1,3-Dichloropropene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Toluene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
trans-1,3-Dichloropropylene	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,2-Trichloroethane	ND		0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3-Dichloropropane	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Tetrachloroethene (PCE)	0.142		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Dibromochloromethane	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dibromoethane (EDB)	ND		0.00678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Chlorobenzene	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,1,1,2-Tetrachloroethane	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Ethylbenzene	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
m,p-Xylene	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
o-Xylene	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Styrene	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Isopropylbenzene	ND		0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromoform	ND		0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:40:00 AM
Project: MVSC
Lab ID: 1804398-018
Matrix: Soil
Client Sample ID: **SB-30-35**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
n-Propylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Bromobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3,5-Trimethylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
2-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
4-Chlorotoluene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
tert-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,3-Trichloropropane	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,4-Trichlorobenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
sec-Butylbenzene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
4-Isopropyltoluene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,3-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,4-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
n-Butylbenzene	ND	0.0339		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2-Dibromo-3-chloropropane	ND	0.678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,4-Trimethylbenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Hexachlorobutadiene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Naphthalene	ND	0.0678		mg/Kg-dry	1	5/3/2018 5:19:46 AM
1,2,3-Trichlorobenzene	ND	0.0271		mg/Kg-dry	1	5/3/2018 5:19:46 AM
Surr: Dibromofluoromethane	95.0	56.5 - 129		%Rec	1	5/3/2018 5:19:46 AM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	5/3/2018 5:19:46 AM
Surr: 1-Bromo-4-fluorobenzene	95.8	43.2 - 143		%Rec	1	5/3/2018 5:19:46 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: R43138		Analyst: EAS
Percent Moisture	14.4	0.500		wt%	1	4/27/2018 9:29:37 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804398-019
Matrix: Soil
Client Sample ID: **SB-30-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloromethane	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Vinyl chloride	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromomethane	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Trichlorofluoromethane (CFC-11)	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloroethane	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloroethene	ND	UJ	0.0263	Q-	mg/Kg-dry	1	5/3/2018 5:50:13 AM
Methylene chloride	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
trans-1,2-Dichloroethene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Methyl tert-butyl ether (MTBE)	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloroethane	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
2,2-Dichloropropane	ND		0.131		mg/Kg-dry	1	5/3/2018 5:50:13 AM
cis-1,2-Dichloroethene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chloroform	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,1-Trichloroethane (TCA)	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1-Dichloropropene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Carbon tetrachloride	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichloroethane (EDC)	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Benzene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Trichloroethene (TCE)	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichloropropane	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromodichloromethane	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Dibromomethane	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
cis-1,3-Dichloropropene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Toluene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
trans-1,3-Dichloropropylene	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,2-Trichloroethane	ND		0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3-Dichloropropane	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Tetrachloroethene (PCE)	0.0665		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Dibromochloromethane	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dibromoethane (EDB)	ND		0.00656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Chlorobenzene	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,1,1,2-Tetrachloroethane	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Ethylbenzene	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
m,p-Xylene	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
o-Xylene	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Styrene	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Isopropylbenzene	ND		0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromoform	ND		0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM

JC 6/5/18

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 11:50:00 AM
Project: MVSC
Lab ID: 1804398-019
Matrix: Soil
Client Sample ID: **SB-30-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
n-Propylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Bromobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3,5-Trimethylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
2-Chlorotoluene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
4-Chlorotoluene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
tert-Butylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,3-Trichloropropane	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,4-Trichlorobenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
sec-Butylbenzene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
4-Isopropyltoluene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,3-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,4-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
n-Butylbenzene	ND	0.0328		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2-Dibromo-3-chloropropane	ND	0.656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,4-Trimethylbenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Hexachlorobutadiene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Naphthalene	ND	0.0656		mg/Kg-dry	1	5/3/2018 5:50:13 AM
1,2,3-Trichlorobenzene	ND	0.0263		mg/Kg-dry	1	5/3/2018 5:50:13 AM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	5/3/2018 5:50:13 AM
Surr: Toluene-d8	99.3	64.5 - 151		%Rec	1	5/3/2018 5:50:13 AM
Surr: 1-Bromo-4-fluorobenzene	94.2	43.2 - 143		%Rec	1	5/3/2018 5:50:13 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: R43138		Analyst: EAS
Percent Moisture	18.0	0.500		wt%	1	4/27/2018 9:29:37 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:05:00 PM
Project: MVSC
Lab ID: 1804398-021
Matrix: Soil
Client Sample ID: **SB-13b-36**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloromethane	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Vinyl chloride	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromomethane	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Trichlorofluoromethane (CFC-11)	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloroethane	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloroethene	ND	UJ	0.0247	Q-	mg/Kg-dry	1	5/3/2018 6:20:34 AM
Methylene chloride	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
trans-1,2-Dichloroethene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Methyl tert-butyl ether (MTBE)	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloroethane	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
2,2-Dichloropropane	ND		0.124		mg/Kg-dry	1	5/3/2018 6:20:34 AM
cis-1,2-Dichloroethene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chloroform	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,1-Trichloroethane (TCA)	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1-Dichloropropene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Carbon tetrachloride	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichloroethane (EDC)	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Benzene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Trichloroethene (TCE)	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichloropropane	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromodichloromethane	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Dibromomethane	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
cis-1,3-Dichloropropene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Toluene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
trans-1,3-Dichloropropylene	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,2-Trichloroethane	ND		0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3-Dichloropropane	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Tetrachloroethene (PCE)	0.0829		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Dibromochloromethane	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dibromoethane (EDB)	ND		0.00619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Chlorobenzene	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,1,1,2-Tetrachloroethane	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Ethylbenzene	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
m,p-Xylene	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
o-Xylene	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Styrene	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Isopropylbenzene	ND		0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromoform	ND		0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:05:00 PM
Project: MVSC
Lab ID: 1804398-021
Matrix: Soil
Client Sample ID: **SB-13b-36**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
n-Propylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Bromobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3,5-Trimethylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
2-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
4-Chlorotoluene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
tert-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,3-Trichloropropane	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,4-Trichlorobenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
sec-Butylbenzene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
4-Isopropyltoluene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,3-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,4-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
n-Butylbenzene	ND	0.0309		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2-Dibromo-3-chloropropane	ND	0.619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,4-Trimethylbenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Hexachlorobutadiene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Naphthalene	ND	0.0619		mg/Kg-dry	1	5/3/2018 6:20:34 AM
1,2,3-Trichlorobenzene	ND	0.0247		mg/Kg-dry	1	5/3/2018 6:20:34 AM
Surr: Dibromofluoromethane	94.4	56.5 - 129		%Rec	1	5/3/2018 6:20:34 AM
Surr: Toluene-d8	99.4	64.5 - 151		%Rec	1	5/3/2018 6:20:34 AM
Surr: 1-Bromo-4-fluorobenzene	91.5	43.2 - 143		%Rec	1	5/3/2018 6:20:34 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: R43138		Analyst: EAS
Percent Moisture	9.17	0.500		wt%	1	4/27/2018 9:29:37 AM

JC 6/5/18

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804398-022
Matrix: Soil
Client Sample ID: **SB-13b-40**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 20566 Analyst: MW

Analyses	Result		RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloromethane	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Vinyl chloride	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromomethane	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Trichlorofluoromethane (CFC-11)	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloroethane	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloroethene	ND	UJ	0.0188	Q-	mg/Kg-dry	1	5/3/2018 6:51:01 AM
Methylene chloride	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
trans-1,2-Dichloroethene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Methyl tert-butyl ether (MTBE)	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloroethane	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
2,2-Dichloropropane	ND		0.0940		mg/Kg-dry	1	5/3/2018 6:51:01 AM
cis-1,2-Dichloroethene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chloroform	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,1-Trichloroethane (TCA)	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1-Dichloropropene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Carbon tetrachloride	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichloroethane (EDC)	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Benzene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Trichloroethene (TCE)	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichloropropane	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromodichloromethane	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Dibromomethane	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
cis-1,3-Dichloropropene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Toluene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
trans-1,3-Dichloropropylene	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,2-Trichloroethane	ND		0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3-Dichloropropane	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Tetrachloroethene (PCE)	0.128		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Dibromochloromethane	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dibromoethane (EDB)	ND		0.00470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Chlorobenzene	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,1,1,2-Tetrachloroethane	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Ethylbenzene	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
m,p-Xylene	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
o-Xylene	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Styrene	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Isopropylbenzene	ND		0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromoform	ND		0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM

Analytical Report

Work Order: **1804398**
Date Reported: **5/11/2018**

Client: PES Environmental, Inc.
Collection Date: 4/25/2018 2:20:00 PM
Project: MVSC
Lab ID: 1804398-022
Matrix: Soil
Client Sample ID: **SB-13b-40**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 20566		Analyst: MW
1,1,2,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
n-Propylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Bromobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3,5-Trimethylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
2-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
4-Chlorotoluene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
tert-Butylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,3-Trichloropropane	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,4-Trichlorobenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
sec-Butylbenzene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
4-Isopropyltoluene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,3-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,4-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
n-Butylbenzene	ND	0.0235		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2-Dibromo-3-chloropropane	ND	0.470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,4-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Hexachlorobutadiene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Naphthalene	ND	0.0470		mg/Kg-dry	1	5/3/2018 6:51:01 AM
1,2,3-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	5/3/2018 6:51:01 AM
Surr: Dibromofluoromethane	92.8	56.5 - 129		%Rec	1	5/3/2018 6:51:01 AM
Surr: Toluene-d8	96.2	64.5 - 151		%Rec	1	5/3/2018 6:51:01 AM
Surr: 1-Bromo-4-fluorobenzene	95.6	43.2 - 143		%Rec	1	5/3/2018 6:51:01 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: R43138		Analyst: EAS
Percent Moisture	6.93	0.500		wt%	1	4/27/2018 9:29:37 AM

JC 6/5/18

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LABORATORY REPORT

December 6, 2017

Karsten Springstead
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: MVSC / 1358.001.01.007

Dear Karsten:

Enclosed are the results of the sample submitted to our laboratory on November 20, 2017. For your reference, this analysis has been assigned our service request number P1705855.

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 12:27 pm, 12/06/17

Kate Kaneko
Project Manager

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Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1705855

CASE NARRATIVE

The sample was received intact under chain of custody on November 20, 2017 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1177034
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1705855

Date Received: 11/20/2017
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-1117	P1705855-001	Air	11/16/2017	11:00	SC00270	-0.74	3.75	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: P1703855

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, INC. 1115 4th AVE STE 1350 SEATTLE WA 98161

Project Name: MUSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

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		Comments e.g. Actual Preservative or specific instructions
SYS-1117	1	11-16-17	1100	SC00270		29	4	6L	X		

Report Tier Levels - please select

Tier I - Results (Default in not specified) X
Tier II (Results + QC Summaries ____
Tier III (Results + QC & Calibration Summaries) ____
Tier IV (Date 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:	Time:	Received by: (Signature)	Date:	Time:
	11-16-17	1130			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				11-20	0930

Cooler / Blank Temperature ____°C

5 of 16

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1705855

Project: MVSC / 1358.001.01.007

Sample(s) received on: 11/20/17 Date opened: 11/20/17 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)? Box sealing. 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
P1705855-001.01	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: **SYS-1117** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1705855-001

Test Code: EPA TO-15 Date Collected: 11/16/17
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/20/17
Analyst: Simon Cao Date Analyzed: 11/29/17
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00270

Initial Pressure (psig): -0.74 Final Pressure (psig): 3.75

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.66	ND	0.38	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.6**	0.66	**0.94**	0.13	
74-87-3	Chloromethane	**1.2**	0.66	**0.57**	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.66	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.66	ND	0.30	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.66	ND	0.25	
64-17-5	Ethanol	**6.8**	6.6	**3.6**	3.5	
75-05-8	Acetonitrile	ND	0.66	ND	0.39	
107-02-8	Acrolein	ND	2.6	ND	1.2	
67-64-1	Acetone	**6.8**	6.6	**2.9**	2.8	
75-69-4	Trichlorofluoromethane (CFC 11)	**3.7**	0.66	**0.66**	0.12	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.6	ND	2.7	
107-13-1	Acrylonitrile	ND	0.66	ND	0.30	
75-35-4	1,1-Dichloroethene	ND	0.66	ND	0.17	
75-09-2	Methylene Chloride	ND	0.66	ND	0.19	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.66	ND	0.21	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.66	ND	0.086	
75-15-0	Carbon Disulfide	ND	6.6	ND	2.1	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.66	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.66	ND	0.18	
108-05-4	Vinyl Acetate	ND	6.6	ND	1.9	
78-93-3	2-Butanone (MEK)	ND	6.6	ND	2.2	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-1117** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1705855-001

Test Code: EPA TO-15 Date Collected: 11/16/17
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/20/17
Analyst: Simon Cao Date Analyzed: 11/29/17
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00270

Initial Pressure (psig): -0.74 Final Pressure (psig): 3.75

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.66	ND	0.17	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.37	
110-54-3	n-Hexane	ND	0.66	ND	0.19	
67-66-3	Chloroform	**4.4**	0.66	**0.89**	0.14	
109-99-9	Tetrahydrofuran (THF)	**1.9**	0.66	**0.66**	0.22	
107-06-2	1,2-Dichloroethane	ND	0.66	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.66	ND	0.12	
71-43-2	Benzene	ND	0.66	ND	0.21	
56-23-5	Carbon Tetrachloride	ND	0.66	ND	0.10	
110-82-7	Cyclohexane	ND	1.3	ND	0.38	
78-87-5	1,2-Dichloropropane	ND	0.66	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.66	ND	0.099	
79-01-6	Trichloroethene	ND	0.66	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.32	
142-82-5	n-Heptane	ND	0.66	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.66	ND	0.12	
108-88-3	Toluene	**2.2**	0.66	**0.59**	0.18	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	
124-48-1	Dibromochloromethane	ND	0.66	ND	0.078	
106-93-4	1,2-Dibromoethane	ND	0.66	ND	0.086	
123-86-4	n-Butyl Acetate	ND	0.66	ND	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: **SYS-1117** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1705855-001

Test Code: EPA TO-15 Date Collected: 11/16/17
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/20/17
Analyst: Simon Cao Date Analyzed: 11/29/17
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00270

Initial Pressure (psig): -0.74 Final Pressure (psig): 3.75

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.66	ND	0.14	
127-18-4	Tetrachloroethene	**230**	6.6	**34**	0.97	**D**
108-90-7	Chlorobenzene	ND	0.66	ND	0.14	
100-41-4	Ethylbenzene	**1.1**	0.66	**0.25**	0.15	
179601-23-1	m,p-Xylenes	**4.1**	1.3	**0.95**	0.30	
75-25-2	Bromoform	ND	0.66	ND	0.064	
100-42-5	Styrene	ND	0.66	ND	0.16	
95-47-6	o-Xylene	**1.2**	0.66	**0.29**	0.15	
111-84-2	n-Nonane	ND	0.66	ND	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	ND	0.096	
98-82-8	Cumene	ND	0.66	ND	0.13	
80-56-8	alpha-Pinene	ND	0.66	ND	0.12	
103-65-1	n-Propylbenzene	ND	0.66	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.66	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	**0.95**	0.66	**0.19**	0.13	
100-44-7	Benzyl Chloride	ND	1.3	ND	0.26	
541-73-1	1,3-Dichlorobenzene	ND	0.66	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.66	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.66	ND	0.11	
5989-27-5	d-Limonene	ND	0.66	ND	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.66	ND	0.068	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.089	
91-20-3	Naphthalene	ND	0.66	ND	0.13	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.062	

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** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17
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
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1705855

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17

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
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1705855

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17

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
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	1.0	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1705855

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 11/16/17
Analyst: Simon Cao Date(s) Received: 11/20/17
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 11/29/17
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	P171129-MB	**110**	**98**	**90**	70-130	
Lab Control Sample	P171129-LCS	**101**	**96**	**102**	70-130	
Duplicate Lab Control Sample	P171129-DLCS	**101**	**95**	**100**	70-130	
SYS-1117	P1705855-001	**113**	**94**	**94**	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: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17
Sample Type: 6.0 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
115-07-1	Propene	210	182	183	**87**	**87**	54-133	0	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	182	184	**85**	**86**	64-115	1	25	
74-87-3	Chloromethane	210	188	194	**90**	**92**	47-140	2	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	172	170	**82**	**81**	60-112	1	25	
75-01-4	Vinyl Chloride	211	193	192	**91**	**91**	63-127	0	25	
106-99-0	1,3-Butadiene	210	228	232	**109**	**110**	57-149	0.9	25	
74-83-9	Bromomethane	210	173	178	**82**	**85**	63-132	4	25	
75-00-3	Chloroethane	210	188	191	**90**	**91**	68-129	1	25	
64-17-5	Ethanol	1,040	1080	1090	**104**	**105**	62-131	1	25	
75-05-8	Acetonitrile	210	192	194	**91**	**92**	56-136	1	25	
107-02-8	Acrolein	209	206	206	**99**	**99**	60-132	0	25	
67-64-1	Acetone	1,050	968	968	**92**	**92**	63-124	0	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	189	188	**91**	**90**	65-113	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	453	456	**107**	**108**	62-135	0.9	25	
107-13-1	Acrylonitrile	212	209	209	**99**	**99**	68-138	0	25	
75-35-4	1,1-Dichloroethene	213	200	199	**94**	**93**	72-118	1	25	
75-09-2	Methylene Chloride	213	189	187	**89**	**88**	67-116	1	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	235	235	**111**	**111**	61-143	0	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	189	189	**88**	**88**	68-113	0	25	
75-15-0	Carbon Disulfide	214	192	190	**90**	**89**	68-120	1	25	
156-60-5	trans-1,2-Dichloroethene	214	233	234	**109**	**109**	71-125	0	25	
75-34-3	1,1-Dichloroethane	212	199	198	**94**	**93**	68-118	1	25	
1634-04-4	Methyl tert-Butyl Ether	213	236	234	**111**	**110**	60-123	0.9	25	
108-05-4	Vinyl Acetate	1,060	986	984	**93**	**93**	73-135	0	25	
78-93-3	2-Butanone (MEK)	212	201	200	**95**	**94**	70-129	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	212	208	208	**98**	**98**	69-121	0	25	
141-78-6	Ethyl Acetate	426	432	431	**101**	**101**	66-140	0	25	
110-54-3	n-Hexane	213	210	210	**99**	**99**	61-124	0	25	
67-66-3	Chloroform	212	190	187	**90**	**88**	69-113	2	25	
109-99-9	Tetrahydrofuran (THF)	212	207	203	**98**	**96**	66-121	2	25	
107-06-2	1,2-Dichloroethane	212	194	192	**92**	**91**	62-120	1	25	
71-55-6	1,1,1-Trichloroethane	212	202	201	**95**	**95**	65-116	0	25	
71-43-2	Benzene	213	167	166	**78**	**78**	66-111	0	25	
56-23-5	Carbon Tetrachloride	214	209	207	**98**	**97**	64-122	1	25	
110-82-7	Cyclohexane	425	409	404	**96**	**95**	69-115	1	25	
78-87-5	1,2-Dichloropropane	212	204	202	**96**	**95**	69-121	1	25	
75-27-4	Bromodichloromethane	214	220	218	**103**	**102**	69-123	1	25	
79-01-6	Trichloroethene	212	201	198	**95**	**93**	69-112	2	25	
123-91-1	1,4-Dioxane	213	210	206	**99**	**97**	74-123	2	25	
80-62-6	Methyl Methacrylate	424	401	396	**95**	**93**	75-125	2	25	
142-82-5	n-Heptane	213	205	205	**96**	**96**	68-118	0	25	
10061-01-5	cis-1,3-Dichloropropene	208	237	234	**114**	**113**	74-129	0.9	25	
108-10-1	4-Methyl-2-pentanone	213	232	232	**109**	**109**	66-138	0	25	
10061-02-6	trans-1,3-Dichloropropene	213	219	219	**103**	**103**	75-130	0	25	
79-00-5	1,1,2-Trichloroethane	212	208	206	**98**	**97**	73-117	1	25	
108-88-3	Toluene	211	178	175	**84**	**83**	66-114	1	25	
591-78-6	2-Hexanone	211	225	225	**107**	**107**	58-146	0	25	
124-48-1	Dibromochloromethane	212	217	213	**102**	**100**	67-130	2	25	
106-93-4	1,2-Dibromoethane	211	205	201	**97**	**95**	70-127	2	25	
123-86-4	n-Butyl Acetate	215	236	235	**110**	**109**	62-140	0.9	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1705855
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P171129-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: 11/29/17
Sample Type: 6.0 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
111-65-9	n-Octane	212	205	202	**97**	**95**	65-121	2	25	
127-18-4	Tetrachloroethene	212	192	189	**91**	**89**	62-119	2	25	
108-90-7	Chlorobenzene	212	178	176	**84**	**83**	66-115	1	25	
100-41-4	Ethylbenzene	212	192	190	**91**	**90**	69-117	1	25	
179601-23-1	m,p-Xylenes	424	400	393	**94**	**93**	67-117	1	25	
75-25-2	Bromoform	212	199	195	**94**	**92**	67-135	2	25	
100-42-5	Styrene	211	207	204	**98**	**97**	70-128	1	25	
95-47-6	o-Xylene	211	197	193	**93**	**91**	67-118	2	25	
111-84-2	n-Nonane	212	211	209	**100**	**99**	61-127	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	201	197	**95**	**93**	70-125	2	25	
98-82-8	Cumene	212	190	187	**90**	**88**	68-116	2	25	
80-56-8	alpha-Pinene	213	206	204	**97**	**96**	69-122	1	25	
103-65-1	n-Propylbenzene	214	203	199	**95**	**93**	70-118	2	25	
622-96-8	4-Ethyltoluene	211	204	201	**97**	**95**	69-124	2	25	
108-67-8	1,3,5-Trimethylbenzene	212	196	193	**92**	**91**	65-117	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	216	212	**102**	**100**	67-124	2	25	
100-44-7	Benzyl Chloride	212	230	228	**108**	**108**	75-142	0	25	
541-73-1	1,3-Dichlorobenzene	212	207	202	**98**	**95**	70-124	3	25	
106-46-7	1,4-Dichlorobenzene	214	205	201	**96**	**94**	63-124	2	25	
95-50-1	1,2-Dichlorobenzene	214	207	202	**97**	**94**	66-125	3	25	
5989-27-5	d-Limonene	213	223	220	**105**	**103**	64-135	2	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	196	193	**93**	**92**	73-136	1	25	
120-82-1	1,2,4-Trichlorobenzene	218	209	206	**96**	**94**	70-141	2	25	
91-20-3	Naphthalene	209	202	200	**97**	**96**	71-146	1	25	
87-68-3	Hexachlorobutadiene	212	194	190	**92**	**90**	63-126	2	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.

MEMORANDUM

TO: Project File **DATE:** December 12, 2017

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center and Harris Family properties- Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: November 16, 2017 SVE Stack Air Sample

LAB: ALS Environmental Service Request No. P1705855

One SVE system stack discharge air sample was collected as part of SVE system O&M at the Manhattan Village Shopping Center and Harris Family properties in Normandy Park, Washington, on November 16, 2017. The air sample was analyzed for VOCs by USEPA Method TO-15. Laboratory analytical services were provided by ALS Environmental (ALS) of Simi Valley, California. Analytical data are reported under ALS project number P1705855.

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

DATA QUALIFICATIONS

Guidelines established by USEPA for review of analytical data were used to validate the data. The comments presented in this memorandum refer to the laboratory's performance in meeting the quality control criteria outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2017).

DATA VALIDATION

Completeness

All samples were collected and analyzed as requested. No concerns, issues, or anomalies are identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa canister (6 Liter) for the air sample. The sample was shipped by courier and received in good condition by the laboratory. Summa canisters do not require preservation or cooling. The sample was collected, handled, and delivered in an appropriate manner. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed thirteen days after sample collection. This is within the 30-day recommended holding time limit for air samples collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

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

Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The method blank results did not report any compounds at concentrations at or above the MRLs.

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 replicate was not performed. Refer to laboratory control sample results for precision data.

Surrogate Recoveries

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

Laboratory Control Samples

A laboratory control sample and laboratory control sample duplicate (LCS/LCSD) were analyzed for VOCs by TO-15. The LCS/LCSD spike % Rs and relative percent differences (RPDs) for all control compounds met laboratory acceptance 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 were 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 SYS-1117 was diluted for one analyte (tetrachloroethene) due to an elevated concentration. 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: MVSC
Work Order Number: 1711285

November 27, 2017

Attention Matt Dahl:

Fremont Analytical, Inc. received 2 sample(s) on 11/16/2017 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: *11/27/2017*

CLIENT: PES Environmental, Inc.
Project: MVSC
Work Order: 1711285

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1711285-001	W-COND-111617	11/16/2017 12:15 PM	11/16/2017 1:36 PM
1711285-002	W-DRUM-111617	11/16/2017 12:00 PM	11/16/2017 1:36 PM

Case Narrative

WO#: **1711285**
Date: **11/27/2017**

CLIENT: PES Environmental, Inc.
Project: MVSC

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: 11/16/2017 12:15:00 PM
Project: MVSC
Lab ID: 1711285-001
Matrix: Wastewater
Client Sample ID: **W-COND-111617**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 18955 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Chloromethane	ND	2.00		µg/L	1	11/21/2017 3:13:43 AM
Vinyl chloride	ND	0.200		µg/L	1	11/21/2017 3:13:43 AM
Bromomethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Chloroethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Methylene chloride	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	11/21/2017 3:13:43 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Chloroform	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Carbon tetrachloride	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Benzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	11/21/2017 3:13:43 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Bromodichloromethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Dibromomethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Toluene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Dibromochloromethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	11/21/2017 3:13:43 AM
Chlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Ethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
m,p-Xylene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
o-Xylene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Styrene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Isopropylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Bromoform	ND	2.00		µg/L	1	11/21/2017 3:13:43 AM

Analytical Report

Work Order: **1711285**
Date Reported: **11/27/2017**

Client: PES Environmental, Inc.
Collection Date: 11/16/2017 12:15:00 PM
Project: MVSC
Lab ID: 1711285-001
Matrix: Wastewater
Client Sample ID: **W-COND-111617**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 18955 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
n-Propylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Bromobenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
2-Chlorotoluene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
4-Chlorotoluene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
tert-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	11/21/2017 3:13:43 AM
sec-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
n-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	11/21/2017 3:13:43 AM
Naphthalene	ND	1.00		µg/L	1	11/21/2017 3:13:43 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	11/21/2017 3:13:43 AM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	11/21/2017 3:13:43 AM
Surr: Toluene-d8	95.6	40.1 - 139		%Rec	1	11/21/2017 3:13:43 AM
Surr: 1-Bromo-4-fluorobenzene	92.3	64.2 - 128		%Rec	1	11/21/2017 3:13:43 AM

Client: PES Environmental, Inc.
Collection Date: 11/16/2017 12:00:00 PM
Project: MVSC
Lab ID: 1711285-002
Matrix: Wastewater
Client Sample ID: **W-DRUM-111617**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 18955 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Chloromethane	ND	2.00		µg/L	1	11/21/2017 3:44:15 AM
Vinyl chloride	ND	0.200		µg/L	1	11/21/2017 3:44:15 AM
Bromomethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Chloroethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Methylene chloride	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	11/21/2017 3:44:15 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Chloroform	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Carbon tetrachloride	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Benzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	11/21/2017 3:44:15 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Bromodichloromethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Dibromomethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Toluene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Dibromochloromethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	11/21/2017 3:44:15 AM
Chlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Ethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
m,p-Xylene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
o-Xylene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Styrene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Isopropylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Bromoform	ND	2.00		µg/L	1	11/21/2017 3:44:15 AM

Analytical Report

Work Order: **1711285**
Date Reported: **11/27/2017**

Client: PES Environmental, Inc.
Collection Date: 11/16/2017 12:00:00 PM
Project: MVSC
Lab ID: 1711285-002
Matrix: Wastewater
Client Sample ID: **W-DRUM-111617**

Volatile Organic Compounds by EPA Method 8260C

Batch ID: 18955 Analyst: MW

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
n-Propylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Bromobenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
2-Chlorotoluene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
4-Chlorotoluene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
tert-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	11/21/2017 3:44:15 AM
sec-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
n-Butylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	11/21/2017 3:44:15 AM
Naphthalene	ND	1.00		µg/L	1	11/21/2017 3:44:15 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	11/21/2017 3:44:15 AM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	11/21/2017 3:44:15 AM
Surr: Toluene-d8	105	40.1 - 139		%Rec	1	11/21/2017 3:44:15 AM
Surr: 1-Bromo-4-fluorobenzene	99.7	64.2 - 128		%Rec	1	11/21/2017 3:44:15 AM

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-18955**	SampType: **MBLK**		Units: **µg/L**	Prep Date: **11/20/2017**		RunNo: **40041**	
Client ID: **MBLKW**	Batch ID: **18955**			Analysis Date: **11/20/2017**		SeqNo: **771314**	

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									
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									

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-18955**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **11/20/2017**	RunNo: **40041**
Client ID: **MBLKW**	Batch ID: **18955**		Analysis Date: **11/20/2017**	SeqNo: **771314**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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									
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	24.8		25.00		99.0	45.4	152				
Surr: Toluene-d8	24.5		25.00		98.0	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.3		25.00		93.0	64.2	128				

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	**MB-18955**	SampType:	**MBLK**	Units:	**µg/L**	Prep Date:	**11/20/2017**	RunNo:	**40041**
Client ID:	**MBLKW**	Batch ID:	**18955**			Analysis Date:	**11/20/2017**	SeqNo:	**771314**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID	**LCS-18955**	SampType:	**LCS**	Units:	**µg/L**	Prep Date:	**11/20/2017**	RunNo:	**40041**
Client ID:	**LCSW**	Batch ID:	**18955**			Analysis Date:	**11/20/2017**	SeqNo:	**771313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	18.4	1.00	20.00	0	92.0	18.7	171				
Chloromethane	18.6	2.00	20.00	0	93.0	38.5	171				
Vinyl chloride	18.9	0.200	20.00	0	94.5	48	145				
Bromomethane	21.4	1.00	20.00	0	107	32.5	184				
Trichlorofluoromethane (CFC-11)	19.9	1.00	20.00	0	99.3	43.5	149				
Chloroethane	19.3	1.00	20.00	0	96.6	43.8	168				
1,1-Dichloroethene	20.0	1.00	20.00	0	100	57.5	150				
Methylene chloride	20.0	1.00	20.00	0	99.8	67.1	131				
trans-1,2-Dichloroethene	19.6	1.00	20.00	0	98.0	71.7	129				
Methyl tert-butyl ether (MTBE)	20.3	1.00	20.00	0	102	58	138				
1,1-Dichloroethane	19.7	1.00	20.00	0	98.4	67.9	134				
2,2-Dichloropropane	19.7	2.00	20.00	0	98.7	26.5	185				
cis-1,2-Dichloroethene	19.9	1.00	20.00	0	99.4	70.2	139				
Chloroform	19.9	1.00	20.00	0	99.5	66.3	131				
1,1,1-Trichloroethane (TCA)	18.8	1.00	20.00	0	94.2	71	131				
1,1-Dichloropropene	19.6	1.00	20.00	0	98.2	69.9	124				
Carbon tetrachloride	18.0	1.00	20.00	0	90.0	66.2	134				
1,2-Dichloroethane (EDC)	20.0	1.00	20.00	0	99.9	67	126				
Benzene	20.2	1.00	20.00	0	101	69.3	132				
Trichloroethene (TCE)	20.2	0.500	20.00	0	101	65.2	136				
1,2-Dichloropropane	19.9	1.00	20.00	0	99.7	70.5	130				
Bromodichloromethane	20.1	1.00	20.00	0	101	67.2	137				
Dibromomethane	20.4	1.00	20.00	0	102	69.3	143				
cis-1,3-Dichloropropene	18.6	1.00	20.00	0	93.2	62.6	137				
Toluene	20.4	1.00	20.00	0	102	61.3	145				

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-18955** SampType: **LCS** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **LCSW** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	19.0	1.00	20.00	0	95.1	56.5	163				
1,1,2-Trichloroethane	21.1	1.00	20.00	0	106	71.7	131				
1,3-Dichloropropane	20.9	1.00	20.00	0	104	73.5	127				
Tetrachloroethene (PCE)	20.0	1.00	20.00	0	100	47.5	147				
Dibromochloromethane	19.6	1.00	20.00	0	97.9	67.2	134				
1,2-Dibromoethane (EDB)	20.5	0.250	20.00	0	102	73.6	125				
Chlorobenzene	20.2	1.00	20.00	0	101	73.9	126				
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	101	76.8	124				
Ethylbenzene	21.3	1.00	20.00	0	106	72	130				
m,p-Xylene	42.1	1.00	40.00	0	105	70.3	134				
o-Xylene	20.3	1.00	20.00	0	101	72.1	131				
Styrene	20.4	1.00	20.00	0	102	64.3	140				
Isopropylbenzene	22.1	1.00	20.00	0	110	73.9	128				
Bromoform	19.5	2.00	20.00	0	97.6	55.3	141				
1,1,2,2-Tetrachloroethane	21.0	1.00	20.00	0	105	62.9	132				
n-Propylbenzene	20.6	1.00	20.00	0	103	74.5	127				
Bromobenzene	20.1	1.00	20.00	0	100	71	131				
1,3,5-Trimethylbenzene	21.2	1.00	20.00	0	106	73.1	128				
2-Chlorotoluene	20.3	1.00	20.00	0	101	70.8	130				
4-Chlorotoluene	20.5	1.00	20.00	0	102	70.1	131				
tert-Butylbenzene	20.3	1.00	20.00	0	101	68.2	131				
1,2,3-Trichloropropane	20.2	1.00	20.00	0	101	67.7	131				
1,2,4-Trichlorobenzene	18.9	2.00	20.00	0	94.3	41	139				
sec-Butylbenzene	20.1	1.00	20.00	0	100	72	129				
4-Isopropyltoluene	20.9	1.00	20.00	0	105	69.2	130				
1,3-Dichlorobenzene	20.5	1.00	20.00	0	102	80.4	124				
1,4-Dichlorobenzene	20.4	1.00	20.00	0	102	66.8	119				
n-Butylbenzene	20.4	1.00	20.00	0	102	73.8	127				
1,2-Dichlorobenzene	20.8	1.00	20.00	0	104	69.7	119				
1,2-Dibromo-3-chloropropane	20.6	1.00	20.00	0	103	63.1	136				
1,2,4-Trimethylbenzene	21.3	1.00	20.00	0	107	73.4	127				

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-18955** SampType: **LCS** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **LCSW** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771313**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	20.3	4.00	20.00	0	101	58.6	138				
Naphthalene	19.9	1.00	20.00	0	99.6	41.8	165				
1,2,3-Trichlorobenzene	19.1	4.00	20.00	0	95.7	48.7	156				
Surr: Dibromofluoromethane	26.0		25.00		104	45.4	152				
Surr: Toluene-d8	25.6		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		107	64.2	128				

Sample ID **1711284-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771299**

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	
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: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771299**

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: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771299**

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	24.9		25.00		99.6	45.4	152		0		
Surr: Toluene-d8	24.2		25.00		96.9	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.6		25.00		90.2	64.2	128		0		

Sample ID **1711284-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771295**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	19.0	1.00	20.00	0	95.2	33.3	122				
Chloromethane	19.4	2.00	20.00	0	97.1	39.7	143				
Vinyl chloride	20.2	0.200	20.00	0	101	41	165				
Bromomethane	33.1	1.00	20.00	0	166	31.5	135				S
Trichlorofluoromethane (CFC-11)	23.1	1.00	20.00	0	116	54.7	138				
Chloroethane	21.4	1.00	20.00	0	107	49.9	143				
1,1-Dichloroethene	21.7	1.00	20.00	0	109	51.6	164				
Methylene chloride	19.9	1.00	20.00	0	99.7	61.6	135				
trans-1,2-Dichloroethene	20.8	1.00	20.00	0	104	63.5	138				
Methyl tert-butyl ether (MTBE)	18.9	1.00	20.00	0	94.4	60.9	132				
1,1-Dichloroethane	20.2	1.00	20.00	0	101	55.7	151				
2,2-Dichloropropane	20.2	2.00	20.00	0	101	37.7	150				
cis-1,2-Dichloroethene	20.1	1.00	20.00	0	101	60	154				

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771295**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	20.4	1.00	20.00	0	102	48.1	140				
1,1,1-Trichloroethane (TCA)	20.8	1.00	20.00	0	104	64.2	146				
1,1-Dichloropropene	21.7	1.00	20.00	0	108	73.8	136				
Carbon tetrachloride	21.6	1.00	20.00	0	108	62.7	146				
1,2-Dichloroethane (EDC)	19.9	1.00	20.00	0	99.7	63.4	137				
Benzene	22.1	1.00	20.00	1.908	101	65.4	138				
Trichloroethene (TCE)	20.0	0.500	20.00	0	99.9	60.4	134				
1,2-Dichloropropane	19.7	1.00	20.00	0	98.7	62.6	138				
Bromodichloromethane	20.2	1.00	20.00	0	101	59.4	139				
Dibromomethane	19.8	1.00	20.00	0	99.0	58.7	148				
cis-1,3-Dichloropropene	18.2	1.00	20.00	0	91.0	63.8	132				
Toluene	28.9	1.00	20.00	8.148	104	52	147				
trans-1,3-Dichloropropylene	17.6	1.00	20.00	0	88.2	57.7	125				
1,1,2-Trichloroethane	20.4	1.00	20.00	0	102	57.5	153				
1,3-Dichloropropane	20.1	1.00	20.00	0	101	54.1	157				
Tetrachloroethene (PCE)	21.8	1.00	20.00	0	109	50.3	133				
Dibromochloromethane	19.2	1.00	20.00	0	95.8	61.6	139				
1,2-Dibromoethane (EDB)	19.4	0.250	20.00	0	97.2	63.2	134				
Chlorobenzene	20.3	1.00	20.00	0	101	65.8	134				
1,1,1,2-Tetrachloroethane	20.1	1.00	20.00	0	100	65.4	135				
Ethylbenzene	22.5	1.00	20.00	0	112	64.5	136				
m,p-Xylene	64.3	1.00	40.00	22.56	104	63.3	135				
o-Xylene	46.0	1.00	20.00	26.23	99.1	64.8	150				
Styrene	21.1	1.00	20.00	0	106	52.9	163				
Isopropylbenzene	23.6	1.00	20.00	0	118	56	147				
Bromoform	18.9	2.00	20.00	0	94.4	57.7	139				
1,1,2,2-Tetrachloroethane	21.8	1.00	20.00	0	109	59.8	146				
n-Propylbenzene	22.6	1.00	20.00	0	113	57.6	142				
Bromobenzene	20.3	1.00	20.00	0	101	69.3	157				
1,3,5-Trimethylbenzene	41.9	1.00	20.00	27.33	72.7	59.9	136				
2-Chlorotoluene	23.9	1.00	20.00	0	119	61.7	134				

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771295**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	23.5	1.00	20.00	0	117	58.4	134				
tert-Butylbenzene	22.9	1.00	20.00	0	115	66.8	141				
1,2,3-Trichloropropane	18.8	1.00	20.00	0	94.1	62.4	129				
1,2,4-Trichlorobenzene	24.2	2.00	20.00	0	121	50.9	133				
sec-Butylbenzene	23.3	1.00	20.00	0	117	56	146				
4-Isopropyltoluene	24.2	1.00	20.00	0	121	56.4	136				
1,3-Dichlorobenzene	20.3	1.00	20.00	0	102	58.2	128				
1,4-Dichlorobenzene	20.3	1.00	20.00	0	101	60.1	123				
n-Butylbenzene	26.7	1.00	20.00	0	134	54.6	135				
1,2-Dichlorobenzene	20.6	1.00	20.00	0	103	65.4	133				
1,2-Dibromo-3-chloropropane	21.0	1.00	20.00	0	105	51.8	142				
1,2,4-Trimethylbenzene	26.3	1.00	20.00	3.666	113	63.7	132				
Hexachloro-1,3-butadiene	23.1	4.00	20.00	0	115	58.1	130				
Naphthalene	38.6	1.00	20.00	16.83	109	50.7	154				
1,2,3-Trichlorobenzene	25.8	4.00	20.00	0	129	57	131				
Surr: Dibromofluoromethane	26.2		25.00		105	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	27.0		25.00		108	64.2	128				

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

Sample ID **1711284-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771296**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	20.4	1.00	20.00	0	102	33.3	122	19.05	7.04	30	
Chloromethane	20.6	2.00	20.00	0	103	39.7	143	19.43	5.88	30	
Vinyl chloride	22.0	0.200	20.00	0	110	41	165	20.20	8.46	30	
Bromomethane	21.5	1.00	20.00	0	108	31.5	135	33.12	42.4	30	R
Trichlorofluoromethane (CFC-11)	24.8	1.00	20.00	0	124	54.7	138	23.13	7.12	30	
Chloroethane	22.6	1.00	20.00	0	113	49.9	143	21.37	5.39	30	

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771296**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	23.6	1.00	20.00	0	118	51.6	164	21.73	8.02	30	
Methylene chloride	21.5	1.00	20.00	0	107	61.6	135	19.94	7.52	30	
trans-1,2-Dichloroethene	22.3	1.00	20.00	0	112	63.5	138	20.83	6.87	30	
Methyl tert-butyl ether (MTBE)	21.2	1.00	20.00	0	106	60.9	132	18.87	11.6	30	
1,1-Dichloroethane	21.7	1.00	20.00	0	109	55.7	151	20.17	7.41	30	
2,2-Dichloropropane	22.5	2.00	20.00	0	113	37.7	150	20.16	11.1	30	
cis-1,2-Dichloroethene	21.5	1.00	20.00	0	108	60	154	20.14	6.55	30	
Chloroform	21.7	1.00	20.00	0	108	48.1	140	20.43	5.90	30	
1,1,1-Trichloroethane (TCA)	22.5	1.00	20.00	0	112	64.2	146	20.77	7.83	30	
1,1-Dichloropropene	23.2	1.00	20.00	0	116	73.8	136	21.69	6.81	30	
Carbon tetrachloride	23.2	1.00	20.00	0	116	62.7	146	21.63	7.10	30	
1,2-Dichloroethane (EDC)	21.2	1.00	20.00	0	106	63.4	137	19.94	5.93	30	
Benzene	23.6	1.00	20.00	1.908	108	65.4	138	22.06	6.68	30	
Trichloroethene (TCE)	21.1	0.500	20.00	0	105	60.4	134	19.98	5.23	30	
1,2-Dichloropropane	21.2	1.00	20.00	0	106	62.6	138	19.74	7.05	30	
Bromodichloromethane	21.5	1.00	20.00	0	107	59.4	139	20.19	6.16	30	
Dibromomethane	20.9	1.00	20.00	0	105	58.7	148	19.81	5.51	30	
cis-1,3-Dichloropropene	19.7	1.00	20.00	0	98.7	63.8	132	18.21	8.06	30	
Toluene	30.0	1.00	20.00	8.148	109	52	147	28.93	3.77	30	
trans-1,3-Dichloropropylene	19.4	1.00	20.00	0	97.2	57.7	125	17.65	9.62	30	
1,1,2-Trichloroethane	21.5	1.00	20.00	0	108	57.5	153	20.37	5.52	30	
1,3-Dichloropropane	21.2	1.00	20.00	0	106	54.1	157	20.12	5.40	30	
Tetrachloroethene (PCE)	23.1	1.00	20.00	0	115	50.3	133	21.81	5.66	30	
Dibromochloromethane	20.4	1.00	20.00	0	102	61.6	139	19.17	6.22	30	
1,2-Dibromoethane (EDB)	20.7	0.250	20.00	0	104	63.2	134	19.44	6.36	30	
Chlorobenzene	21.7	1.00	20.00	0	109	65.8	134	20.28	6.93	30	
1,1,1,2-Tetrachloroethane	21.5	1.00	20.00	0	108	65.4	135	20.06	7.04	30	
Ethylbenzene	24.1	1.00	20.00	0	121	64.5	136	22.49	6.98	30	
m,p-Xylene	67.4	1.00	40.00	22.56	112	63.3	135	64.34	4.65	30	
o-Xylene	48.1	1.00	20.00	26.23	109	64.8	150	46.04	4.39	30	
Styrene	22.7	1.00	20.00	0	114	52.9	163	21.11	7.38	30	

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711284-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/20/2017** SeqNo: **771296**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Isopropylbenzene	25.4	1.00	20.00	0	127	56	147	23.55	7.43	30	
Bromoform	20.4	2.00	20.00	0	102	57.7	139	18.87	7.59	30	
1,1,2,2-Tetrachloroethane	23.6	1.00	20.00	0	118	59.8	146	21.79	7.98	30	
n-Propylbenzene	24.8	1.00	20.00	0	124	57.6	142	22.58	9.18	30	
Bromobenzene	21.7	1.00	20.00	0	108	69.3	157	20.29	6.51	30	
1,3,5-Trimethylbenzene	42.3	1.00	20.00	27.33	74.6	59.9	136	41.87	0.910	30	
2-Chlorotoluene	25.1	1.00	20.00	0	126	61.7	134	23.85	5.23	30	
4-Chlorotoluene	25.1	1.00	20.00	0	126	58.4	134	23.47	6.81	30	
tert-Butylbenzene	24.7	1.00	20.00	0	124	66.8	141	22.94	7.49	30	
1,2,3-Trichloropropane	21.0	1.00	20.00	0	105	62.4	129	18.83	10.8	30	
1,2,4-Trichlorobenzene	27.7	2.00	20.00	0	138	50.9	133	24.21	13.5	30	S
sec-Butylbenzene	25.4	1.00	20.00	0	127	56	146	23.34	8.64	30	
4-Isopropyltoluene	26.2	1.00	20.00	0	131	56.4	136	24.16	7.95	30	
1,3-Dichlorobenzene	21.9	1.00	20.00	0	110	58.2	128	20.31	7.68	30	
1,4-Dichlorobenzene	21.9	1.00	20.00	0	110	60.1	123	20.27	7.82	30	
n-Butylbenzene	29.3	1.00	20.00	0	147	54.6	135	26.74	9.16	30	S
1,2-Dichlorobenzene	22.2	1.00	20.00	0	111	65.4	133	20.62	7.47	30	
1,2-Dibromo-3-chloropropane	24.0	1.00	20.00	0	120	51.8	142	21.03	13.2	30	
1,2,4-Trimethylbenzene	28.3	1.00	20.00	3.666	123	63.7	132	26.29	7.24	30	
Hexachloro-1,3-butadiene	25.4	4.00	20.00	0	127	58.1	130	23.09	9.51	30	
Naphthalene	45.2	1.00	20.00	16.83	142	50.7	154	38.59	15.7	30	
1,2,3-Trichlorobenzene	29.5	4.00	20.00	0	147	57	131	25.78	13.3	30	S
Surr: Dibromofluoromethane	26.1		25.00		105	45.4	152		0		
Surr: Toluene-d8	25.3		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	27.0		25.00		108	64.2	128		0		

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.
R - High RPD observed, spike recoveries are within range.

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711290-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/21/2017** SeqNo: **771304**

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	
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	

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711290-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/21/2017** SeqNo: **771304**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	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	25.3		25.00		101	45.4	152		0		
Surr: Toluene-d8	23.9		25.00		95.6	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.8	64.2	128		0		

Work Order: 1711285
CLIENT: PES Environmental, Inc.
Project: MVSC

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1711290-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **11/20/2017** RunNo: **40041**
Client ID: **BATCH** Batch ID: **18955** Analysis Date: **11/21/2017** SeqNo: **771304**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample Log-In Check List

Client Name:	**PES**	Work Order Number:	**1711285**
Logged by:	**Brianna Barnes**	Date Received:	**11/16/2017 1:36:00 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	15.7

* 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: Page: 1 of: 1

Laboratory Project No (internal): 1711285

Project Name: MUSC

Special Remarks:

Project No: 1358.001.01.007

Collected by: Karsten Springstead

Location: Normandy Park, WA

Report To (PM): Matt Dahl

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

PM Email: MDahl@pesenv.com

Client: PES Environmental Inc.

Address: 1215 4th Ave Ste 1350

City, State, Zip: Seattle, WA 98101

Telephone: 206-529-3980

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	W-COND-111617	11-16-17	1215	WW	X														
2	W-DRUM-111617	11-16-17	1200	WW	X														
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 x — Date/Time 11-16-17/1336

Relinquished x — Date/Time

Received x — Date/Time

Received x — Date/Time 11/16/17 1336

Turn-around Time:

☒ Standard

☐ 3 Day

☐ 2 Day

☐ Next Day

Same Day _____ (specify)

COC 1.2 - 2.22.17

www.fremontanalytical.com

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Simi Valley, CA 93065
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F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

January 11, 2018

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

RE: MUSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the samples submitted to our laboratory on January 2, 2018. For your reference, these analyses have been assigned our service request number P1800001.

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 4:29 pm, 01/11/18

Kate Kaneko
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: PES Environmental
Project: MUSC / 1358.001.01.007

Service Request No: P1800001

CASE NARRATIVE

The samples were received intact under chain of custody on January 2, 2018 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 sample SYS-1217 (P1800001-001) was analyzed for volatile organic compounds and the remaining samples were analyzed for tetrachloroethene 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 spike recovery of vinyl acetate in the Duplicate Laboratory Control Sample (DLCS) of the first analytical batch analyzed on January 3, 2018 exceeded the upper acceptance limit. However, since the apparent problem equates to a potential high bias and the field sample associated with this DLCS did not contain the analyte in question, the data quality has not been significantly affected. The data has been flagged accordingly. No further corrective action was taken.

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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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
Project ID: MUSC / 1358.001.01.007

Service Request: P1800001

Date Received: 1/2/2018
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-1217	P1800001-001	Air	12/28/2017	10:50	SC00652	-0.55	3.54	X
SVE-1-122817	P1800001-002	Air	12/28/2017	09:00	1SS00776	0.05	5.03	X
SVE-2-122817	P1800001-003	Air	12/28/2017	09:05	1SS00256	-0.01	5.61	X
SVE-3-122817	P1800001-004	Air	12/28/2017	09:10	1SC01059	-0.72	5.45	X
SVE-4-122817	P1800001-005	Air	12/28/2017	09:15	1SC00767	0.46	5.22	X
SVE-5-122817	P1800001-006	Air	12/28/2017	09:20	1SC01006	0.11	6.23	X
SVE-6-122817	P1800001-007	Air	12/28/2017	09:25	1SS00239	-0.06	5.66	X
SVE-7-122817	P1800001-008	Air	12/28/2017	09:30	1SC00026	-0.39	5.12	X
SVE-8-122817	P1800001-009	Air	12/28/2017	09:35	1SC00606	0.57	5.15	X
SVE-9-122817	P1800001-010	Air	12/28/2017	09:40	1SC00128	-0.26	5.47	X
SVE-10-122817	P1800001-011	Air	12/28/2017	09:45	1SC00632	-0.63	5.81	X
SVE-11A-122817	P1800001-012	Air	12/28/2017	09:50	1SC01028	-0.73	5.29	X
SVE-11B-122817	P1800001-013	Air	12/28/2017	09:55	1SC01228	-1.52	5.35	X
SVE-12A-122817	P1800001-014	Air	12/28/2017	10:00	1SC00615	0.05	5.24	X
SVE-12B-122817	P1800001-015	Air	12/28/2017	10:05	1SC00939	-1.32	5.35	X
SVE-13A-122817	P1800001-016	Air	12/28/2017	10:10	1SC01145	-0.12	5.14	X
SVE-13B-122817	P1800001-017	Air	12/28/2017	10:15	1SC00811	0.09	5.62	X
SVE-14-122817	P1800001-018	Air	12/28/2017	10:20	1SC00796	-1.18	5.86	X
SVE-15-122817	P1800001-019	Air	12/28/2017	10:25	1SC00160	0.06	5.42	X
SVE-16-122817	P1800001-020	Air	12/28/2017	10:30	1SC01168	0.42	5.56	X
SVE-17-122817	P1800001-021	Air	12/28/2017	10:35	1SC00946	-0.22	6.37	X
SVE-18-122817	P1800001-022	Air	12/28/2017	10:40	1SC00139	-0.02	5.32	X
SVE-19-122817	P1800001-023	Air	12/28/2017	10:45	1SC00439	-0.28	6.34	X

Air - Chain of Custody Record & Analytical Service Request

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: P1900000~~4~~ (1)

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, INC. 1215 4th AVE STE 1350 SEATTLE, WA 98161

Project Name: MUSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-329-3980

Fax:

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Sprickstead

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	PCE	Comments e.g. Actual Preservative or specific instructions
SYS-122817	1	12-28-17	1050	SC00652		29	3	6L	X		
SUE-1-122817	2		900	ISS00776		29	2	1L		X	
SUE-2-122817	3		905	ISS00256		28	2			X	
SUE-3-122817	4		910	ISC01059		30	4			X	
SUE-4-122817	5		915	ISC00767		30	0			X	
SUE-5-122817	6		920	ISC01006		26	2			X	
SUE-6-122817	7		925	ISS00239		28	7			X	
SUE-7-122817	8		930	ISC00026		28	3			X	
SUE-8-122817	9		935	ISC00606		30	0			X	
SUE-9-122817	10		940	ISC00128		25	2			X	
SUE-10-122817	11		945	ISC00632		30	3			X	
SUE-11A-122817	12		950	ISC01028		30	3			X	
SUE-11B-122817	13		955	ISC01228		28	4			X	
SUE-12A-122817	14		1000	ISC00615		30	1			X	

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: EIM Units: ____

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

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 12-28-17	Time: 1130	Received by: (Signature)	Date: 1-2-18	Time: 0900
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

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. P1800001

Company Name & Address (Reporting Information): PES ENVIRONMENTAL

Project Name: MVSC

Project Number: 1358.001.01.007

Project Manager: M. Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-524-3901 Fax:

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

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	PCW	Comments e.g. Actual Preservative or specific instructions
SVE-12B-122817	15	12-28-17	1005	ISC00839		29	5	1L		X	
SVE-13A-122817	16	"	1010	ISC01145		30	2	"		X	
SVE-13B-122817	17	"	1015	ISC00811		28	2	"		X	
SVE-14-122817	18	"	1020	ISC00796		29	4	"		X	
SVE-15-122817	19	"	1025	ISC00160		30	1	"		X	
SVE-16-122817	20	"	1030	ISC01188		30	0	"		X	
SVE-17-122817	21	"	1035	ISC00946		30	3	"		X	
SVE-18-122817	22	"	1040	ISC00139		29	2	"		X	
SVE-19-122817	23	"	1045	ISC00439		30	3	"		X	

Report Tier Levels - please select

Tier I - Results (Default if 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: EIM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 12-28-	Time: 1130	Received by: (Signature)	Date: 1-2-18	Time: 0900
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: P1800001

Project: MUSC / 1358.001.01.007

Sample(s) received on: 1/2/18 Date opened: 1/2/18 by: E.PEREZ

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
P1800001-001.01	6.0 L Source Can					
P1800001-002.01	1.0 L Source Silonite Canister					
P1800001-003.01	1.0 L Source Silonite Canister					
P1800001-004.01	1.0 L Source Can					
P1800001-005.01	1.0 L Source Can					
P1800001-006.01	1.0 L Source Can					
P1800001-007.01	1.0 L Source Silonite Canister					
P1800001-008.01	1.0 L Source Can					
P1800001-009.01	1.0 L Source Can					
P1800001-010.01	1.0 L Source Can					
P1800001-011.01	1.0 L Source Can					
P1800001-012.01	1.0 L Source Can					
P1800001-013.01	1.0 L Source Can					
P1800001-014.01	1.0 L Source Can					
P1800001-015.01	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
Sample Acceptance Check Form

Client: PES Environmental Work order: P1800001

Project: MUSC / 1358.001.01.007

Sample(s) received on: 1/2/18 Date opened: 1/2/18 by: E.PEREZ

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1800001-016.01	1.0 L Source Can					
P1800001-017.01	1.0 L Source Can					
P1800001-018.01	1.0 L Source Can					
P1800001-019.01	1.0 L Source Can					
P1800001-020.01	1.0 L Source Can					
P1800001-021.01	1.0 L Source Can					
P1800001-022.01	1.0 L Source Can					
P1800001-023.01	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: **SYS-1217** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-001

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.70 Liter(s)
Test Notes:
Container ID: SC00652

Initial Pressure (psig): -0.55 Final Pressure (psig): 3.54

Container Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.92	ND	0.54	
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.1**	0.92	**1.0**	0.19	
74-87-3	Chloromethane	ND	0.92	ND	0.45	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.92	ND	0.13	
75-01-4	Vinyl Chloride	ND	0.92	ND	0.36	
106-99-0	1,3-Butadiene	ND	0.92	ND	0.42	
74-83-9	Bromomethane	ND	0.92	ND	0.24	
75-00-3	Chloroethane	ND	0.92	ND	0.35	
64-17-5	Ethanol	**25**	9.2	**13**	4.9	
75-05-8	Acetonitrile	ND	0.92	ND	0.55	
107-02-8	Acrolein	ND	3.7	ND	1.6	
67-64-1	Acetone	ND	9.2	ND	3.9	
75-69-4	Trichlorofluoromethane (CFC 11)	**3.5**	0.92	**0.63**	0.16	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	9.2	ND	3.8	
107-13-1	Acrylonitrile	ND	0.92	ND	0.42	
75-35-4	1,1-Dichloroethene	ND	0.92	ND	0.23	
75-09-2	Methylene Chloride	ND	0.92	ND	0.27	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.92	ND	0.29	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.92	ND	0.12	
75-15-0	Carbon Disulfide	ND	9.2	ND	3.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.92	ND	0.23	
75-34-3	1,1-Dichloroethane	ND	0.92	ND	0.23	
1634-04-4	Methyl tert-Butyl Ether	ND	0.92	ND	0.26	
108-05-4	Vinyl Acetate	ND	9.2	ND	2.6	**L**
78-93-3	2-Butanone (MEK)	ND	9.2	ND	3.1	

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.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **SYS-1217** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-001

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.70 Liter(s)
Test Notes:
Container ID: SC00652

Initial Pressure (psig): -0.55 Final Pressure (psig): 3.54

Container Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.92	ND	0.23	
141-78-6	Ethyl Acetate	**13**	1.8	**3.5**	0.51	
110-54-3	n-Hexane	**50**	0.92	**14**	0.26	
67-66-3	Chloroform	**3.4**	0.92	**0.69**	0.19	
109-99-9	Tetrahydrofuran (THF)	ND	0.92	ND	0.31	
107-06-2	1,2-Dichloroethane	ND	0.92	ND	0.23	
71-55-6	1,1,1-Trichloroethane	ND	0.92	ND	0.17	
71-43-2	Benzene	ND	0.92	ND	0.29	
56-23-5	Carbon Tetrachloride	ND	0.92	ND	0.15	
110-82-7	Cyclohexane	**30**	1.8	**8.6**	0.54	
78-87-5	1,2-Dichloropropane	ND	0.92	ND	0.20	
75-27-4	Bromodichloromethane	ND	0.92	ND	0.14	
79-01-6	Trichloroethene	ND	0.92	ND	0.17	
123-91-1	1,4-Dioxane	ND	0.92	ND	0.26	
80-62-6	Methyl Methacrylate	ND	1.8	ND	0.45	
142-82-5	n-Heptane	**6.0**	0.92	**1.5**	0.22	
10061-01-5	cis-1,3-Dichloropropene	ND	0.92	ND	0.20	
108-10-1	4-Methyl-2-pentanone	ND	0.92	ND	0.22	
10061-02-6	trans-1,3-Dichloropropene	ND	0.92	ND	0.20	
79-00-5	1,1,2-Trichloroethane	ND	0.92	ND	0.17	
108-88-3	Toluene	**4.5**	0.92	**1.2**	0.24	
591-78-6	2-Hexanone	ND	0.92	ND	0.23	
124-48-1	Dibromochloromethane	ND	0.92	ND	0.11	
106-93-4	1,2-Dibromoethane	ND	0.92	ND	0.12	
123-86-4	n-Butyl Acetate	ND	0.92	ND	0.19	

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: **SYS-1217** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-001

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 0.70 Liter(s)
Test Notes:
Container ID: SC00652

Initial Pressure (psig): -0.55 Final Pressure (psig): 3.54

Container Dilution Factor: 1.29

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.92	ND	0.20	
127-18-4	Tetrachloroethene	**160**	0.92	**23**	0.14	
108-90-7	Chlorobenzene	ND	0.92	ND	0.20	
100-41-4	Ethylbenzene	ND	0.92	ND	0.21	
179601-23-1	m,p-Xylenes	**2.3**	1.8	**0.53**	0.42	
75-25-2	Bromoform	ND	0.92	ND	0.089	
100-42-5	Styrene	ND	0.92	ND	0.22	
95-47-6	o-Xylene	ND	0.92	ND	0.21	
111-84-2	n-Nonane	ND	0.92	ND	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.92	ND	0.13	
98-82-8	Cumene	ND	0.92	ND	0.19	
80-56-8	alpha-Pinene	**1.2**	0.92	**0.21**	0.17	
103-65-1	n-Propylbenzene	ND	0.92	ND	0.19	
622-96-8	4-Ethyltoluene	ND	0.92	ND	0.19	
108-67-8	1,3,5-Trimethylbenzene	ND	0.92	ND	0.19	
95-63-6	1,2,4-Trimethylbenzene	**0.96**	0.92	**0.20**	0.19	
100-44-7	Benzyl Chloride	ND	1.8	ND	0.36	
541-73-1	1,3-Dichlorobenzene	ND	0.92	ND	0.15	
106-46-7	1,4-Dichlorobenzene	ND	0.92	ND	0.15	
95-50-1	1,2-Dichlorobenzene	ND	0.92	ND	0.15	
5989-27-5	d-Limonene	**1.1**	0.92	**0.21**	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.92	ND	0.095	
120-82-1	1,2,4-Trichlorobenzene	ND	0.92	ND	0.12	
91-20-3	Naphthalene	ND	0.92	ND	0.18	
87-68-3	Hexachlorobutadiene	ND	0.92	ND	0.086	

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: **SVE-1-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-002

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00776

Initial Pressure (psig): 0.05 Final Pressure (psig): 5.03

Container Dilution Factor: 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**120**	1.7	**18**	0.25	

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: **SVE-2-122817**
Client Project ID: **MUSC / 1358.001.01.007**

ALS Project ID: P1800001
ALS Sample ID: P1800001-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 1.0 L Silonite Summa Canister
Test Notes:
Container ID: 1SS00256

Date Collected: 12/28/17
Date Received: 1/2/18
Date Analyzed: 1/3/18
Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -0.01 Final Pressure (psig): 5.61

Container Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**210**	1.7	**30**	0.25	

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: **SVE-3-122817**
Client Project ID: **MUSC / 1358.001.01.007**

ALS Project ID: P1800001
ALS Sample ID: P1800001-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 1.0 L Summa Canister
Test Notes:
Container ID: 1SC01059

Date Collected: 12/28/17
Date Received: 1/2/18
Date Analyzed: 1/3/18
Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -0.72 Final Pressure (psig): 5.45

Container Dilution Factor: 1.44

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**50**	1.8	**7.4**	0.27	

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: **SVE-4-122817**
Client Project ID: **MUSC / 1358.001.01.007**

ALS Project ID: P1800001
ALS Sample ID: P1800001-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16
Analyst: Lusine Hakobyan
Sample Type: 1.0 L Summa Canister
Test Notes:
Container ID: 1SC00767

Date Collected: 12/28/17
Date Received: 1/2/18
Date Analyzed: 1/3/18
Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): 0.46 Final Pressure (psig): 5.22

Container Dilution Factor: 1.31

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**59**	1.6	**8.7**	0.24	

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: **SVE-5-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-006

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01006

Initial Pressure (psig): 0.11 Final Pressure (psig): 6.23

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**170**	1.8	**25**	0.26	

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: **SVE-6-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-007

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Silonite Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SS00239

Initial Pressure (psig): -0.06 Final Pressure (psig): 5.66

Container Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**150**	1.7	**22**	0.26	

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: **SVE-7-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-008

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00026

Initial Pressure (psig): -0.39 Final Pressure (psig): 5.12

Container Dilution Factor: 1.39

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**350**	1.7	**52**	0.26	

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: **SVE-8-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-009

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.050 Liter(s)
Test Notes:
Container ID: 1SC00606

Initial Pressure (psig): 0.57 Final Pressure (psig): 5.15

Container Dilution Factor: 1.30

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**320**	13	**47**	1.9	

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: **SVE-9-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-010

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00128

Initial Pressure (psig): -0.26 Final Pressure (psig): 5.47

Container Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**170**	1.8	**25**	0.26	

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: **SVE-10-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-011

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00632

Initial Pressure (psig): -0.63 Final Pressure (psig): 5.81

Container Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**290**	1.8	**42**	0.27	

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: **SVE-11A-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-012

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01028

Initial Pressure (psig): -0.73 Final Pressure (psig): 5.29

Container Dilution Factor: 1.43

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**68**	1.8	**10**	0.26	

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: **SVE-11B-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-013

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01228

Initial Pressure (psig): -1.52 Final Pressure (psig): 5.35

Container Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**24**	1.9	**3.6**	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: **SVE-12A-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-014

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00615

Initial Pressure (psig): 0.05 Final Pressure (psig): 5.24

Container Dilution Factor: 1.35

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**310**	1.7	**46**	0.25	

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: **SVE-12B-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-015

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00939

Initial Pressure (psig): -1.32 Final Pressure (psig): 5.35

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**54**	1.9	**7.9**	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: **SVE-13A-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-016

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01145

Initial Pressure (psig): -0.12 Final Pressure (psig): 5.14

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**36**	1.7	**5.3**	0.25	

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: **SVE-13B-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-017

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00811

Initial Pressure (psig): 0.09 Final Pressure (psig): 5.62

Container Dilution Factor: 1.37

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**180**	1.7	**26**	0.25	

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: **SVE-14-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-018

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00796

Initial Pressure (psig): -1.18 Final Pressure (psig): 5.86

Container Dilution Factor: 1.52

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**120**	1.9	**18**	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: **SVE-15-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-019

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00160

Initial Pressure (psig): 0.06 Final Pressure (psig): 5.42

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**190**	1.7	**28**	0.25	

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: **SVE-16-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-020

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01168

Initial Pressure (psig): 0.42 Final Pressure (psig): 5.56

Container Dilution Factor: 1.34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**310**	1.7	**46**	0.25	

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: **SVE-17-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-021

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00946

Initial Pressure (psig): -0.22 Final Pressure (psig): 6.37

Container Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**5.9**	1.8	**0.86**	0.27	

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: **SVE-18-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-022

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00139

Initial Pressure (psig): -0.02 Final Pressure (psig): 5.32

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**59**	1.7	**8.7**	0.25	

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: **SVE-19-122817** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P1800001-023

Test Code: EPA TO-15 Date Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 1/2/18
Analyst: Lusine Hakobyan Date Analyzed: 1/4/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00439

Initial Pressure (psig): -0.28 Final Pressure (psig): 6.34

Container Dilution Factor: 1.46

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
127-18-4	Tetrachloroethene	**39**	1.8	**5.8**	0.27	

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: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
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
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	**L**
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

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.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1800001

Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	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.

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
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
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	1.0	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

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: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
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
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	

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: **MUSC / 1358.001.01.007** ALS Project ID: P1800001

Test Code: EPA TO-15 Date(s) Collected: 12/28/17
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Received: 1/2/18
Analyst: Lusine Hakobyan Date(s) Analyzed: 1/3 - 1/4/18
Sample Type: 6.0 L Summa Canister(s) / 1.0 L Silonite Summa Canister(s) / 1.0 L Summa Canister(s)
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	P180103-MB	**111**	**96**	**100**	70-130	
Method Blank	P180103-MB	**111**	**96**	**103**	70-130	
Lab Control Sample	P180103-LCS	**109**	**92**	**99**	70-130	
Lab Control Sample	P180103-LCS	**108**	**102**	**97**	70-130	
Duplicate Lab Control Sample	P180103-DLCS	**109**	**95**	**108**	70-130	
Duplicate Lab Control Sample	P180103-DLCS	**112**	**108**	**95**	70-130	
SYS-1217	P1800001-001	**110**	**95**	**107**	70-130	
SVE-1-122817	P1800001-002	**111**	**98**	**102**	70-130	
SVE-2-122817	P1800001-003	**111**	**97**	**103**	70-130	
SVE-3-122817	P1800001-004	**113**	**96**	**104**	70-130	
SVE-4-122817	P1800001-005	**112**	**93**	**101**	70-130	
SVE-5-122817	P1800001-006	**112**	**101**	**103**	70-130	
SVE-6-122817	P1800001-007	**112**	**94**	**102**	70-130	
SVE-7-122817	P1800001-008	**110**	**95**	**105**	70-130	
SVE-8-122817	P1800001-009	**110**	**93**	**105**	70-130	
SVE-9-122817	P1800001-010	**111**	**96**	**104**	70-130	
SVE-10-122817	P1800001-011	**113**	**96**	**104**	70-130	
SVE-11A-122817	P1800001-012	**111**	**96**	**102**	70-130	
SVE-11B-122817	P1800001-013	**111**	**95**	**102**	70-130	
SVE-12A-122817	P1800001-014	**116**	**95**	**101**	70-130	
SVE-12B-122817	P1800001-015	**110**	**96**	**105**	70-130	
SVE-13A-122817	P1800001-016	**110**	**95**	**103**	70-130	
SVE-13B-122817	P1800001-017	**112**	**96**	**103**	70-130	
SVE-14-122817	P1800001-018	**112**	**96**	**104**	70-130	
SVE-15-122817	P1800001-019	**112**	**95**	**104**	70-130	
SVE-16-122817	P1800001-020	**110**	**103**	**92**	70-130	
SVE-17-122817	P1800001-021	**109**	**99**	**92**	70-130	
SVE-18-122817	P1800001-022	**109**	**100**	**91**	70-130	
SVE-19-122817	P1800001-023	**109**	**101**	**93**	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: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
Sample Type: 6.0 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
115-07-1	Propene	210	235	252	**112**	**120**	54-133	7	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	227	239	**107**	**112**	64-115	5	25	
74-87-3	Chloromethane	210	237	252	**113**	**120**	47-140	6	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	211	226	**100**	**107**	60-112	7	25	
75-01-4	Vinyl Chloride	211	243	261	**115**	**124**	63-127	8	25	
106-99-0	1,3-Butadiene	210	253	273	**120**	**130**	57-149	8	25	
74-83-9	Bromomethane	210	219	227	**104**	**108**	63-132	4	25	
75-00-3	Chloroethane	210	230	241	**110**	**115**	68-129	4	25	
64-17-5	Ethanol	1,040	1260	1310	**121**	**126**	62-131	4	25	
75-05-8	Acetonitrile	210	242	252	**115**	**120**	56-136	4	25	
107-02-8	Acrolein	209	247	255	**118**	**122**	60-132	3	25	
67-64-1	Acetone	1,050	1220	1260	**116**	**120**	63-124	3	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	214	221	**103**	**106**	65-113	3	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	489	500	**116**	**118**	62-135	2	25	
107-13-1	Acrylonitrile	212	256	261	**121**	**123**	68-138	2	25	
75-35-4	1,1-Dichloroethene	213	222	226	**104**	**106**	72-118	2	25	
75-09-2	Methylene Chloride	213	233	233	**109**	**109**	67-116	0	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	251	250	**118**	**118**	61-143	0	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	211	213	**99**	**100**	68-113	1	25	
75-15-0	Carbon Disulfide	214	250	251	**117**	**117**	68-120	0	25	
156-60-5	trans-1,2-Dichloroethene	214	248	252	**116**	**118**	71-125	2	25	
75-34-3	1,1-Dichloroethane	212	227	233	**107**	**110**	68-118	3	25	
1634-04-4	Methyl tert-Butyl Ether	213	229	232	**108**	**109**	60-123	0.9	25	
108-05-4	Vinyl Acetate	1,060	1430	1450	**135**	**137**	73-135	1	25	**L**
78-93-3	2-Butanone (MEK)	212	248	245	**117**	**116**	70-129	0.9	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.
L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	212	236	240	**111**	**113**	69-121	2	25	
141-78-6	Ethyl Acetate	426	522	495	**123**	**116**	66-140	6	25	
110-54-3	n-Hexane	213	239	227	**112**	**107**	61-124	5	25	
67-66-3	Chloroform	212	232	224	**109**	**106**	69-113	3	25	
109-99-9	Tetrahydrofuran (THF)	212	241	242	**114**	**114**	66-121	0	25	
107-06-2	1,2-Dichloroethane	212	228	235	**108**	**111**	62-120	3	25	
71-55-6	1,1,1-Trichloroethane	212	219	226	**103**	**107**	65-116	4	25	
71-43-2	Benzene	213	201	205	**94**	**96**	66-111	2	25	
56-23-5	Carbon Tetrachloride	214	236	240	**110**	**112**	64-122	2	25	
110-82-7	Cyclohexane	425	428	435	**101**	**102**	69-115	1	25	
78-87-5	1,2-Dichloropropane	212	229	228	**108**	**108**	69-121	0	25	
75-27-4	Bromodichloromethane	214	234	238	**109**	**111**	69-123	2	25	
79-01-6	Trichloroethene	212	196	199	**92**	**94**	69-112	2	25	
123-91-1	1,4-Dioxane	213	224	228	**105**	**107**	74-123	2	25	
80-62-6	Methyl Methacrylate	424	450	456	**106**	**108**	75-125	2	25	
142-82-5	n-Heptane	213	225	226	**106**	**106**	68-118	0	25	
10061-01-5	cis-1,3-Dichloropropene	208	251	250	**121**	**120**	74-129	0.8	25	
108-10-1	4-Methyl-2-pentanone	213	244	243	**115**	**114**	66-138	0.9	25	
10061-02-6	trans-1,3-Dichloropropene	213	274	272	**129**	**128**	75-130	0.8	25	
79-00-5	1,1,2-Trichloroethane	212	221	222	**104**	**105**	73-117	1	25	
108-88-3	Toluene	211	181	189	**86**	**90**	66-114	5	25	
591-78-6	2-Hexanone	211	226	224	**107**	**106**	58-146	0.9	25	
124-48-1	Dibromochloromethane	212	208	221	**98**	**104**	67-130	6	25	
106-93-4	1,2-Dibromoethane	211	196	210	**93**	**100**	70-127	7	25	
123-86-4	n-Butyl Acetate	215	220	242	**102**	**113**	62-140	10	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/3/18
Sample Type: 6.0 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
111-65-9	n-Octane	212	198	211	**93**	**100**	65-121	7	25	
127-18-4	Tetrachloroethene	212	169	179	**80**	**84**	62-119	5	25	
108-90-7	Chlorobenzene	212	186	190	**88**	**90**	66-115	2	25	
100-41-4	Ethylbenzene	212	189	197	**89**	**93**	69-117	4	25	
179601-23-1	m,p-Xylenes	424	372	393	**88**	**93**	67-117	6	25	
75-25-2	Bromoform	212	213	227	**100**	**107**	67-135	7	25	
100-42-5	Styrene	211	188	205	**89**	**97**	70-128	9	25	
95-47-6	o-Xylene	211	187	201	**89**	**95**	67-118	7	25	
111-84-2	n-Nonane	212	206	236	**97**	**111**	61-127	13	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	218	230	**103**	**108**	70-125	5	25	
98-82-8	Cumene	212	185	205	**87**	**97**	68-116	11	25	
80-56-8	alpha-Pinene	213	188	210	**88**	**99**	69-122	12	25	
103-65-1	n-Propylbenzene	214	191	211	**89**	**99**	70-118	11	25	
622-96-8	4-Ethyltoluene	211	207	222	**98**	**105**	69-124	7	25	
108-67-8	1,3,5-Trimethylbenzene	212	189	203	**89**	**96**	65-117	8	25	
95-63-6	1,2,4-Trimethylbenzene	212	187	200	**88**	**94**	67-124	7	25	
100-44-7	Benzyl Chloride	212	244	260	**115**	**123**	75-142	7	25	
541-73-1	1,3-Dichlorobenzene	212	188	201	**89**	**95**	70-124	7	25	
106-46-7	1,4-Dichlorobenzene	214	179	191	**84**	**89**	63-124	6	25	
95-50-1	1,2-Dichlorobenzene	214	185	200	**86**	**93**	66-125	8	25	
5989-27-5	d-Limonene	213	195	211	**92**	**99**	64-135	7	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	252	278	**120**	**132**	73-136	10	25	
120-82-1	1,2,4-Trichlorobenzene	218	198	214	**91**	**98**	70-141	7	25	
91-20-3	Naphthalene	209	184	200	**88**	**96**	71-146	9	25	
87-68-3	Hexachlorobutadiene	212	188	202	**89**	**95**	63-126	7	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800001
Client Project ID: **MUSC / 1358.001.01.007** ALS Sample ID: P180103-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: 1/4/18
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
127-18-4	Tetrachloroethene	212	205	202	**97**	**95**	62-119	2	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.

MEMORANDUM

TO: Project File **DATE:** January 19, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: December 28, 2017 Air Samples

LAB: ALS Environmental P1800001

Twenty-three (23) vapor samples were collected as part of SVE system O&M at the at the Manhattan Village Shopping Center and Harris Family properties in Normandy Park, Washington, on December 28, 2017. One air vapor sample (SYS-1217) collected from the SVE system stack was 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). The remaining air vapor samples were analyzed for one VOC analyte (tetrachloroethene) via USEPA Method TO-15. 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 number P1800001.

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

All samples were collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied Summa ™ canisters (6 and 1 Liter) for the air samples. The samples were shipped, delivered by FedEx, and received in good condition by the laboratory. Summa canisters do not require preservation or cooling. The sample was collected, handled, and delivered in an appropriate manner with the following discussion:

- ALS's Sample Acceptance Check Form indicates that chain of custody seals were not placed on the outside of the shipping container. Chain of custody seals are recommended since the sample was shipped using a courier. No action is taken in this case since the Sample Acceptance Check Form indicates that the container was received in good condition.

No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed within six days of sample collection. This is within the 30-day recommended holding time limit for air samples collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 batches per method requirement. The method blank results did not report any compounds at concentrations at or above the 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance criteria with one exception:

- LCSD recovery for vinyl acetate is slightly above the laboratory control limit criteria. No action was taken since the target compound was not detected in the associated sample.

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 were 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 were assigned. All data are judged to be acceptable for their intended use.

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LABORATORY REPORT

February 1, 2018

Karsten Springstead
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: MVSC / 1358.001.01.007

Dear Karsten:

Enclosed are the results of the sample submitted to our laboratory on January 24, 2018. For your reference, this analysis has been assigned our service request number P1800331.

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 4:24 pm, 02/01/18

Kate Kaneko
Project Manager

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Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1800331

CASE NARRATIVE

The sample was received intact under chain of custody on January 24, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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Simi Valley, CA 93065
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F: +1 805 526 7270
www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-004
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1800331

Date Received: 1/24/2018
Time Received: 10:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0118	P1800331-001	Air	1/23/2018	14:00	SC02207	-0.88	3.55	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 P1800331

Company Name & Address (Reporting Information)
PBS ENVIRONMENTAL, INC
1215 4th AVE STE 1350
SEATTLE, WA 98161

Project Name: MVSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

ALS Contact:

Analysis Method: TO-15

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
SXS-0118	1	1-23-18	1400	SC07207		30	4	6L	X		

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: ____ Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	1-23-18	1510	Henry Reyes	1-24-18	1030
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature ____ °C

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ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1800331

Project: MVSC / 1358.001.01.007

Sample(s) received on: 1/24/18 Date opened: 1/24/18 by: E.PEREZ

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 Box 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
P1800331-001.01	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: **SYS-0118** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800331-001

Test Code: EPA TO-15 Date Collected: 1/23/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 1/24/18
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02207

Initial Pressure (psig): -0.88 Final Pressure (psig): 3.55

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.66	ND	0.38	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.1**	0.66	**0.84**	0.13	
74-87-3	Chloromethane	ND	0.66	ND	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.66	ND	0.094	
75-01-4	Vinyl Chloride	ND	0.66	ND	0.26	
106-99-0	1,3-Butadiene	ND	0.66	ND	0.30	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.66	ND	0.25	
64-17-5	Ethanol	ND	6.6	ND	3.5	
75-05-8	Acetonitrile	ND	0.66	ND	0.39	
107-02-8	Acrolein	ND	2.6	ND	1.2	
67-64-1	Acetone	ND	6.6	ND	2.8	
75-69-4	Trichlorofluoromethane (CFC 11)	**3.1**	0.66	**0.55**	0.12	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.6	ND	2.7	
107-13-1	Acrylonitrile	ND	0.66	ND	0.30	
75-35-4	1,1-Dichloroethene	ND	0.66	ND	0.17	
75-09-2	Methylene Chloride	ND	0.66	ND	0.19	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.66	ND	0.21	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.66	ND	0.086	
75-15-0	Carbon Disulfide	ND	6.6	ND	2.1	
156-60-5	trans-1,2-Dichloroethene	ND	0.66	ND	0.17	
75-34-3	1,1-Dichloroethane	ND	0.66	ND	0.16	
1634-04-4	Methyl tert-Butyl Ether	ND	0.66	ND	0.18	
108-05-4	Vinyl Acetate	ND	6.6	ND	1.9	
78-93-3	2-Butanone (MEK)	ND	6.6	ND	2.2	

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: **SYS-0118** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800331-001

Test Code: EPA TO-15 Date Collected: 1/23/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 1/24/18
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02207

Initial Pressure (psig): -0.88 Final Pressure (psig): 3.55

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.66	ND	0.17	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.37	
110-54-3	n-Hexane	**0.73**	0.66	**0.21**	0.19	
67-66-3	Chloroform	**4.3**	0.66	**0.88**	0.14	
109-99-9	Tetrahydrofuran (THF)	ND	0.66	ND	0.22	
107-06-2	1,2-Dichloroethane	ND	0.66	ND	0.16	
71-55-6	1,1,1-Trichloroethane	ND	0.66	ND	0.12	
71-43-2	Benzene	ND	0.66	ND	0.21	
56-23-5	Carbon Tetrachloride	ND	0.66	ND	0.10	
110-82-7	Cyclohexane	ND	1.3	ND	0.38	
78-87-5	1,2-Dichloropropane	ND	0.66	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.66	ND	0.099	
79-01-6	Trichloroethene	ND	0.66	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.66	ND	0.18	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.32	
142-82-5	n-Heptane	ND	0.66	ND	0.16	
10061-01-5	cis-1,3-Dichloropropene	ND	0.66	ND	0.15	
108-10-1	4-Methyl-2-pentanone	ND	0.66	ND	0.16	
10061-02-6	trans-1,3-Dichloropropene	ND	0.66	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.66	ND	0.12	
108-88-3	Toluene	ND	0.66	ND	0.18	
591-78-6	2-Hexanone	ND	0.66	ND	0.16	
124-48-1	Dibromochloromethane	ND	0.66	ND	0.078	
106-93-4	1,2-Dibromoethane	ND	0.66	ND	0.086	
123-86-4	n-Butyl Acetate	ND	0.66	ND	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: **SYS-0118** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800331-001

Test Code: EPA TO-15 Date Collected: 1/23/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 1/24/18
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02207

Initial Pressure (psig): -0.88 Final Pressure (psig): 3.55

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.66	ND	0.14	
127-18-4	Tetrachloroethene	**200**	6.6	**29**	0.97	**D**
108-90-7	Chlorobenzene	ND	0.66	ND	0.14	
100-41-4	Ethylbenzene	ND	0.66	ND	0.15	
179601-23-1	m,p-Xylenes	ND	1.3	ND	0.30	
75-25-2	Bromoform	ND	0.66	ND	0.064	
100-42-5	Styrene	ND	0.66	ND	0.16	
95-47-6	o-Xylene	ND	0.66	ND	0.15	
111-84-2	n-Nonane	ND	0.66	ND	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.66	ND	0.096	
98-82-8	Cumene	ND	0.66	ND	0.13	
80-56-8	alpha-Pinene	ND	0.66	ND	0.12	
103-65-1	n-Propylbenzene	ND	0.66	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.66	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.66	ND	0.13	
100-44-7	Benzyl Chloride	ND	1.3	ND	0.26	
541-73-1	1,3-Dichlorobenzene	ND	0.66	ND	0.11	
106-46-7	1,4-Dichlorobenzene	ND	0.66	ND	0.11	
95-50-1	1,2-Dichlorobenzene	ND	0.66	ND	0.11	
5989-27-5	d-Limonene	ND	0.66	ND	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.66	ND	0.068	
120-82-1	1,2,4-Trichlorobenzene	ND	0.66	ND	0.089	
91-20-3	Naphthalene	ND	0.66	ND	0.13	
87-68-3	Hexachlorobutadiene	ND	0.66	ND	0.062	

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** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
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
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1800331

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 1/30/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	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: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
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
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	1.0	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1800331

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 1/23/18
Analyst: Raneem Sahtah Date(s) Received: 1/24/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 1/30/18
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	P180130-MB	**95**	**99**	**106**	70-130	
Lab Control Sample	P180130-LCS	**92**	**98**	**110**	70-130	
Duplicate Lab Control Sample	P180130-DLCS	**94**	**98**	**108**	70-130	
SYS-0118	P1800331-001	**97**	**97**	**100**	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: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 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
115-07-1	Propene	210	181	192	**86**	**91**	54-133	6	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	182	187	**85**	**88**	64-115	3	25	
74-87-3	Chloromethane	210	195	206	**93**	**98**	47-140	5	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	177	182	**84**	**86**	60-112	2	25	
75-01-4	Vinyl Chloride	211	191	200	**91**	**95**	63-127	4	25	
106-99-0	1,3-Butadiene	210	198	207	**94**	**99**	57-149	5	25	
74-83-9	Bromomethane	210	184	190	**88**	**90**	63-132	2	25	
75-00-3	Chloroethane	210	199	206	**95**	**98**	68-129	3	25	
64-17-5	Ethanol	1,040	1080	1130	**104**	**109**	62-131	5	25	
75-05-8	Acetonitrile	210	228	239	**109**	**114**	56-136	4	25	
107-02-8	Acrolein	209	239	250	**114**	**120**	60-132	5	25	
67-64-1	Acetone	1,050	1050	1100	**100**	**105**	63-124	5	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	180	185	**87**	**89**	65-113	2	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	421	438	**100**	**104**	62-135	4	25	
107-13-1	Acrylonitrile	212	227	237	**107**	**112**	68-138	5	25	
75-35-4	1,1-Dichloroethene	213	202	208	**95**	**98**	72-118	3	25	
75-09-2	Methylene Chloride	213	192	197	**90**	**92**	67-116	2	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	209	218	**99**	**103**	61-143	4	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	198	201	**93**	**94**	68-113	1	25	
75-15-0	Carbon Disulfide	214	197	204	**92**	**95**	68-120	3	25	
156-60-5	trans-1,2-Dichloroethene	214	211	220	**99**	**103**	71-125	4	25	
75-34-3	1,1-Dichloroethane	212	193	200	**91**	**94**	68-118	3	25	
1634-04-4	Methyl tert-Butyl Ether	213	201	207	**94**	**97**	60-123	3	25	
108-05-4	Vinyl Acetate	1,060	1150	1180	**108**	**111**	73-135	3	25	
78-93-3	2-Butanone (MEK)	212	226	231	**107**	**109**	70-129	2	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	212	204	210	**96**	**99**	69-121	3	25	
141-78-6	Ethyl Acetate	426	473	487	**111**	**114**	66-140	3	25	
110-54-3	n-Hexane	213	191	195	**90**	**92**	61-124	2	25	
67-66-3	Chloroform	212	195	200	**92**	**94**	69-113	2	25	
109-99-9	Tetrahydrofuran (THF)	212	181	185	**85**	**87**	66-121	2	25	
107-06-2	1,2-Dichloroethane	212	190	196	**90**	**92**	62-120	2	25	
71-55-6	1,1,1-Trichloroethane	212	194	198	**92**	**93**	65-116	1	25	
71-43-2	Benzene	213	197	199	**92**	**93**	66-111	1	25	
56-23-5	Carbon Tetrachloride	214	211	214	**99**	**100**	64-122	1	25	
110-82-7	Cyclohexane	425	417	423	**98**	**100**	69-115	2	25	
78-87-5	1,2-Dichloropropane	212	207	211	**98**	**100**	69-121	2	25	
75-27-4	Bromodichloromethane	214	215	217	**100**	**101**	69-123	1	25	
79-01-6	Trichloroethene	212	204	205	**96**	**97**	69-112	1	25	
123-91-1	1,4-Dioxane	213	217	219	**102**	**103**	74-123	1	25	
80-62-6	Methyl Methacrylate	424	460	466	**108**	**110**	75-125	2	25	
142-82-5	n-Heptane	213	205	206	**96**	**97**	68-118	1	25	
10061-01-5	cis-1,3-Dichloropropene	208	234	238	**113**	**114**	74-129	0.9	25	
108-10-1	4-Methyl-2-pentanone	213	221	225	**104**	**106**	66-138	2	25	
10061-02-6	trans-1,3-Dichloropropene	213	243	247	**114**	**116**	75-130	2	25	
79-00-5	1,1,2-Trichloroethane	212	210	212	**99**	**100**	73-117	1	25	
108-88-3	Toluene	211	196	198	**93**	**94**	66-114	1	25	
591-78-6	2-Hexanone	211	217	221	**103**	**105**	58-146	2	25	
124-48-1	Dibromochloromethane	212	225	226	**106**	**107**	67-130	0.9	25	
106-93-4	1,2-Dibromoethane	211	221	222	**105**	**105**	70-127	0	25	
123-86-4	n-Butyl Acetate	215	218	222	**101**	**103**	62-140	2	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800331
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180130-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 1/30/18
Sample Type: 6.0 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
111-65-9	n-Octane	212	209	212	**99**	**100**	65-121	1	25	
127-18-4	Tetrachloroethene	212	200	201	**94**	**95**	62-119	1	25	
108-90-7	Chlorobenzene	212	203	205	**96**	**97**	66-115	1	25	
100-41-4	Ethylbenzene	212	204	207	**96**	**98**	69-117	2	25	
179601-23-1	m,p-Xylenes	424	425	431	**100**	**102**	67-117	2	25	
75-25-2	Bromoform	212	245	248	**116**	**117**	67-135	0.9	25	
100-42-5	Styrene	211	226	229	**107**	**109**	70-128	2	25	
95-47-6	o-Xylene	211	211	213	**100**	**101**	67-118	1	25	
111-84-2	n-Nonane	212	214	219	**101**	**103**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	221	225	**104**	**106**	70-125	2	25	
98-82-8	Cumene	212	210	212	**99**	**100**	68-116	1	25	
80-56-8	alpha-Pinene	213	221	226	**104**	**106**	69-122	2	25	
103-65-1	n-Propylbenzene	214	204	207	**95**	**97**	70-118	2	25	
622-96-8	4-Ethyltoluene	211	224	228	**106**	**108**	69-124	2	25	
108-67-8	1,3,5-Trimethylbenzene	212	214	217	**101**	**102**	65-117	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	230	234	**108**	**110**	67-124	2	25	
100-44-7	Benzyl Chloride	212	259	265	**122**	**125**	75-142	2	25	
541-73-1	1,3-Dichlorobenzene	212	228	230	**108**	**108**	70-124	0	25	
106-46-7	1,4-Dichlorobenzene	214	224	226	**105**	**106**	63-124	0.9	25	
95-50-1	1,2-Dichlorobenzene	214	235	238	**110**	**111**	66-125	0.9	25	
5989-27-5	d-Limonene	213	252	258	**118**	**121**	64-135	3	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	226	229	**108**	**109**	73-136	0.9	25	
120-82-1	1,2,4-Trichlorobenzene	218	235	238	**108**	**109**	70-141	0.9	25	
91-20-3	Naphthalene	209	233	236	**111**	**113**	71-146	2	25	
87-68-3	Hexachlorobutadiene	212	229	230	**108**	**108**	63-126	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.

MEMORANDUM

TO: Project File **DATE:** February 13, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: January 23, 2018 Air Sample

LAB: ALS Environmental P1800331

One (1) soil vapor extraction sample was collected on January 23, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1800331.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa ^{TM} canister (6 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. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed within seven days of sample collection. This is within the 30-day recommended holding time limit for the air sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance 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.

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www.alsglobal.com

LABORATORY REPORT

March 9, 2018

Karsten Springstead
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: MVSC / 1358.001.01.007

Dear Karsten:

Enclosed are the results of the sample submitted to our laboratory on February 23, 2018. For your reference, this analysis has been assigned our service request number P1800825.

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 1:05 pm, 03/09/18

Kate Kaneko
Project Manager

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Simi Valley, CA 93065
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www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1800825

CASE NARRATIVE

The sample was received intact under chain of custody on February 23, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1800825

Date Received: 2/23/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0218	P1800825-001	Air	2/21/2018	11:00	1SC00894	-0.26	5.24	X

Air - Chain of Custody Record & Analytical Service Request

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: P1800925

Company Name & Address (Reporting Information): PES ENVIRONMENTAL INC. 1215 4th AVE SITE 1350 SEATTLE, WA 98161

Project Name: MVSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

ALS Contact: Kate Kaneko

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	Analysis Method	Comments e.g. Actual Preservative or specific instructions
SVS-0218	1	2-21-18	1100	SC00894		28	2	1L	X		

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: ____ Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	2-21-18	1200			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature) Henry Perez	Date: 2/23/18	Time: 0930

Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1800825

Project: MVSC / 1358.001.01.007

Sample(s) received on: 2/23/18 Date opened: 2/23/18 by: E.PEREZ

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
P1800825-001.01	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: **SYS-0218** ALS Project ID: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800825-001

Test Code: EPA TO-15 Date Collected: 2/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 2/23/18
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00894

Initial Pressure (psig): -0.26 Final Pressure (psig): 5.24

Container Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	1.7	ND	1.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.2**	1.7	**0.85**	0.35	
74-87-3	Chloromethane	ND	1.7	ND	0.84	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	ND	0.25	
75-01-4	Vinyl Chloride	ND	1.7	ND	0.68	
106-99-0	1,3-Butadiene	ND	1.7	ND	0.78	
74-83-9	Bromomethane	ND	1.7	ND	0.44	
75-00-3	Chloroethane	ND	1.7	ND	0.65	
64-17-5	Ethanol	ND	17	ND	9.2	
75-05-8	Acetonitrile	ND	1.7	ND	1.0	
107-02-8	Acrolein	ND	6.9	ND	3.0	
67-64-1	Acetone	ND	17	ND	7.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.9**	1.7	**0.52**	0.31	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	ND	7.0	
107-13-1	Acrylonitrile	ND	1.7	ND	0.80	
75-35-4	1,1-Dichloroethene	ND	1.7	ND	0.44	
75-09-2	Methylene Chloride	ND	1.7	ND	0.50	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	ND	0.55	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	1.7	ND	0.23	
75-15-0	Carbon Disulfide	ND	17	ND	5.5	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	ND	0.44	
75-34-3	1,1-Dichloroethane	ND	1.7	ND	0.43	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	ND	0.48	
108-05-4	Vinyl Acetate	ND	17	ND	4.9	
78-93-3	2-Butanone (MEK)	ND	17	ND	5.9	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-0218** ALS Project ID: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800825-001

Test Code: EPA TO-15 Date Collected: 2/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 2/23/18
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00894

Initial Pressure (psig): -0.26 Final Pressure (psig): 5.24

Container Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.7	ND	0.44	
141-78-6	Ethyl Acetate	ND	3.5	ND	0.96	
110-54-3	n-Hexane	ND	1.7	ND	0.49	
67-66-3	Chloroform	**5.6**	1.7	**1.1**	0.35	
109-99-9	Tetrahydrofuran (THF)	ND	1.7	ND	0.59	
107-06-2	1,2-Dichloroethane	ND	1.7	ND	0.43	
71-55-6	1,1,1-Trichloroethane	ND	1.7	ND	0.32	
71-43-2	Benzene	ND	1.7	ND	0.54	
56-23-5	Carbon Tetrachloride	ND	1.7	ND	0.27	
110-82-7	Cyclohexane	ND	3.5	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.7	ND	0.37	
75-27-4	Bromodichloromethane	ND	1.7	ND	0.26	
79-01-6	Trichloroethene	ND	1.7	ND	0.32	
123-91-1	1,4-Dioxane	ND	1.7	ND	0.48	
80-62-6	Methyl Methacrylate	ND	3.5	ND	0.84	
142-82-5	n-Heptane	ND	1.7	ND	0.42	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	ND	0.38	
108-10-1	4-Methyl-2-pentanone	ND	1.7	ND	0.42	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	ND	0.38	
79-00-5	1,1,2-Trichloroethane	ND	1.7	ND	0.32	
108-88-3	Toluene	**3.8**	1.7	**1.0**	0.46	
591-78-6	2-Hexanone	ND	1.7	ND	0.42	
124-48-1	Dibromochloromethane	ND	1.7	ND	0.20	
106-93-4	1,2-Dibromoethane	ND	1.7	ND	0.22	
123-86-4	n-Butyl Acetate	ND	1.7	ND	0.36	

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: **SYS-0218** ALS Project ID: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1800825-001

Test Code: EPA TO-15 Date Collected: 2/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 2/23/18
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00894

Initial Pressure (psig): -0.26 Final Pressure (psig): 5.24

Container Dilution Factor: 1.38

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	1.7	ND	0.37	
127-18-4	Tetrachloroethene	**200**	1.7	**29**	0.25	
108-90-7	Chlorobenzene	ND	1.7	ND	0.37	
100-41-4	Ethylbenzene	ND	1.7	ND	0.40	
179601-23-1	m,p-Xylenes	**3.7**	3.5	**0.86**	0.79	
75-25-2	Bromoform	ND	1.7	ND	0.17	
100-42-5	Styrene	ND	1.7	ND	0.41	
95-47-6	o-Xylene	ND	1.7	ND	0.40	
111-84-2	n-Nonane	ND	1.7	ND	0.33	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	ND	0.25	
98-82-8	Cumene	ND	1.7	ND	0.35	
80-56-8	alpha-Pinene	ND	1.7	ND	0.31	
103-65-1	n-Propylbenzene	ND	1.7	ND	0.35	
622-96-8	4-Ethyltoluene	ND	1.7	ND	0.35	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	ND	0.35	
95-63-6	1,2,4-Trimethylbenzene	ND	1.7	ND	0.35	
100-44-7	Benzyl Chloride	ND	3.5	ND	0.67	
541-73-1	1,3-Dichlorobenzene	ND	1.7	ND	0.29	
106-46-7	1,4-Dichlorobenzene	ND	1.7	ND	0.29	
95-50-1	1,2-Dichlorobenzene	ND	1.7	ND	0.29	
5989-27-5	d-Limonene	ND	1.7	ND	0.31	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	ND	0.18	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	ND	0.23	
91-20-3	Naphthalene	ND	1.7	ND	0.33	
87-68-3	Hexachlorobutadiene	ND	1.7	ND	0.16	

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: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 3/2/18
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
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1800825

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 3/2/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1800825

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 3/2/18

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
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	1.0	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1800825

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 2/21/18
Analyst: Anusha Bayyarapu Date(s) Received: 2/23/18
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 3/2 - 3/3/18
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	P180302-MB	**107**	**102**	**97**	70-130	
Lab Control Sample	P180302-LCS	**100**	**101**	**95**	70-130	
Duplicate Lab Control Sample	P180302-DLCS	**99**	**101**	**94**	70-130	
SYS-0218	P1800825-001	**104**	**103**	**94**	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: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
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
115-07-1	Propene	210	180	195	**86**	**93**	54-133	8	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	197	204	**92**	**96**	64-115	4	25	
74-87-3	Chloromethane	210	192	204	**91**	**97**	47-140	6	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	182	189	**86**	**90**	60-112	5	25	
75-01-4	Vinyl Chloride	211	198	207	**94**	**98**	63-127	4	25	
106-99-0	1,3-Butadiene	210	200	210	**95**	**100**	57-149	5	25	
74-83-9	Bromomethane	210	192	205	**91**	**98**	63-132	7	25	
75-00-3	Chloroethane	210	186	201	**89**	**96**	68-129	8	25	
64-17-5	Ethanol	1,040	955	1010	**92**	**97**	62-131	5	25	
75-05-8	Acetonitrile	210	194	209	**92**	**100**	56-136	8	25	
107-02-8	Acrolein	209	199	211	**95**	**101**	60-132	6	25	
67-64-1	Acetone	1,050	940	974	**90**	**93**	63-124	3	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	183	188	**88**	**90**	65-113	2	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	393	409	**93**	**97**	62-135	4	25	
107-13-1	Acrylonitrile	212	209	220	**99**	**104**	68-138	5	25	
75-35-4	1,1-Dichloroethene	213	197	204	**92**	**96**	72-118	4	25	
75-09-2	Methylene Chloride	213	189	197	**89**	**92**	67-116	3	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	205	214	**97**	**101**	61-143	4	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	191	196	**89**	**92**	68-113	3	25	
75-15-0	Carbon Disulfide	214	207	215	**97**	**100**	68-120	3	25	
156-60-5	trans-1,2-Dichloroethene	214	215	223	**100**	**104**	71-125	4	25	
75-34-3	1,1-Dichloroethane	212	191	199	**90**	**94**	68-118	4	25	
1634-04-4	Methyl tert-Butyl Ether	213	198	206	**93**	**97**	60-123	4	25	
108-05-4	Vinyl Acetate	1,060	1110	1150	**105**	**108**	73-135	3	25	
78-93-3	2-Butanone (MEK)	212	202	208	**95**	**98**	70-129	3	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
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
156-59-2	cis-1,2-Dichloroethene	212	200	209	**94**	**99**	69-121	5	25	
141-78-6	Ethyl Acetate	426	416	431	**98**	**101**	66-140	3	25	
110-54-3	n-Hexane	213	206	212	**97**	**100**	61-124	3	25	
67-66-3	Chloroform	212	196	202	**92**	**95**	69-113	3	25	
109-99-9	Tetrahydrofuran (THF)	212	183	191	**86**	**90**	66-121	5	25	
107-06-2	1,2-Dichloroethane	212	196	202	**92**	**95**	62-120	3	25	
71-55-6	1,1,1-Trichloroethane	212	202	209	**95**	**99**	65-116	4	25	
71-43-2	Benzene	213	196	204	**92**	**96**	66-111	4	25	
56-23-5	Carbon Tetrachloride	214	206	215	**96**	**100**	64-122	4	25	
110-82-7	Cyclohexane	425	394	409	**93**	**96**	69-115	3	25	
78-87-5	1,2-Dichloropropane	212	196	205	**92**	**97**	69-121	5	25	
75-27-4	Bromodichloromethane	214	215	223	**100**	**104**	69-123	4	25	
79-01-6	Trichloroethene	212	193	201	**91**	**95**	69-112	4	25	
123-91-1	1,4-Dioxane	213	200	209	**94**	**98**	74-123	4	25	
80-62-6	Methyl Methacrylate	424	417	434	**98**	**102**	75-125	4	25	
142-82-5	n-Heptane	213	195	202	**92**	**95**	68-118	3	25	
10061-01-5	cis-1,3-Dichloropropene	208	219	227	**105**	**109**	74-129	4	25	
108-10-1	4-Methyl-2-pentanone	213	206	214	**97**	**100**	66-138	3	25	
10061-02-6	trans-1,3-Dichloropropene	213	232	241	**109**	**113**	75-130	4	25	
79-00-5	1,1,2-Trichloroethane	212	205	213	**97**	**100**	73-117	3	25	
108-88-3	Toluene	211	194	201	**92**	**95**	66-114	3	25	
591-78-6	2-Hexanone	211	193	202	**91**	**96**	58-146	5	25	
124-48-1	Dibromochloromethane	212	219	227	**103**	**107**	67-130	4	25	
106-93-4	1,2-Dibromoethane	211	213	222	**101**	**105**	70-127	4	25	
123-86-4	n-Butyl Acetate	215	207	215	**96**	**100**	62-140	4	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1800825
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180302-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 3/3/18
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
111-65-9	n-Octane	212	196	204	**92**	**96**	65-121	4	25	
127-18-4	Tetrachloroethene	212	196	202	**92**	**95**	62-119	3	25	
108-90-7	Chlorobenzene	212	200	207	**94**	**98**	66-115	4	25	
100-41-4	Ethylbenzene	212	200	208	**94**	**98**	69-117	4	25	
179601-23-1	m,p-Xylenes	424	407	421	**96**	**99**	67-117	3	25	
75-25-2	Bromoform	212	228	237	**108**	**112**	67-135	4	25	
100-42-5	Styrene	211	215	224	**102**	**106**	70-128	4	25	
95-47-6	o-Xylene	211	204	211	**97**	**100**	67-118	3	25	
111-84-2	n-Nonane	212	215	220	**101**	**104**	61-127	3	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	214	221	**101**	**104**	70-125	3	25	
98-82-8	Cumene	212	202	209	**95**	**99**	68-116	4	25	
80-56-8	alpha-Pinene	213	214	221	**100**	**104**	69-122	4	25	
103-65-1	n-Propylbenzene	214	204	212	**95**	**99**	70-118	4	25	
622-96-8	4-Ethyltoluene	211	215	223	**102**	**106**	69-124	4	25	
108-67-8	1,3,5-Trimethylbenzene	212	201	208	**95**	**98**	65-117	3	25	
95-63-6	1,2,4-Trimethylbenzene	212	201	208	**95**	**98**	67-124	3	25	
100-44-7	Benzyl Chloride	212	266	277	**125**	**131**	75-142	5	25	
541-73-1	1,3-Dichlorobenzene	212	208	215	**98**	**101**	70-124	3	25	
106-46-7	1,4-Dichlorobenzene	214	204	211	**95**	**99**	63-124	4	25	
95-50-1	1,2-Dichlorobenzene	214	211	219	**99**	**102**	66-125	3	25	
5989-27-5	d-Limonene	213	220	227	**103**	**107**	64-135	4	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	231	240	**110**	**114**	73-136	4	25	
120-82-1	1,2,4-Trichlorobenzene	218	237	246	**109**	**113**	70-141	4	25	
91-20-3	Naphthalene	209	267	276	**128**	**132**	71-146	3	25	
87-68-3	Hexachlorobutadiene	212	196	203	**92**	**96**	63-126	4	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.

MEMORANDUM

TO: Project File **DATE:** March 14, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: February 21, 2018 Air Sample

LAB: ALS Environmental P1800825

One (1) soil vapor extraction sample was collected on February 21, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1800825.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa ^{TM} canister (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. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed within the 30-day recommended holding time limit for the air sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance 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.

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LABORATORY REPORT

April 12, 2018

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

RE: MVSC / 1358.001.01.007

DearMatt:

Enclosed are the results of the sample submitted to our laboratory on March 29, 2018. For your reference, this analysis has been assigned our service request number P1801580.

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 4:20 pm, 04/12/18

Kate Kaneko
Project Manager

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www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1801580

CASE NARRATIVE

The sample was received intact under chain of custody on March 29, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)		05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1801580

Date Received: 3/29/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0318	P1801580-001	Air	3/27/2018	13:15	1SC01043	-0.06	5.21	X

Air - Chain of Custody Record & Analytical Service Request

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. R1801580

Company Name & Address (Reporting Information)
PES ENVIRONMENTAL, INC
1215 4th AVE STE 1350
SEATTLE, WA 98161

Project Name: MUSC

Project Number: 1358.001.01.007

Project Manager: MATT DAHL

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

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		Comments e.g. Actual Preservative or specific instructions
SYS-0318	1	3-27-18	1315	ISC01043	—	28	0	1L	X		

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: EDM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	3-27-18	1330			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				3-27-18	0830

Cooler / Blank Temperature ____°C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1801580

Project: MVSC / 1358.001.01.007

Sample(s) received on: 3/29/18 Date opened: 3/29/18 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)? Top and bottom of box sealing. 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
P1801580-001.01	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: **SYS-0318** ALS Project ID: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1801580-001

Test Code: EPA TO-15 Date Collected: 3/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 3/29/18
Analyst: Simon Cao Date Analyzed: 4/9/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01043

Initial Pressure (psig): -0.06 Final Pressure (psig): 5.21

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	1.7	ND	0.99	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.3**	1.7	**0.66**	0.34	
74-87-3	Chloromethane	ND	1.7	ND	0.82	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.7	ND	0.24	
75-01-4	Vinyl Chloride	ND	1.7	ND	0.67	
106-99-0	1,3-Butadiene	ND	1.7	ND	0.77	
74-83-9	Bromomethane	ND	1.7	ND	0.44	
75-00-3	Chloroethane	ND	1.7	ND	0.64	
64-17-5	Ethanol	ND	17	ND	9.0	
75-05-8	Acetonitrile	**9.6**	1.7	**5.7**	1.0	
107-02-8	Acrolein	ND	6.8	ND	3.0	
67-64-1	Acetone	ND	17	ND	7.2	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.2**	1.7	**0.39**	0.30	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	17	ND	6.9	
107-13-1	Acrylonitrile	ND	1.7	ND	0.78	
75-35-4	1,1-Dichloroethene	ND	1.7	ND	0.43	
75-09-2	Methylene Chloride	ND	1.7	ND	0.49	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.7	ND	0.54	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	1.7	ND	0.22	
75-15-0	Carbon Disulfide	ND	17	ND	5.5	
156-60-5	trans-1,2-Dichloroethene	ND	1.7	ND	0.43	
75-34-3	1,1-Dichloroethane	ND	1.7	ND	0.42	
1634-04-4	Methyl tert-Butyl Ether	ND	1.7	ND	0.47	
108-05-4	Vinyl Acetate	ND	17	ND	4.8	
78-93-3	2-Butanone (MEK)	ND	17	ND	5.8	

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: **SYS-0318** ALS Project ID: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1801580-001

Test Code: EPA TO-15 Date Collected: 3/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 3/29/18
Analyst: Simon Cao Date Analyzed: 4/9/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01043

Initial Pressure (psig): -0.06 Final Pressure (psig): 5.21

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	1.7	ND	0.43	
141-78-6	Ethyl Acetate	**17**	3.4	**4.7**	0.94	
110-54-3	n-Hexane	ND	1.7	ND	0.48	
67-66-3	Chloroform	**4.4**	1.7	**0.89**	0.35	
109-99-9	Tetrahydrofuran (THF)	**4.2**	1.7	**1.4**	0.58	
107-06-2	1,2-Dichloroethane	ND	1.7	ND	0.42	
71-55-6	1,1,1-Trichloroethane	ND	1.7	ND	0.31	
71-43-2	Benzene	ND	1.7	ND	0.53	
56-23-5	Carbon Tetrachloride	ND	1.7	ND	0.27	
110-82-7	Cyclohexane	ND	3.4	ND	0.99	
78-87-5	1,2-Dichloropropane	ND	1.7	ND	0.37	
75-27-4	Bromodichloromethane	ND	1.7	ND	0.25	
79-01-6	Trichloroethene	ND	1.7	ND	0.32	
123-91-1	1,4-Dioxane	ND	1.7	ND	0.47	
80-62-6	Methyl Methacrylate	ND	3.4	ND	0.83	
142-82-5	n-Heptane	ND	1.7	ND	0.41	
10061-01-5	cis-1,3-Dichloropropene	ND	1.7	ND	0.37	
108-10-1	4-Methyl-2-pentanone	ND	1.7	ND	0.41	
10061-02-6	trans-1,3-Dichloropropene	ND	1.7	ND	0.37	
79-00-5	1,1,2-Trichloroethane	ND	1.7	ND	0.31	
108-88-3	Toluene	**4.1**	1.7	**1.1**	0.45	
591-78-6	2-Hexanone	ND	1.7	ND	0.42	
124-48-1	Dibromochloromethane	ND	1.7	ND	0.20	
106-93-4	1,2-Dibromoethane	ND	1.7	ND	0.22	
123-86-4	n-Butyl Acetate	ND	1.7	ND	0.36	

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: **SYS-0318** ALS Project ID: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1801580-001

Test Code: EPA TO-15 Date Collected: 3/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 3/29/18
Analyst: Simon Cao Date Analyzed: 4/9/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01043

Initial Pressure (psig): -0.06 Final Pressure (psig): 5.21

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	1.7	ND	0.36	
127-18-4	Tetrachloroethene	**130**	1.7	**20**	0.25	
108-90-7	Chlorobenzene	ND	1.7	ND	0.37	
100-41-4	Ethylbenzene	ND	1.7	ND	0.39	
179601-23-1	m,p-Xylenes	**4.1**	3.4	**0.95**	0.78	
75-25-2	Bromoform	ND	1.7	ND	0.16	
100-42-5	Styrene	ND	1.7	ND	0.40	
95-47-6	o-Xylene	ND	1.7	ND	0.39	
111-84-2	n-Nonane	ND	1.7	ND	0.32	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.7	ND	0.25	
98-82-8	Cumene	ND	1.7	ND	0.35	
80-56-8	alpha-Pinene	ND	1.7	ND	0.31	
103-65-1	n-Propylbenzene	ND	1.7	ND	0.35	
622-96-8	4-Ethyltoluene	ND	1.7	ND	0.35	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	ND	0.35	
95-63-6	1,2,4-Trimethylbenzene	ND	1.7	ND	0.35	
100-44-7	Benzyl Chloride	ND	3.4	ND	0.66	
541-73-1	1,3-Dichlorobenzene	ND	1.7	ND	0.28	
106-46-7	1,4-Dichlorobenzene	ND	1.7	ND	0.28	
95-50-1	1,2-Dichlorobenzene	ND	1.7	ND	0.28	
5989-27-5	d-Limonene	ND	1.7	ND	0.31	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.7	ND	0.18	
120-82-1	1,2,4-Trichlorobenzene	ND	1.7	ND	0.23	
91-20-3	Naphthalene	ND	1.7	ND	0.32	
87-68-3	Hexachlorobutadiene	ND	1.7	ND	0.16	

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: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Simon Cao Date Analyzed: 4/9/18
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
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1801580

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Simon Cao Date Analyzed: 4/9/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1801580

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Simon Cao Date Analyzed: 4/9/18

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
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	1.0	ND	0.19	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1801580

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 3/27/18
Analyst: Simon Cao Date(s) Received: 3/29/18
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 4/9/18
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	P180409-MB	**92**	**102**	**92**	70-130	
Lab Control Sample	P180409-LCS	**91**	**103**	**92**	70-130	
Duplicate Lab Control Sample	P180409-DLCS	**92**	**104**	**93**	70-130	
SYS-0318	P1801580-001	**94**	**100**	**93**	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: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Simon Cao Date Analyzed: 4/9/18
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
115-07-1	Propene	210	183	171	**87**	**81**	54-133	7	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	170	162	**80**	**76**	64-115	5	25	
74-87-3	Chloromethane	210	173	163	**82**	**78**	47-140	5	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	149	144	**71**	**68**	60-112	4	25	
75-01-4	Vinyl Chloride	211	161	155	**76**	**73**	63-127	4	25	
106-99-0	1,3-Butadiene	210	157	150	**75**	**71**	57-149	5	25	
74-83-9	Bromomethane	210	194	185	**92**	**88**	63-132	4	25	
75-00-3	Chloroethane	210	197	188	**94**	**90**	68-129	4	25	
64-17-5	Ethanol	1,040	835	801	**80**	**77**	62-131	4	25	
75-05-8	Acetonitrile	210	189	181	**90**	**86**	56-136	5	25	
107-02-8	Acrolein	209	194	185	**93**	**89**	60-132	4	25	
67-64-1	Acetone	1,050	815	778	**78**	**74**	63-124	5	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	155	151	**75**	**73**	65-113	3	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	338	326	**80**	**77**	62-135	4	25	
107-13-1	Acrylonitrile	212	199	191	**94**	**90**	68-138	4	25	
75-35-4	1,1-Dichloroethene	213	183	178	**86**	**84**	72-118	2	25	
75-09-2	Methylene Chloride	213	180	174	**85**	**82**	67-116	4	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	186	180	**88**	**85**	61-143	3	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	163	159	**76**	**74**	68-113	3	25	
75-15-0	Carbon Disulfide	214	193	188	**90**	**88**	68-120	2	25	
156-60-5	trans-1,2-Dichloroethene	214	200	195	**93**	**91**	71-125	2	25	
75-34-3	1,1-Dichloroethane	212	185	181	**87**	**85**	68-118	2	25	
1634-04-4	Methyl tert-Butyl Ether	213	185	180	**87**	**85**	60-123	2	25	
108-05-4	Vinyl Acetate	1,060	975	952	**92**	**90**	73-135	2	25	
78-93-3	2-Butanone (MEK)	212	188	185	**89**	**87**	70-129	2	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Simon Cao Date Analyzed: 4/9/18
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
156-59-2	cis-1,2-Dichloroethene	212	185	180	**87**	**85**	69-121	2	25	
141-78-6	Ethyl Acetate	426	371	363	**87**	**85**	66-140	2	25	
110-54-3	n-Hexane	213	198	194	**93**	**91**	61-124	2	25	
67-66-3	Chloroform	212	174	171	**82**	**81**	69-113	1	25	
109-99-9	Tetrahydrofuran (THF)	212	178	175	**84**	**83**	66-121	1	25	
107-06-2	1,2-Dichloroethane	212	163	159	**77**	**75**	62-120	3	25	
71-55-6	1,1,1-Trichloroethane	212	161	156	**76**	**74**	65-116	3	25	
71-43-2	Benzene	213	179	174	**84**	**82**	66-111	2	25	
56-23-5	Carbon Tetrachloride	214	159	155	**74**	**72**	64-122	3	25	
110-82-7	Cyclohexane	425	344	333	**81**	**78**	69-115	4	25	
78-87-5	1,2-Dichloropropane	212	185	180	**87**	**85**	69-121	2	25	
75-27-4	Bromodichloromethane	214	175	171	**82**	**80**	69-123	2	25	
79-01-6	Trichloroethene	212	171	167	**81**	**79**	69-112	3	25	
123-91-1	1,4-Dioxane	213	177	173	**83**	**81**	74-123	2	25	
80-62-6	Methyl Methacrylate	424	366	358	**86**	**84**	75-125	2	25	
142-82-5	n-Heptane	213	183	179	**86**	**84**	68-118	2	25	
10061-01-5	cis-1,3-Dichloropropene	208	189	185	**91**	**89**	74-129	2	25	
108-10-1	4-Methyl-2-pentanone	213	179	174	**84**	**82**	66-138	2	25	
10061-02-6	trans-1,3-Dichloropropene	213	197	193	**92**	**91**	75-130	1	25	
79-00-5	1,1,2-Trichloroethane	212	183	178	**86**	**84**	73-117	2	25	
108-88-3	Toluene	211	176	171	**83**	**81**	66-114	2	25	
591-78-6	2-Hexanone	211	158	154	**75**	**73**	58-146	3	25	
124-48-1	Dibromochloromethane	212	184	179	**87**	**84**	67-130	4	25	
106-93-4	1,2-Dibromoethane	211	189	184	**90**	**87**	70-127	3	25	
123-86-4	n-Butyl Acetate	215	173	170	**80**	**79**	62-140	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.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1801580
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180409-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Simon Cao Date Analyzed: 4/9/18
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
111-65-9	n-Octane	212	181	177	**85**	**83**	65-121	2	25	
127-18-4	Tetrachloroethene	212	170	166	**80**	**78**	62-119	3	25	
108-90-7	Chlorobenzene	212	176	172	**83**	**81**	66-115	2	25	
100-41-4	Ethylbenzene	212	173	169	**82**	**80**	69-117	2	25	
179601-23-1	m,p-Xylenes	424	339	332	**80**	**78**	67-117	3	25	
75-25-2	Bromoform	212	186	183	**88**	**86**	67-135	2	25	
100-42-5	Styrene	211	183	180	**87**	**85**	70-128	2	25	
95-47-6	o-Xylene	211	171	167	**81**	**79**	67-118	3	25	
111-84-2	n-Nonane	212	181	177	**85**	**83**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	181	176	**85**	**83**	70-125	2	25	
98-82-8	Cumene	212	170	166	**80**	**78**	68-116	3	25	
80-56-8	alpha-Pinene	213	181	177	**85**	**83**	69-122	2	25	
103-65-1	n-Propylbenzene	214	171	167	**80**	**78**	70-118	3	25	
622-96-8	4-Ethyltoluene	211	172	168	**82**	**80**	69-124	2	25	
108-67-8	1,3,5-Trimethylbenzene	212	166	162	**78**	**76**	65-117	3	25	
95-63-6	1,2,4-Trimethylbenzene	212	158	154	**75**	**73**	67-124	3	25	
100-44-7	Benzyl Chloride	212	213	209	**100**	**99**	75-142	1	25	
541-73-1	1,3-Dichlorobenzene	212	167	164	**79**	**77**	70-124	3	25	
106-46-7	1,4-Dichlorobenzene	214	167	164	**78**	**77**	63-124	1	25	
95-50-1	1,2-Dichlorobenzene	214	167	164	**78**	**77**	66-125	1	25	
5989-27-5	d-Limonene	213	170	167	**80**	**78**	64-135	3	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	191	188	**91**	**90**	73-136	1	25	
120-82-1	1,2,4-Trichlorobenzene	218	195	193	**89**	**89**	70-141	0	25	
91-20-3	Naphthalene	209	209	206	**100**	**99**	71-146	1	25	
87-68-3	Hexachlorobutadiene	212	162	161	**76**	**76**	63-126	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.

MEMORANDUM

TO: Project File **DATE:** May 3, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: March 27, 2018 Air Sample

LAB: ALS Environmental P1801580

One (1) soil vapor extraction sample was collected on March 27, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1801580.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa ^{TM} canister (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. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed within the 30-day recommended holding time limit for the air sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance 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.

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LABORATORY REPORT

June 11, 2018

Karsten Springstead
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: MVSC / 1358.001.01.007

Dear Karsten:

Enclosed are the results of the sample submitted to our laboratory on May 25, 2018. For your reference, this analysis has been assigned our service request number P1802682.

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 5:01 pm, 06/11/18

Kate Kaneko
Project Manager

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www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1802682

CASE NARRATIVE

The sample was received intact under chain of custody on May 25, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Arizona DHS	http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home	AZ0694
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Louisiana DEQ (NELAP)	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	05071
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-005
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
PJLA (DoD ELAP)	http://www.pjlabs.com/search-accredited-labs	65818 (Testing)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-17-8
Utah DOH (NELAP)	http://health.utah.gov/lab/environmental-lab-certification/	CA016272017-8
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: P1802682
Project ID: MVSC / 1358.001.01.007

Date Received: 5/25/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0518	P1802682-001	Air	5/21/2018	12:00	SC01973	-0.87	3.53	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 1

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Simi Valley, California 93065
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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: R1802682

Company Name & Address (Reporting Information)	PES ENVIRONMENTAL, INC. 1215 4th Ave STE 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	MUSC
Project Number	1358.001.01.007
P.O. # / Billing Information	1358.001.01.007
Sampler (Print & Sign)	Karsten Sprystead

ALS Contact:

Analysis Method: TO-15

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		Comments e.g. Actual Preservative or specific instructions
SFS-0518	1	5-21-18	1200	SC01973		29	1	6L	X		

5 of 16

Report Tier Levels - please select

Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries ____
Tier III (Results + QC & Calibration Summaries) X
Tier IV (Date 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: 5-21-18	Time: 1230	Received by: (Signature)	Date:	Time:	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 5-25-18	Time: 0930	Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1802682

Project: MVSC / 1358.001.01.007

Sample(s) received on: 5/25/18 Date opened: 5/25/18 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)? Top and bottom box sealing. 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
P1802682-001.01	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: **SYS-0518** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1802682-001

Test Code: EPA TO-15 Date Collected: 5/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 5/25/18
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01973

Initial Pressure (psig): -0.87 Final Pressure (psig): 3.53

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.69	ND	0.40	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.2**	0.69	**0.65**	0.14	
74-87-3	Chloromethane	ND	0.66	ND	0.32	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.67	ND	0.096	
75-01-4	Vinyl Chloride	ND	0.69	ND	0.27	
106-99-0	1,3-Butadiene	ND	0.70	ND	0.32	
74-83-9	Bromomethane	ND	0.66	ND	0.17	
75-00-3	Chloroethane	ND	0.67	ND	0.26	
64-17-5	Ethanol	ND	7.0	ND	3.7	
75-05-8	Acetonitrile	**1.5**	0.70	**0.92**	0.42	
107-02-8	Acrolein	ND	2.8	ND	1.2	
67-64-1	Acetone	ND	7.0	ND	2.9	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.3**	0.70	**0.41**	0.12	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.0	ND	2.8	
107-13-1	Acrylonitrile	ND	0.70	ND	0.32	
75-35-4	1,1-Dichloroethene	ND	0.70	ND	0.18	
75-09-2	Methylene Chloride	ND	0.70	ND	0.20	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.70	ND	0.22	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.70	ND	0.091	
75-15-0	Carbon Disulfide	ND	7.0	ND	2.2	
156-60-5	trans-1,2-Dichloroethene	ND	0.71	ND	0.18	
75-34-3	1,1-Dichloroethane	ND	0.67	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.71	ND	0.20	
108-05-4	Vinyl Acetate	ND	7.0	ND	2.0	
78-93-3	2-Butanone (MEK)	ND	7.0	ND	2.4	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-0518** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1802682-001

Test Code: EPA TO-15 Date Collected: 5/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 5/25/18
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01973

Initial Pressure (psig): -0.87 Final Pressure (psig): 3.53

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**2.8**	0.70	**0.70**	0.18	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.40	
110-54-3	n-Hexane	**1.6**	0.70	**0.45**	0.20	
67-66-3	Chloroform	**5.4**	0.70	**1.1**	0.14	
109-99-9	Tetrahydrofuran (THF)	**0.97**	0.70	**0.33**	0.24	
107-06-2	1,2-Dichloroethane	ND	0.70	ND	0.17	
71-55-6	1,1,1-Trichloroethane	ND	0.71	ND	0.13	
71-43-2	Benzene	ND	0.70	ND	0.22	
56-23-5	Carbon Tetrachloride	ND	0.70	ND	0.11	
110-82-7	Cyclohexane	ND	1.5	ND	0.42	
78-87-5	1,2-Dichloropropane	ND	0.70	ND	0.15	
75-27-4	Bromodichloromethane	ND	0.70	ND	0.10	
79-01-6	Trichloroethene	**1.6**	0.70	**0.31**	0.13	
123-91-1	1,4-Dioxane	ND	0.70	ND	0.19	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.35	
142-82-5	n-Heptane	**1.5**	0.70	**0.36**	0.17	
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	ND	0.16	
108-10-1	4-Methyl-2-pentanone	ND	0.70	ND	0.17	
10061-02-6	trans-1,3-Dichloropropene	ND	0.70	ND	0.15	
79-00-5	1,1,2-Trichloroethane	ND	0.70	ND	0.13	
108-88-3	Toluene	**3.1**	0.70	**0.82**	0.19	
591-78-6	2-Hexanone	ND	0.70	ND	0.17	
124-48-1	Dibromochloromethane	ND	0.70	ND	0.082	
106-93-4	1,2-Dibromoethane	ND	0.70	ND	0.091	
123-86-4	n-Butyl Acetate	ND	0.70	ND	0.15	

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: **SYS-0518** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1802682-001

Test Code: EPA TO-15 Date Collected: 5/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 5/25/18
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01973

Initial Pressure (psig): -0.87 Final Pressure (psig): 3.53

Container Dilution Factor: 1.32

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.70	ND	0.15	
127-18-4	Tetrachloroethene	**220**	7.0	**32**	1.0	**D**
108-90-7	Chlorobenzene	ND	0.70	ND	0.15	
100-41-4	Ethylbenzene	**61**	0.70	**14**	0.16	
179601-23-1	m,p-Xylenes	**160**	1.5	**37**	0.33	
75-25-2	Bromoform	ND	0.70	ND	0.068	
100-42-5	Styrene	ND	0.70	ND	0.16	
95-47-6	o-Xylene	**33**	0.70	**7.6**	0.16	
111-84-2	n-Nonane	ND	0.70	ND	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.70	ND	0.10	
98-82-8	Cumene	ND	0.70	ND	0.14	
80-56-8	alpha-Pinene	ND	0.69	ND	0.12	
103-65-1	n-Propylbenzene	ND	0.70	ND	0.14	
622-96-8	4-Ethyltoluene	**1.1**	0.69	**0.22**	0.14	
108-67-8	1,3,5-Trimethylbenzene	**0.76**	0.69	**0.15**	0.14	
95-63-6	1,2,4-Trimethylbenzene	**2.5**	0.70	**0.51**	0.14	
100-44-7	Benzyl Chloride	ND	1.5	ND	0.28	
541-73-1	1,3-Dichlorobenzene	ND	0.71	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.70	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.71	ND	0.12	
5989-27-5	d-Limonene	**0.74**	0.66	**0.13**	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.70	ND	0.072	
120-82-1	1,2,4-Trichlorobenzene	ND	0.73	ND	0.098	
91-20-3	Naphthalene	**1.1**	0.70	**0.21**	0.13	
87-68-3	Hexachlorobutadiene	ND	0.70	ND	0.066	

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** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.52	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.53	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.3	ND	2.8	
75-05-8	Acetonitrile	ND	0.53	ND	0.32	
107-02-8	Acrolein	ND	2.1	ND	0.92	
67-64-1	Acetone	ND	5.3	ND	2.2	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.3	ND	2.2	
107-13-1	Acrylonitrile	ND	0.53	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.53	ND	0.13	
75-09-2	Methylene Chloride	ND	0.53	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	5.3	ND	1.7	
156-60-5	trans-1,2-Dichloroethene	ND	0.54	ND	0.14	
75-34-3	1,1-Dichloroethane	ND	0.51	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	5.3	ND	1.8	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1802682

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 5/31/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.53	ND	0.15	
67-66-3	Chloroform	ND	0.53	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.53	ND	0.17	
56-23-5	Carbon Tetrachloride	ND	0.53	ND	0.084	
110-82-7	Cyclohexane	ND	1.1	ND	0.32	
78-87-5	1,2-Dichloropropane	ND	0.53	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.53	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.53	ND	0.097	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.53	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.53	ND	0.062	
106-93-4	1,2-Dibromoethane	ND	0.53	ND	0.069	
123-86-4	n-Butyl Acetate	ND	0.53	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1802682

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 5/31/18

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
111-65-9	n-Octane	ND	0.53	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.53	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.53	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.53	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.52	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.53	ND	0.088	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.53	ND	0.055	
120-82-1	1,2,4-Trichlorobenzene	ND	0.55	ND	0.074	
91-20-3	Naphthalene	ND	0.53	ND	0.10	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1802682

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 5/21/18
Analyst: Raneem Sahtah Date(s) Received: 5/25/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 5/31/18
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	P180531-MB	**102**	**100**	**101**	70-130	
Lab Control Sample	P180531-LCS	**98**	**100**	**104**	70-130	
Duplicate Lab Control Sample	P180531-DLCS	**97**	**100**	**104**	70-130	
SYS-0518	P1802682-001	**98**	**108**	**88**	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: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 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
115-07-1	Propene	210	202	195	**96**	**93**	54-133	3	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	206	201	**97**	**94**	64-115	3	25	
74-87-3	Chloromethane	210	199	198	**95**	**94**	47-140	1	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	204	198	**97**	**94**	60-112	3	25	
75-01-4	Vinyl Chloride	211	211	205	**100**	**97**	63-127	3	25	
106-99-0	1,3-Butadiene	210	238	230	**113**	**110**	57-149	3	25	
74-83-9	Bromomethane	210	212	208	**101**	**99**	63-132	2	25	
75-00-3	Chloroethane	210	210	203	**100**	**97**	68-129	3	25	
64-17-5	Ethanol	1,040	1070	1050	**103**	**101**	62-131	2	25	
75-05-8	Acetonitrile	210	246	239	**117**	**114**	56-136	3	25	
107-02-8	Acrolein	209	257	250	**123**	**120**	60-132	2	25	
67-64-1	Acetone	1,050	1080	1040	**103**	**99**	63-124	4	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	204	198	**98**	**95**	65-113	3	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	433	425	**103**	**101**	62-135	2	25	
107-13-1	Acrylonitrile	212	245	238	**116**	**112**	68-138	4	25	
75-35-4	1,1-Dichloroethene	213	216	212	**101**	**100**	72-118	1	25	
75-09-2	Methylene Chloride	213	223	218	**105**	**102**	67-116	3	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	226	221	**107**	**104**	61-143	3	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	212	209	**99**	**98**	68-113	1	25	
75-15-0	Carbon Disulfide	214	208	204	**97**	**95**	68-120	2	25	
156-60-5	trans-1,2-Dichloroethene	214	230	226	**107**	**106**	71-125	0.9	25	
75-34-3	1,1-Dichloroethane	212	206	202	**97**	**95**	68-118	2	25	
1634-04-4	Methyl tert-Butyl Ether	213	214	211	**100**	**99**	60-123	1	25	
108-05-4	Vinyl Acetate	1,060	1330	1300	**125**	**123**	73-135	2	25	
78-93-3	2-Butanone (MEK)	212	234	228	**110**	**108**	70-129	2	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	212	216	211	**102**	**100**	69-121	2	25	
141-78-6	Ethyl Acetate	426	519	504	**122**	**118**	66-140	3	25	
110-54-3	n-Hexane	213	210	205	**99**	**96**	61-124	3	25	
67-66-3	Chloroform	212	209	203	**99**	**96**	69-113	3	25	
109-99-9	Tetrahydrofuran (THF)	212	206	201	**97**	**95**	66-121	2	25	
107-06-2	1,2-Dichloroethane	212	211	204	**100**	**96**	62-120	4	25	
71-55-6	1,1,1-Trichloroethane	212	213	207	**100**	**98**	65-116	2	25	
71-43-2	Benzene	213	219	212	**103**	**100**	66-111	3	25	
56-23-5	Carbon Tetrachloride	214	221	213	**103**	**100**	64-122	3	25	
110-82-7	Cyclohexane	425	427	414	**100**	**97**	69-115	3	25	
78-87-5	1,2-Dichloropropane	212	216	210	**102**	**99**	69-121	3	25	
75-27-4	Bromodichloromethane	214	223	217	**104**	**101**	69-123	3	25	
79-01-6	Trichloroethene	212	221	214	**104**	**101**	69-112	3	25	
123-91-1	1,4-Dioxane	213	241	234	**113**	**110**	74-123	3	25	
80-62-6	Methyl Methacrylate	424	488	477	**115**	**113**	75-125	2	25	
142-82-5	n-Heptane	213	217	211	**102**	**99**	68-118	3	25	
10061-01-5	cis-1,3-Dichloropropene	208	241	234	**116**	**113**	74-129	3	25	
108-10-1	4-Methyl-2-pentanone	213	217	212	**102**	**100**	66-138	2	25	
10061-02-6	trans-1,3-Dichloropropene	213	273	266	**128**	**125**	75-130	2	25	
79-00-5	1,1,2-Trichloroethane	212	225	217	**106**	**102**	73-117	4	25	
108-88-3	Toluene	211	209	205	**99**	**97**	66-114	2	25	
591-78-6	2-Hexanone	211	231	228	**109**	**108**	58-146	0.9	25	
124-48-1	Dibromochloromethane	212	236	231	**111**	**109**	67-130	2	25	
106-93-4	1,2-Dibromoethane	211	235	231	**111**	**109**	70-127	2	25	
123-86-4	n-Butyl Acetate	215	240	236	**112**	**110**	62-140	2	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1802682
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180531-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 5/31/18
Sample Type: 6.0 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
111-65-9	n-Octane	212	216	212	**102**	**100**	65-121	2	25	
127-18-4	Tetrachloroethene	212	220	215	**104**	**101**	62-119	3	25	
108-90-7	Chlorobenzene	212	213	209	**100**	**99**	66-115	1	25	
100-41-4	Ethylbenzene	212	213	208	**100**	**98**	69-117	2	25	
179601-23-1	m,p-Xylenes	424	435	427	**103**	**101**	67-117	2	25	
75-25-2	Bromoform	212	250	244	**118**	**115**	67-135	3	25	
100-42-5	Styrene	211	230	226	**109**	**107**	70-128	2	25	
95-47-6	o-Xylene	211	217	213	**103**	**101**	67-118	2	25	
111-84-2	n-Nonane	212	212	208	**100**	**98**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	224	219	**106**	**103**	70-125	3	25	
98-82-8	Cumene	212	215	211	**101**	**100**	68-116	1	25	
80-56-8	alpha-Pinene	213	219	215	**103**	**101**	69-122	2	25	
103-65-1	n-Propylbenzene	214	220	216	**103**	**101**	70-118	2	25	
622-96-8	4-Ethyltoluene	211	234	230	**111**	**109**	69-124	2	25	
108-67-8	1,3,5-Trimethylbenzene	212	216	211	**102**	**100**	65-117	2	25	
95-63-6	1,2,4-Trimethylbenzene	212	231	225	**109**	**106**	67-124	3	25	
100-44-7	Benzyl Chloride	212	289	285	**136**	**134**	75-142	1	25	
541-73-1	1,3-Dichlorobenzene	212	234	228	**110**	**108**	70-124	2	25	
106-46-7	1,4-Dichlorobenzene	214	236	230	**110**	**107**	63-124	3	25	
95-50-1	1,2-Dichlorobenzene	214	242	237	**113**	**111**	66-125	2	25	
5989-27-5	d-Limonene	213	232	226	**109**	**106**	64-135	3	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	258	252	**123**	**120**	73-136	2	25	
120-82-1	1,2,4-Trichlorobenzene	218	255	250	**117**	**115**	70-141	2	25	
91-20-3	Naphthalene	209	237	234	**113**	**112**	71-146	0.9	25	
87-68-3	Hexachlorobutadiene	212	231	226	**109**	**107**	63-126	2	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.

MEMORANDUM

TO: Project File **DATE:** June 27, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: May 21, 2018 Air Sample

LAB: ALS Environmental P1802682

One (1) soil vapor extraction sample was collected on May 21, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1802682.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa ^{TM} canister (6 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. No data qualifications were warranted based upon sampling and preservation techniques.

Holding Times

The analysis for VOCs by TO-15 was performed within the 30-day recommended holding time limit for the air sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance 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.

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LABORATORY REPORT

July 9, 2018

Karsten Springstead
PES Environmental
1215 Fourth Avenue, Suite 1350
Seattle, WA 98161

RE: MVSC / 1358.001.01.007

Dear Karsten:

Enclosed are the results of the sample submitted to our laboratory on June 22, 2018. For your reference, these analyses have been assigned our service request number P1803225.

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 4:43 pm, 07/09/18

Kate Kaneko
Project Manager

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Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1803225

CASE NARRATIVE

The sample was received intact under chain of custody on June 22, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
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	CA016272017-8
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: P1803225
Project ID: MVSC / 1358.001.01.007

Date Received: 6/22/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0618	P1803225-001	Air	6/18/2018	13:25	SC00532	-1.53	3.69	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: P18 03225

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, INC. 1215 4th Ave STE 1350 Seattle, WA 98161

Project Name: MWSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Sprigstead

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		Comments e.g. Actual Preservative or specific instructions
SYS-0618	6	6/18/18	1355	SC00532	—	30	2	6L	X		

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: EIM Units: ____

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

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 6-18-18	Time: 1430	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 6/20/18	Time: 0830

Cooler / Blank Temperature ____ °C

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ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1803225

Project: MVSC / 1358.001.007

Sample(s) received on: 6/22/18 Date opened: 6/22/18 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)? Top and bottom of box sealing. 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
P1803225-001.01	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: **SYS-0618** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803225-001

Test Code: EPA TO-15 Date Collected: 6/18/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 6/22/18
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00532

Initial Pressure (psig): -1.53 Final Pressure (psig): 3.69

Container Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.73	ND	0.42	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.2**	0.73	**0.65**	0.15	
74-87-3	Chloromethane	ND	0.70	ND	0.34	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.71	ND	0.10	
75-01-4	Vinyl Chloride	ND	0.73	ND	0.28	
106-99-0	1,3-Butadiene	ND	0.74	ND	0.34	
74-83-9	Bromomethane	ND	0.70	ND	0.18	
75-00-3	Chloroethane	ND	0.71	ND	0.27	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	Acrolein	ND	2.9	ND	1.3	
67-64-1	Acetone	ND	7.4	ND	3.1	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.4**	0.74	**0.42**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	7.4	ND	3.0	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.74	ND	0.19	
75-09-2	Methylene Chloride	ND	0.74	ND	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.74	ND	0.24	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.74	ND	0.097	
75-15-0	Carbon Disulfide	ND	7.4	ND	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	0.76	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.71	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.76	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.4	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	7.4	ND	2.5	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-0618** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803225-001

Test Code: EPA TO-15 Date Collected: 6/18/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 6/22/18
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00532

Initial Pressure (psig): -1.53 Final Pressure (psig): 3.69

Container Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**2.9**	0.74	**0.74**	0.19	
141-78-6	Ethyl Acetate	**4.4**	1.5	**1.2**	0.43	
110-54-3	n-Hexane	ND	0.74	ND	0.21	
67-66-3	Chloroform	**6.8**	0.74	**1.4**	0.15	
109-99-9	Tetrahydrofuran (THF)	**3.3**	0.74	**1.1**	0.25	
107-06-2	1,2-Dichloroethane	ND	0.74	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.76	ND	0.14	
71-43-2	Benzene	ND	0.74	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.74	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.74	ND	0.11	
79-01-6	Trichloroethene	**2.0**	0.74	**0.37**	0.14	
123-91-1	1,4-Dioxane	ND	0.74	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.38	
142-82-5	n-Heptane	**0.82**	0.74	**0.20**	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.74	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.74	ND	0.14	
108-88-3	Toluene	**3.4**	0.74	**0.89**	0.20	
591-78-6	2-Hexanone	ND	0.74	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.74	ND	0.087	
106-93-4	1,2-Dibromoethane	ND	0.74	ND	0.097	
123-86-4	n-Butyl Acetate	ND	0.74	ND	0.16	

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: **SYS-0618** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803225-001

Test Code: EPA TO-15 Date Collected: 6/18/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 6/22/18
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00532

Initial Pressure (psig): -1.53 Final Pressure (psig): 3.69

Container Dilution Factor: 1.40

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.74	ND	0.16	
127-18-4	Tetrachloroethene	**240**	7.4	**35**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.74	ND	0.16	
100-41-4	Ethylbenzene	**42**	0.74	**9.7**	0.17	
179601-23-1	m,p-Xylenes	**120**	1.5	**27**	0.35	
75-25-2	Bromoform	ND	0.74	ND	0.072	
100-42-5	Styrene	ND	0.74	ND	0.17	
95-47-6	o-Xylene	**24**	0.74	**5.5**	0.17	
111-84-2	n-Nonane	ND	0.74	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.74	ND	0.11	
98-82-8	Cumene	ND	0.74	ND	0.15	
80-56-8	alpha-Pinene	ND	0.73	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.74	ND	0.15	
622-96-8	4-Ethyltoluene	**0.95**	0.73	**0.19**	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.73	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**1.5**	0.74	**0.31**	0.15	
100-44-7	Benzyl Chloride	ND	1.5	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.76	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.74	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.76	ND	0.13	
5989-27-5	d-Limonene	**0.72**	0.70	**0.13**	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.077	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	ND	0.10	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.74	ND	0.070	

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** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.52	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.53	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.3	ND	2.8	
75-05-8	Acetonitrile	ND	0.53	ND	0.32	
107-02-8	Acrolein	ND	2.1	ND	0.92	
67-64-1	Acetone	ND	5.3	ND	2.2	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.3	ND	2.2	
107-13-1	Acrylonitrile	ND	0.53	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.53	ND	0.13	
75-09-2	Methylene Chloride	ND	0.53	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	5.3	ND	1.7	
156-60-5	trans-1,2-Dichloroethene	ND	0.54	ND	0.14	
75-34-3	1,1-Dichloroethane	ND	0.51	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	5.3	ND	1.8	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803225

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 6/26/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.53	ND	0.15	
67-66-3	Chloroform	ND	0.53	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.53	ND	0.17	
56-23-5	Carbon Tetrachloride	ND	0.53	ND	0.084	
110-82-7	Cyclohexane	ND	1.1	ND	0.32	
78-87-5	1,2-Dichloropropane	ND	0.53	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.53	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.53	ND	0.097	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.53	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.53	ND	0.062	
106-93-4	1,2-Dibromoethane	ND	0.53	ND	0.069	
123-86-4	n-Butyl Acetate	ND	0.53	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803225

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 6/26/18

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
111-65-9	n-Octane	ND	0.53	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.53	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.53	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.53	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.52	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.53	ND	0.088	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.53	ND	0.055	
120-82-1	1,2,4-Trichlorobenzene	ND	0.55	ND	0.074	
91-20-3	Naphthalene	ND	0.53	ND	0.10	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1803225

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date(s) Collected: 6/18/18
Analyst: Raneem Sahtah Date(s) Received: 6/22/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 6/26/18
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	P180626-MB	**100**	**105**	**102**	70-130	
Lab Control Sample	P180626-LCS	**96**	**105**	**106**	70-130	
Duplicate Lab Control Sample	P180626-DLCS	**95**	**105**	**106**	70-130	
SYS-0618	P1803225-001	**100**	**102**	**106**	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: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 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
115-07-1	Propene	210	165	160	**79**	**76**	54-133	4	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	170	167	**80**	**78**	64-115	3	25	
74-87-3	Chloromethane	210	165	166	**79**	**79**	47-140	0	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	169	169	**80**	**80**	60-112	0	25	
75-01-4	Vinyl Chloride	211	170	172	**81**	**82**	63-127	1	25	
106-99-0	1,3-Butadiene	210	190	185	**90**	**88**	57-149	2	25	
74-83-9	Bromomethane	210	174	174	**83**	**83**	63-132	0	25	
75-00-3	Chloroethane	210	172	171	**82**	**81**	68-129	1	25	
64-17-5	Ethanol	1,040	903	891	**87**	**86**	62-131	1	25	
75-05-8	Acetonitrile	210	203	201	**97**	**96**	56-136	1	25	
107-02-8	Acrolein	209	211	208	**101**	**100**	60-132	1	25	
67-64-1	Acetone	1,050	882	871	**84**	**83**	63-124	1	25	
75-69-4	Trichlorofluoromethane (CFC 11)	208	166	165	**80**	**79**	65-113	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	363	359	**86**	**85**	62-135	1	25	
107-13-1	Acrylonitrile	212	200	199	**94**	**94**	68-138	0	25	
75-35-4	1,1-Dichloroethene	213	179	178	**84**	**84**	72-118	0	25	
75-09-2	Methylene Chloride	213	185	184	**87**	**86**	67-116	1	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	184	183	**87**	**86**	61-143	1	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	178	173	**83**	**81**	68-113	2	25	
75-15-0	Carbon Disulfide	214	171	171	**80**	**80**	68-120	0	25	
156-60-5	trans-1,2-Dichloroethene	214	189	189	**88**	**88**	71-125	0	25	
75-34-3	1,1-Dichloroethane	212	169	170	**80**	**80**	68-118	0	25	
1634-04-4	Methyl tert-Butyl Ether	213	175	176	**82**	**83**	60-123	1	25	
108-05-4	Vinyl Acetate	1,060	1090	1090	**103**	**103**	73-135	0	25	
78-93-3	2-Butanone (MEK)	212	190	192	**90**	**91**	70-129	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	212	177	177	**83**	**83**	69-121	0	25	
141-78-6	Ethyl Acetate	426	423	423	**99**	**99**	66-140	0	25	
110-54-3	n-Hexane	213	169	171	**79**	**80**	61-124	1	25	
67-66-3	Chloroform	212	171	172	**81**	**81**	69-113	0	25	
109-99-9	Tetrahydrofuran (THF)	212	170	168	**80**	**79**	66-121	1	25	
107-06-2	1,2-Dichloroethane	212	172	172	**81**	**81**	62-120	0	25	
71-55-6	1,1,1-Trichloroethane	212	156	156	**74**	**74**	65-116	0	25	
71-43-2	Benzene	213	160	161	**75**	**76**	66-111	1	25	
56-23-5	Carbon Tetrachloride	214	162	162	**76**	**76**	64-122	0	25	
110-82-7	Cyclohexane	425	313	313	**74**	**74**	69-115	0	25	
78-87-5	1,2-Dichloropropane	212	159	159	**75**	**75**	69-121	0	25	
75-27-4	Bromodichloromethane	214	165	164	**77**	**77**	69-123	0	25	
79-01-6	Trichloroethene	212	165	165	**78**	**78**	69-112	0	25	
123-91-1	1,4-Dioxane	213	179	178	**84**	**84**	74-123	0	25	
80-62-6	Methyl Methacrylate	424	358	360	**84**	**85**	75-125	1	25	
142-82-5	n-Heptane	213	157	158	**74**	**74**	68-118	0	25	
10061-01-5	cis-1,3-Dichloropropene	208	177	177	**85**	**85**	74-129	0	25	
108-10-1	4-Methyl-2-pentanone	213	160	160	**75**	**75**	66-138	0	25	
10061-02-6	trans-1,3-Dichloropropene	213	200	201	**94**	**94**	75-130	0	25	
79-00-5	1,1,2-Trichloroethane	212	165	165	**78**	**78**	73-117	0	25	
108-88-3	Toluene	211	175	175	**83**	**83**	66-114	0	25	
591-78-6	2-Hexanone	211	196	197	**93**	**93**	58-146	0	25	
124-48-1	Dibromochloromethane	212	199	200	**94**	**94**	67-130	0	25	
106-93-4	1,2-Dibromoethane	211	198	198	**94**	**94**	70-127	0	25	
123-86-4	n-Butyl Acetate	215	204	205	**95**	**95**	62-140	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1803225
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180626-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 6/26/18
Sample Type: 6.0 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
111-65-9	n-Octane	212	180	181	**85**	**85**	65-121	0	25	
127-18-4	Tetrachloroethene	212	186	188	**88**	**89**	62-119	1	25	
108-90-7	Chlorobenzene	212	180	180	**85**	**85**	66-115	0	25	
100-41-4	Ethylbenzene	212	178	179	**84**	**84**	69-117	0	25	
179601-23-1	m,p-Xylenes	424	365	367	**86**	**87**	67-117	1	25	
75-25-2	Bromoform	212	212	213	**100**	**100**	67-135	0	25	
100-42-5	Styrene	211	194	195	**92**	**92**	70-128	0	25	
95-47-6	o-Xylene	211	182	183	**86**	**87**	67-118	1	25	
111-84-2	n-Nonane	212	174	176	**82**	**83**	61-127	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	212	186	188	**88**	**89**	70-125	1	25	
98-82-8	Cumene	212	180	182	**85**	**86**	68-116	1	25	
80-56-8	alpha-Pinene	213	183	185	**86**	**87**	69-122	1	25	
103-65-1	n-Propylbenzene	214	185	186	**86**	**87**	70-118	1	25	
622-96-8	4-Ethyltoluene	211	198	199	**94**	**94**	69-124	0	25	
108-67-8	1,3,5-Trimethylbenzene	212	181	183	**85**	**86**	65-117	1	25	
95-63-6	1,2,4-Trimethylbenzene	212	194	195	**92**	**92**	67-124	0	25	
100-44-7	Benzyl Chloride	212	244	248	**115**	**117**	75-142	2	25	
541-73-1	1,3-Dichlorobenzene	212	200	202	**94**	**95**	70-124	1	25	
106-46-7	1,4-Dichlorobenzene	214	202	204	**94**	**95**	63-124	1	25	
95-50-1	1,2-Dichlorobenzene	214	207	209	**97**	**98**	66-125	1	25	
5989-27-5	d-Limonene	213	193	193	**91**	**91**	64-135	0	25	
96-12-8	1,2-Dibromo-3-chloropropane	210	218	223	**104**	**106**	73-136	2	25	
120-82-1	1,2,4-Trichlorobenzene	218	221	227	**101**	**104**	70-141	3	25	
91-20-3	Naphthalene	209	206	213	**99**	**102**	71-146	3	25	
87-68-3	Hexachlorobutadiene	212	196	199	**92**	**94**	63-126	2	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.

MEMORANDUM

TO: Project File **DATE:** August 10, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: June 18, 2018 Air Sample

LAB: ALS Environmental P1803225

One (1) soil vapor extraction sample was collected on June 18, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1803225.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa Canister ™ canister (6 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. 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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air sample, method blank, 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/laboratory control sample duplicate (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery results for all control compounds met the % R and relative percent difference (RPD) laboratory acceptance 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.

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LABORATORY REPORT

August 1, 2018

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

RE: MVSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on July 18, 2018. For your reference, this analysis has been assigned our service request number P1803704.

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 12:35 pm, 08/01/18

Kate Kaneko
Project Manager

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www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1803704

CASE NARRATIVE

The sample was received intact under chain of custody on July 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
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	CA016272017-8
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1803704

Date Received: 7/18/2018
Time Received: 09:20

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-0718	P1803704-001	Air	7/16/2018	09:30	SC01589	-1.19	3.71	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 P1803704

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

Project Name: MUSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting

Sampler (Print & Sign): Karsten Sprhgstead

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		Comments e.g. Actual Preservative or specific instructions
SYS-0718		7-16-18	930	SC01589	—	29	2	6L	X		

5 of 22

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: EIM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 7-16-18	Time: 945	Received by: (Signature)	Date: 7/18/18	Time: 0920
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: P1803704

Project: MVSC / 1358.001.01.007

Sample(s) received on: 7/18/18 Date opened: 7/18/18 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
P1803704-001.01	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: **SYS-0718** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803704-001

Test Code: EPA TO-15 Date Collected: 7/16/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 7/18/18
Analyst: Wida Ang Date Analyzed: 7/26 - 7/27/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01589

Initial Pressure (psig): -1.19 Final Pressure (psig): 3.71

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.71	ND	0.41	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.6**	0.71	**0.73**	0.14	
74-87-3	Chloromethane	ND	0.68	ND	0.33	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.69	ND	0.099	
75-01-4	Vinyl Chloride	ND	0.71	ND	0.28	
106-99-0	1,3-Butadiene	ND	0.72	ND	0.33	
74-83-9	Bromomethane	ND	0.68	ND	0.18	
75-00-3	Chloroethane	ND	0.69	ND	0.26	
64-17-5	Ethanol	ND	7.2	ND	3.8	
75-05-8	Acetonitrile	ND	0.72	ND	0.43	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	7.2	ND	3.0	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.8**	0.72	**0.51**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.9	ND	1.2	
107-13-1	Acrylonitrile	ND	0.72	ND	0.33	
75-35-4	1,1-Dichloroethene	ND	0.72	ND	0.18	
75-09-2	Methylene Chloride	ND	0.72	ND	0.21	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.72	ND	0.23	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.72	ND	0.094	
75-15-0	Carbon Disulfide	**10**	1.5	**3.2**	0.48	
156-60-5	trans-1,2-Dichloroethene	ND	0.73	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.69	ND	0.17	
1634-04-4	Methyl tert-Butyl Ether	ND	0.73	ND	0.20	
108-05-4	Vinyl Acetate	ND	7.2	ND	2.0	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.51	

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: **SYS-0718** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803704-001

Test Code: EPA TO-15 Date Collected: 7/16/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 7/18/18
Analyst: Wida Ang Date Analyzed: 7/26 - 7/27/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01589

Initial Pressure (psig): -1.19 Final Pressure (psig): 3.71

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**6.0**	0.72	**1.5**	0.18	
141-78-6	Ethyl Acetate	ND	1.5	ND	0.42	
110-54-3	n-Hexane	**1.6**	0.72	**0.46**	0.20	
67-66-3	Chloroform	**4.7**	0.72	**0.97**	0.15	
109-99-9	Tetrahydrofuran (THF)	ND	0.72	ND	0.24	
107-06-2	1,2-Dichloroethane	ND	0.72	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.73	ND	0.13	
71-43-2	Benzene	ND	0.72	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.72	ND	0.11	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.72	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.72	ND	0.11	
79-01-6	Trichloroethene	**3.0**	0.72	**0.55**	0.13	
123-91-1	1,4-Dioxane	ND	0.72	ND	0.20	
80-62-6	Methyl Methacrylate	ND	1.5	ND	0.37	
142-82-5	n-Heptane	ND	0.72	ND	0.18	
10061-01-5	cis-1,3-Dichloropropene	ND	0.76	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.72	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.72	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.72	ND	0.13	
108-88-3	Toluene	**3.2**	0.72	**0.84**	0.19	
591-78-6	2-Hexanone	ND	0.72	ND	0.18	
124-48-1	Dibromochloromethane	ND	0.72	ND	0.085	
106-93-4	1,2-Dibromoethane	ND	0.72	ND	0.094	
123-86-4	n-Butyl Acetate	ND	0.72	ND	0.15	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-0718** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1803704-001

Test Code: EPA TO-15 Date Collected: 7/16/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 7/18/18
Analyst: Wida Ang Date Analyzed: 7/26 - 7/27/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01589

Initial Pressure (psig): -1.19 Final Pressure (psig): 3.71

Container Dilution Factor: 1.36

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.72	ND	0.15	
127-18-4	Tetrachloroethene	**240**	7.2	**35**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.72	ND	0.16	
100-41-4	Ethylbenzene	**28**	0.72	**6.5**	0.17	
179601-23-1	m,p-Xylenes	**84**	1.5	**19**	0.34	
75-25-2	Bromoform	ND	0.72	ND	0.070	
100-42-5	Styrene	ND	0.72	ND	0.17	
95-47-6	o-Xylene	**18**	0.72	**4.2**	0.17	
111-84-2	n-Nonane	ND	0.72	ND	0.14	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.72	ND	0.11	
98-82-8	Cumene	ND	0.72	ND	0.15	
80-56-8	alpha-Pinene	ND	0.71	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.72	ND	0.15	
622-96-8	4-Ethyltoluene	**0.75**	0.71	**0.15**	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.71	ND	0.14	
95-63-6	1,2,4-Trimethylbenzene	**1.6**	0.72	**0.33**	0.15	
100-44-7	Benzyl Chloride	ND	1.5	ND	0.29	
541-73-1	1,3-Dichlorobenzene	ND	0.73	ND	0.12	
106-46-7	1,4-Dichlorobenzene	ND	0.72	ND	0.12	
95-50-1	1,2-Dichlorobenzene	ND	0.73	ND	0.12	
5989-27-5	d-Limonene	**28**	0.68	**5.1**	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.72	ND	0.075	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	**5.2**	0.72	**0.99**	0.14	
87-68-3	Hexachlorobutadiene	ND	0.72	ND	0.068	

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** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.52	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.53	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.3	ND	2.8	
75-05-8	Acetonitrile	ND	0.53	ND	0.32	
107-02-8	Acrolein	ND	1.1	ND	0.48	
67-64-1	Acetone	ND	5.3	ND	2.2	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.53	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.53	ND	0.13	
75-09-2	Methylene Chloride	ND	0.53	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.54	ND	0.14	
75-34-3	1,1-Dichloroethane	ND	0.51	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.1	ND	0.37	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803704

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.53	ND	0.15	
67-66-3	Chloroform	ND	0.53	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.53	ND	0.17	
56-23-5	Carbon Tetrachloride	ND	0.53	ND	0.084	
110-82-7	Cyclohexane	ND	1.1	ND	0.32	
78-87-5	1,2-Dichloropropane	ND	0.53	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.53	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.53	ND	0.097	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.53	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.53	ND	0.062	
106-93-4	1,2-Dibromoethane	ND	0.53	ND	0.069	
123-86-4	n-Butyl Acetate	ND	0.53	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803704

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/18

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
111-65-9	n-Octane	ND	0.53	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.53	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.53	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.53	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.52	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.53	ND	0.088	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.53	ND	0.055	
120-82-1	1,2,4-Trichlorobenzene	ND	0.55	ND	0.074	
91-20-3	Naphthalene	ND	0.53	ND	0.10	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.52	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.53	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.3	ND	2.8	
75-05-8	Acetonitrile	ND	0.53	ND	0.32	
107-02-8	Acrolein	ND	1.1	ND	0.48	
67-64-1	Acetone	ND	5.3	ND	2.2	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.53	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.53	ND	0.13	
75-09-2	Methylene Chloride	ND	0.53	ND	0.15	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.54	ND	0.14	
75-34-3	1,1-Dichloroethane	ND	0.51	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.1	ND	0.37	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803704

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.53	ND	0.15	
67-66-3	Chloroform	ND	0.53	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.53	ND	0.17	
56-23-5	Carbon Tetrachloride	ND	0.53	ND	0.084	
110-82-7	Cyclohexane	ND	1.1	ND	0.32	
78-87-5	1,2-Dichloropropane	ND	0.53	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.53	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.53	ND	0.097	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.53	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.53	ND	0.062	
106-93-4	1,2-Dibromoethane	ND	0.53	ND	0.069	
123-86-4	n-Butyl Acetate	ND	0.53	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1803704

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Wida Ang Date Analyzed: 7/26/18

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
111-65-9	n-Octane	ND	0.53	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.53	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.53	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.53	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.52	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.53	ND	0.088	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.53	ND	0.055	
120-82-1	1,2,4-Trichlorobenzene	ND	0.55	ND	0.074	
91-20-3	Naphthalene	ND	0.53	ND	0.10	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1803704

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 7/16/18
Analyst: Wida Ang Date(s) Received: 7/18/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 7/26/18
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	P180726-MB	**109**	**95**	**96**	70-130	
Method Blank	P180726-MB	**112**	**93**	**94**	70-130	
Lab Control Sample	P180726-LCS	**108**	**94**	**95**	70-130	
Lab Control Sample	P180726-LCS	**112**	**92**	**95**	70-130	
SYS-0718	P1803704-001	**110**	**95**	**91**	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: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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**
115-07-1	Propene	210	**200**	**95**	54-133	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	**190**	**89**	64-115	
74-87-3	Chloromethane	210	**214**	**102**	47-140	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**183**	**87**	60-112	
75-01-4	Vinyl Chloride	211	**204**	**97**	63-127	
106-99-0	1,3-Butadiene	210	**211**	**100**	57-149	
74-83-9	Bromomethane	210	**191**	**91**	63-132	
75-00-3	Chloroethane	210	**197**	**94**	68-129	
64-17-5	Ethanol	1,040	**1030**	**99**	62-131	
75-05-8	Acetonitrile	210	**203**	**97**	56-136	
107-02-8	Acrolein	209	**203**	**97**	60-132	
67-64-1	Acetone	1,050	**932**	**89**	63-124	
75-69-4	Trichlorofluoromethane (CFC 11)	208	**187**	**90**	65-113	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	**418**	**99**	62-135	
107-13-1	Acrylonitrile	212	**208**	**98**	68-138	
75-35-4	1,1-Dichloroethene	213	**194**	**91**	72-118	
75-09-2	Methylene Chloride	213	**190**	**89**	67-116	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**225**	**106**	61-143	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	**180**	**84**	68-113	
75-15-0	Carbon Disulfide	214	**190**	**89**	68-120	
156-60-5	trans-1,2-Dichloroethene	214	**210**	**98**	71-125	
75-34-3	1,1-Dichloroethane	212	**200**	**94**	68-118	
1634-04-4	Methyl tert-Butyl Ether	213	**200**	**94**	60-123	
108-05-4	Vinyl Acetate	1,060	**1060**	**100**	73-135	
78-93-3	2-Butanone (MEK)	212	**205**	**97**	70-129	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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**
156-59-2	cis-1,2-Dichloroethene	212	**206**	**97**	69-121	
141-78-6	Ethyl Acetate	426	**410**	**96**	66-140	
110-54-3	n-Hexane	213	**189**	**89**	61-124	
67-66-3	Chloroform	212	**194**	**92**	69-113	
109-99-9	Tetrahydrofuran (THF)	212	**200**	**94**	66-121	
107-06-2	1,2-Dichloroethane	212	**204**	**96**	62-120	
71-55-6	1,1,1-Trichloroethane	212	**194**	**92**	65-116	
71-43-2	Benzene	213	**193**	**91**	66-111	
56-23-5	Carbon Tetrachloride	214	**198**	**93**	64-122	
110-82-7	Cyclohexane	425	**391**	**92**	69-115	
78-87-5	1,2-Dichloropropane	212	**205**	**97**	69-121	
75-27-4	Bromodichloromethane	214	**204**	**95**	69-123	
79-01-6	Trichloroethene	212	**186**	**88**	69-112	
123-91-1	1,4-Dioxane	213	**196**	**92**	74-123	
80-62-6	Methyl Methacrylate	424	**400**	**94**	75-125	
142-82-5	n-Heptane	213	**197**	**92**	68-118	
10061-01-5	cis-1,3-Dichloropropene	208	**209**	**100**	74-129	
108-10-1	4-Methyl-2-pentanone	213	**208**	**98**	66-138	
10061-02-6	trans-1,3-Dichloropropene	213	**219**	**103**	75-130	
79-00-5	1,1,2-Trichloroethane	212	**194**	**92**	73-117	
108-88-3	Toluene	211	**172**	**82**	66-114	
591-78-6	2-Hexanone	211	**196**	**93**	58-146	
124-48-1	Dibromochloromethane	212	**186**	**88**	67-130	
106-93-4	1,2-Dibromoethane	211	**182**	**86**	70-127	
123-86-4	n-Butyl Acetate	215	**201**	**93**	62-140	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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
111-65-9	n-Octane	212	**193**	**91**	65-121	
127-18-4	Tetrachloroethene	212	**171**	**81**	62-119	
108-90-7	Chlorobenzene	212	**178**	**84**	66-115	
100-41-4	Ethylbenzene	212	**181**	**85**	69-117	
179601-23-1	m,p-Xylenes	424	**358**	**84**	67-117	
75-25-2	Bromoform	212	**187**	**88**	67-135	
100-42-5	Styrene	211	**187**	**89**	70-128	
95-47-6	o-Xylene	211	**179**	**85**	67-118	
111-84-2	n-Nonane	212	**198**	**93**	61-127	
79-34-5	1,1,2,2-Tetrachloroethane	212	**186**	**88**	70-125	
98-82-8	Cumene	212	**179**	**84**	68-116	
80-56-8	alpha-Pinene	213	**188**	**88**	69-122	
103-65-1	n-Propylbenzene	214	**187**	**87**	70-118	
622-96-8	4-Ethyltoluene	211	**181**	**86**	69-124	
108-67-8	1,3,5-Trimethylbenzene	212	**182**	**86**	65-117	
95-63-6	1,2,4-Trimethylbenzene	212	**183**	**86**	67-124	
100-44-7	Benzyl Chloride	212	**226**	**107**	75-142	
541-73-1	1,3-Dichlorobenzene	212	**183**	**86**	70-124	
106-46-7	1,4-Dichlorobenzene	214	**183**	**86**	63-124	
95-50-1	1,2-Dichlorobenzene	214	**183**	**86**	66-125	
5989-27-5	d-Limonene	213	**193**	**91**	64-135	
96-12-8	1,2-Dibromo-3-chloropropane	210	**199**	**95**	73-136	
120-82-1	1,2,4-Trichlorobenzene	218	**217**	**100**	70-141	
91-20-3	Naphthalene	209	**233**	**111**	71-146	
87-68-3	Hexachlorobutadiene	212	**183**	**86**	63-126	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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
115-07-1	Propene	210	**199**	**95**	54-133	
75-71-8	Dichlorodifluoromethane (CFC 12)	213	**183**	**86**	64-115	
74-87-3	Chloromethane	210	**206**	**98**	47-140	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**173**	**82**	60-112	
75-01-4	Vinyl Chloride	211	**198**	**94**	63-127	
106-99-0	1,3-Butadiene	210	**215**	**102**	57-149	
74-83-9	Bromomethane	210	**187**	**89**	63-132	
75-00-3	Chloroethane	210	**200**	**95**	68-129	
64-17-5	Ethanol	1,040	**1060**	**102**	62-131	
75-05-8	Acetonitrile	210	**213**	**101**	56-136	
107-02-8	Acrolein	209	**208**	**100**	60-132	
67-64-1	Acetone	1,050	**938**	**89**	63-124	
75-69-4	Trichlorofluoromethane (CFC 11)	208	**183**	**88**	65-113	
67-63-0	2-Propanol (Isopropyl Alcohol)	422	**428**	**101**	62-135	
107-13-1	Acrylonitrile	212	**212**	**100**	68-138	
75-35-4	1,1-Dichloroethene	213	**190**	**89**	72-118	
75-09-2	Methylene Chloride	213	**188**	**88**	67-116	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	212	**232**	**109**	61-143	
76-13-1	Trichlorotrifluoroethane (CFC 113)	214	**174**	**81**	68-113	
75-15-0	Carbon Disulfide	214	**188**	**88**	68-120	
156-60-5	trans-1,2-Dichloroethene	214	**209**	**98**	71-125	
75-34-3	1,1-Dichloroethane	212	**199**	**94**	68-118	
1634-04-4	Methyl tert-Butyl Ether	213	**196**	**92**	60-123	
108-05-4	Vinyl Acetate	1,060	**1020**	**96**	73-135	
78-93-3	2-Butanone (MEK)	212	**204**	**96**	70-129	

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.

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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**
156-59-2	cis-1,2-Dichloroethene	212	**207**	**98**	69-121	
141-78-6	Ethyl Acetate	426	**400**	**94**	66-140	
110-54-3	n-Hexane	213	**184**	**86**	61-124	
67-66-3	Chloroform	212	**190**	**90**	69-113	
109-99-9	Tetrahydrofuran (THF)	212	**197**	**93**	66-121	
107-06-2	1,2-Dichloroethane	212	**201**	**95**	62-120	
71-55-6	1,1,1-Trichloroethane	212	**188**	**89**	65-116	
71-43-2	Benzene	213	**188**	**88**	66-111	
56-23-5	Carbon Tetrachloride	214	**192**	**90**	64-122	
110-82-7	Cyclohexane	425	**381**	**90**	69-115	
78-87-5	1,2-Dichloropropane	212	**204**	**96**	69-121	
75-27-4	Bromodichloromethane	214	**198**	**93**	69-123	
79-01-6	Trichloroethene	212	**177**	**83**	69-112	
123-91-1	1,4-Dioxane	213	**190**	**89**	74-123	
80-62-6	Methyl Methacrylate	424	**385**	**91**	75-125	
142-82-5	n-Heptane	213	**192**	**90**	68-118	
10061-01-5	cis-1,3-Dichloropropene	208	**205**	**99**	74-129	
108-10-1	4-Methyl-2-pentanone	213	**206**	**97**	66-138	
10061-02-6	trans-1,3-Dichloropropene	213	**216**	**101**	75-130	
79-00-5	1,1,2-Trichloroethane	212	**187**	**88**	73-117	
108-88-3	Toluene	211	**160**	**76**	66-114	
591-78-6	2-Hexanone	211	**189**	**90**	58-146	
124-48-1	Dibromochloromethane	212	**172**	**81**	67-130	
106-93-4	1,2-Dibromoethane	211	**168**	**80**	70-127	
123-86-4	n-Butyl Acetate	215	**193**	**90**	62-140	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1803704
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180726-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Wida Ang Date Analyzed: 7/26/18
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
111-65-9	n-Octane	212	**183**	**86**	65-121	
127-18-4	Tetrachloroethene	212	**156**	**74**	62-119	
108-90-7	Chlorobenzene	212	**166**	**78**	66-115	
100-41-4	Ethylbenzene	212	**168**	**79**	69-117	
179601-23-1	m,p-Xylenes	424	**334**	**79**	67-117	
75-25-2	Bromoform	212	**171**	**81**	67-135	
100-42-5	Styrene	211	**174**	**82**	70-128	
95-47-6	o-Xylene	211	**167**	**79**	67-118	
111-84-2	n-Nonane	212	**192**	**91**	61-127	
79-34-5	1,1,2,2-Tetrachloroethane	212	**175**	**83**	70-125	
98-82-8	Cumene	212	**167**	**79**	68-116	
80-56-8	alpha-Pinene	213	**176**	**83**	69-122	
103-65-1	n-Propylbenzene	214	**175**	**82**	70-118	
622-96-8	4-Ethyltoluene	211	**169**	**80**	69-124	
108-67-8	1,3,5-Trimethylbenzene	212	**169**	**80**	65-117	
95-63-6	1,2,4-Trimethylbenzene	212	**170**	**80**	67-124	
100-44-7	Benzyl Chloride	212	**213**	**100**	75-142	
541-73-1	1,3-Dichlorobenzene	212	**168**	**79**	70-124	
106-46-7	1,4-Dichlorobenzene	214	**169**	**79**	63-124	
95-50-1	1,2-Dichlorobenzene	214	**169**	**79**	66-125	
5989-27-5	d-Limonene	213	**183**	**86**	64-135	
96-12-8	1,2-Dibromo-3-chloropropane	210	**183**	**87**	73-136	
120-82-1	1,2,4-Trichlorobenzene	218	**197**	**90**	70-141	
91-20-3	Naphthalene	209	**213**	**102**	71-146	
87-68-3	Hexachlorobutadiene	212	**165**	**78**	63-126	

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:** August 10, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: July 16, 2018 Air Sample

LAB: ALS Environmental P1803704

One (1) soil vapor extraction sample was collected on July 16, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1803704.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa Canister ™ canister (6 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. 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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

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

Laboratory Control Samples

Two sets of laboratory control samples (LCS) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS recovery results for all control compounds met the % R. Precision was not assessed however both sets of LCS recoveries 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.

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LABORATORY REPORT

August 31, 2018

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

RE: MVSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on August 21, 2018. For your reference, this analysis has been assigned our service request number P1804329.

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 11:55 am, 08/31/18

Kate Kaneko
Project Manager

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1804329

CASE NARRATIVE

The sample was received intact under chain of custody on August 21, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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F: +1 805 526 7270
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	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
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: P1804329
Project ID: MVSC / 1358.001.01.007

Date Received: 8/21/2018
Time Received: 10:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-081718	P1804329-001	Air	8/17/2018	08:50	1SC00271	-2.25	5.87	X

Air - Chain of Custody Record & Analytical Service Request

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: P1804329

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, INC. 1215 4th Ave Ste 850, Seattle, WA 98161

Project Name: MWSL

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3900 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

ALS Contact:

Analysis Method: TO-15

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		Comments e.g. Actual Preservative or specific instructions
SYS-081718		8-17-18	850	15006741	AV603463	30	4	1L	X		

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 (Data Validation Package) 10% Surcharge ____

EDD required YES / No

Type: PM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	8-17-18	1000		8/21/18	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: P1804329

Project: MVSC / 1358.001.01.007

Sample(s) received on: 8/21/18 Date opened: 8/21/18 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
P1804329-001.01	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: **SYS-081718** ALS Project ID: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1804329-001

Test Code: EPA TO-15 Date Collected: 8/17/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 8/21/18
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00271

Initial Pressure (psig): -2.25 Final Pressure (psig): 5.87

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	2.1	ND	1.2	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.2**	2.1	**0.65**	0.43	
74-87-3	Chloromethane	ND	2.1	ND	1.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.1	ND	0.30	
75-01-4	Vinyl Chloride	ND	2.2	ND	0.86	
106-99-0	1,3-Butadiene	ND	2.1	ND	0.97	
74-83-9	Bromomethane	ND	2.1	ND	0.53	
75-00-3	Chloroethane	ND	2.1	ND	0.80	
64-17-5	Ethanol	ND	21	ND	11	
75-05-8	Acetonitrile	ND	2.1	ND	1.3	
107-02-8	Acrolein	ND	4.1	ND	1.8	
67-64-1	Acetone	**53**	22	**22**	9.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.6**	2.2	**0.47**	0.39	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.7	ND	3.5	
107-13-1	Acrylonitrile	ND	2.1	ND	0.99	
75-35-4	1,1-Dichloroethene	ND	2.2	ND	0.56	
75-09-2	Methylene Chloride	ND	2.2	ND	0.64	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	ND	0.70	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	2.2	ND	0.29	
75-15-0	Carbon Disulfide	ND	4.5	ND	1.5	
156-60-5	trans-1,2-Dichloroethene	ND	2.2	ND	0.55	
75-34-3	1,1-Dichloroethane	ND	2.1	ND	0.53	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	ND	0.62	
108-05-4	Vinyl Acetate	ND	22	ND	6.2	
78-93-3	2-Butanone (MEK)	**5.0**	4.1	**1.7**	1.4	

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: **SYS-081718** ALS Project ID: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1804329-001

Test Code: EPA TO-15 Date Collected: 8/17/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 8/21/18
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00271

Initial Pressure (psig): -2.25 Final Pressure (psig): 5.87

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**9.8**	2.2	**2.5**	0.55	
141-78-6	Ethyl Acetate	ND	4.5	ND	1.3	
110-54-3	n-Hexane	ND	2.2	ND	0.63	
67-66-3	Chloroform	**9.4**	2.2	**1.9**	0.46	
109-99-9	Tetrahydrofuran (THF)	ND	2.2	ND	0.74	
107-06-2	1,2-Dichloroethane	ND	2.2	ND	0.54	
71-55-6	1,1,1-Trichloroethane	ND	2.2	ND	0.41	
71-43-2	Benzene	ND	2.1	ND	0.67	
56-23-5	Carbon Tetrachloride	ND	2.1	ND	0.34	
110-82-7	Cyclohexane	ND	4.1	ND	1.2	
78-87-5	1,2-Dichloropropane	ND	2.2	ND	0.48	
75-27-4	Bromodichloromethane	ND	2.2	ND	0.33	
79-01-6	Trichloroethene	**3.7**	2.2	**0.68**	0.41	
123-91-1	1,4-Dioxane	ND	2.2	ND	0.61	
80-62-6	Methyl Methacrylate	ND	4.5	ND	1.1	
142-82-5	n-Heptane	ND	2.2	ND	0.54	
10061-01-5	cis-1,3-Dichloropropene	ND	2.3	ND	0.51	
108-10-1	4-Methyl-2-pentanone	ND	2.2	ND	0.53	
10061-02-6	trans-1,3-Dichloropropene	ND	2.2	ND	0.48	
79-00-5	1,1,2-Trichloroethane	ND	2.2	ND	0.41	
108-88-3	Toluene	**12**	2.2	**3.2**	0.58	
591-78-6	2-Hexanone	ND	2.2	ND	0.54	
124-48-1	Dibromochloromethane	ND	2.2	ND	0.26	
106-93-4	1,2-Dibromoethane	ND	2.2	ND	0.29	
123-86-4	n-Butyl Acetate	ND	2.2	ND	0.47	

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: **SYS-081718** ALS Project ID: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1804329-001

Test Code: EPA TO-15 Date Collected: 8/17/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 8/21/18
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC00271

Initial Pressure (psig): -2.25 Final Pressure (psig): 5.87

Container Dilution Factor: 1.65

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	**8.2**	2.2	**1.8**	0.48	
127-18-4	Tetrachloroethene	**400**	2.2	**59**	0.32	
108-90-7	Chlorobenzene	ND	2.2	ND	0.47	
100-41-4	Ethylbenzene	**56**	2.1	**13**	0.49	
179601-23-1	m,p-Xylenes	**160**	4.5	**36**	1.0	
75-25-2	Bromoform	ND	2.2	ND	0.21	
100-42-5	Styrene	ND	2.2	ND	0.51	
95-47-6	o-Xylene	**27**	2.2	**6.3**	0.50	
111-84-2	n-Nonane	**2.4**	2.2	**0.45**	0.42	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	ND	0.32	
98-82-8	Cumene	ND	2.2	ND	0.44	
80-56-8	alpha-Pinene	ND	2.1	ND	0.39	
103-65-1	n-Propylbenzene	ND	2.2	ND	0.45	
622-96-8	4-Ethyltoluene	ND	2.2	ND	0.44	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	ND	0.44	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	ND	0.44	
100-44-7	Benzyl Chloride	ND	4.5	ND	0.88	
541-73-1	1,3-Dichlorobenzene	ND	2.2	ND	0.37	
106-46-7	1,4-Dichlorobenzene	ND	2.2	ND	0.37	
95-50-1	1,2-Dichlorobenzene	ND	2.2	ND	0.37	
5989-27-5	d-Limonene	**2.5**	2.1	**0.45**	0.38	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.1	ND	0.22	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	ND	0.29	
91-20-3	Naphthalene	ND	2.1	ND	0.40	
87-68-3	Hexachlorobutadiene	ND	2.2	ND	0.21	

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: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1804329

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 8/24/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1804329

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Raneem Sahtah Date Analyzed: 8/24/18

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**
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1804329

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 8/17/18
Analyst: Raneem Sahtah Date(s) Received: 8/21/18
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 8/24/18
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	P180824-MB	**107**	**106**	**95**	70-130	
Lab Control Sample	P180824-LCS	**101**	**103**	**95**	70-130	
Duplicate Lab Control Sample	P180824-DLCS	**100**	**105**	**94**	70-130	
SYS-081718	P1804329-001	**104**	**100**	**98**	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: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
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
115-07-1	Propene	211	155	159	**73**	**75**	54-133	3	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	168	172	**80**	**82**	64-115	2	25	
74-87-3	Chloromethane	211	140	156	**66**	**74**	47-140	11	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	172	184	**82**	**87**	60-112	6	25	
75-01-4	Vinyl Chloride	214	185	200	**86**	**93**	63-127	8	25	
106-99-0	1,3-Butadiene	210	179	194	**85**	**92**	57-149	8	25	
74-83-9	Bromomethane	212	154	164	**73**	**77**	63-132	5	25	
75-00-3	Chloroethane	214	160	166	**75**	**78**	68-129	4	25	
64-17-5	Ethanol	1,020	662	689	**65**	**68**	62-131	5	25	
75-05-8	Acetonitrile	206	137	144	**67**	**70**	56-136	4	25	
107-02-8	Acrolein	205	171	179	**83**	**87**	60-132	5	25	
67-64-1	Acetone	1,060	819	845	**77**	**80**	63-124	4	25	
75-69-4	Trichlorofluoromethane (CFC 11)	211	169	171	**80**	**81**	65-113	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	311	322	**75**	**78**	62-135	4	25	
107-13-1	Acrylonitrile	207	178	184	**86**	**89**	68-138	3	25	
75-35-4	1,1-Dichloroethene	218	204	208	**94**	**95**	72-118	1	25	
75-09-2	Methylene Chloride	217	161	166	**74**	**76**	67-116	3	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	227	236	**105**	**109**	61-143	4	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	167	172	**77**	**80**	68-113	4	25	
75-15-0	Carbon Disulfide	218	171	174	**78**	**80**	68-120	3	25	
156-60-5	trans-1,2-Dichloroethene	214	212	218	**99**	**102**	71-125	3	25	
75-34-3	1,1-Dichloroethane	216	187	189	**87**	**88**	68-118	1	25	
1634-04-4	Methyl tert-Butyl Ether	214	177	182	**83**	**85**	60-123	2	25	
108-05-4	Vinyl Acetate	1,060	1050	1030	**99**	**97**	73-135	2	25	
78-93-3	2-Butanone (MEK)	208	182	181	**88**	**87**	70-129	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
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
156-59-2	cis-1,2-Dichloroethene	211	185	187	**88**	**89**	69-121	1	25	
141-78-6	Ethyl Acetate	436	390	382	**89**	**88**	66-140	1	25	
110-54-3	n-Hexane	216	236	225	**109**	**104**	61-124	5	25	
67-66-3	Chloroform	217	172	173	**79**	**80**	69-113	1	25	
109-99-9	Tetrahydrofuran (THF)	216	201	203	**93**	**94**	66-121	1	25	
107-06-2	1,2-Dichloroethane	215	169	169	**79**	**79**	62-120	0	25	
71-55-6	1,1,1-Trichloroethane	215	163	170	**76**	**79**	65-116	4	25	
71-43-2	Benzene	211	164	166	**78**	**79**	66-111	1	25	
56-23-5	Carbon Tetrachloride	212	168	175	**79**	**83**	64-122	5	25	
110-82-7	Cyclohexane	416	336	346	**81**	**83**	69-115	2	25	
78-87-5	1,2-Dichloropropane	216	166	170	**77**	**79**	69-121	3	25	
75-27-4	Bromodichloromethane	215	173	177	**80**	**82**	69-123	2	25	
79-01-6	Trichloroethene	213	173	176	**81**	**83**	69-112	2	25	
123-91-1	1,4-Dioxane	214	168	175	**79**	**82**	74-123	4	25	
80-62-6	Methyl Methacrylate	431	362	372	**84**	**86**	75-125	2	25	
142-82-5	n-Heptane	215	179	179	**83**	**83**	68-118	0	25	
10061-01-5	cis-1,3-Dichloropropene	214	181	185	**85**	**86**	74-129	1	25	
108-10-1	4-Methyl-2-pentanone	209	173	178	**83**	**85**	66-138	2	25	
10061-02-6	trans-1,3-Dichloropropene	213	191	198	**90**	**93**	75-130	3	25	
79-00-5	1,1,2-Trichloroethane	215	159	163	**74**	**76**	73-117	3	25	
108-88-3	Toluene	212	163	169	**77**	**80**	66-114	4	25	
591-78-6	2-Hexanone	214	182	190	**85**	**89**	58-146	5	25	
124-48-1	Dibromochloromethane	213	186	193	**87**	**91**	67-130	4	25	
106-93-4	1,2-Dibromoethane	216	182	189	**84**	**88**	70-127	5	25	
123-86-4	n-Butyl Acetate	219	192	200	**88**	**91**	62-140	3	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1804329
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P180824-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Raneem Sahtah Date Analyzed: 8/24/18
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
111-65-9	n-Octane	217	189	193	**87**	**89**	65-121	2	25	
127-18-4	Tetrachloroethene	213	172	177	**81**	**83**	62-119	2	25	
108-90-7	Chlorobenzene	215	165	170	**77**	**79**	66-115	3	25	
100-41-4	Ethylbenzene	212	170	176	**80**	**83**	69-117	4	25	
179601-23-1	m,p-Xylenes	426	345	359	**81**	**84**	67-117	4	25	
75-25-2	Bromoform	213	186	196	**87**	**92**	67-135	6	25	
100-42-5	Styrene	212	181	188	**85**	**89**	70-128	5	25	
95-47-6	o-Xylene	214	174	181	**81**	**85**	67-118	5	25	
111-84-2	n-Nonane	215	182	188	**85**	**87**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	214	167	174	**78**	**81**	70-125	4	25	
98-82-8	Cumene	214	170	178	**79**	**83**	68-116	5	25	
80-56-8	alpha-Pinene	211	204	213	**97**	**101**	69-122	4	25	
103-65-1	n-Propylbenzene	218	174	181	**80**	**83**	70-118	4	25	
622-96-8	4-Ethyltoluene	214	180	188	**84**	**88**	69-124	5	25	
108-67-8	1,3,5-Trimethylbenzene	214	171	178	**80**	**83**	65-117	4	25	
95-63-6	1,2,4-Trimethylbenzene	215	184	191	**86**	**89**	67-124	3	25	
100-44-7	Benzyl Chloride	217	194	204	**89**	**94**	75-142	5	25	
541-73-1	1,3-Dichlorobenzene	216	168	175	**78**	**81**	70-124	4	25	
106-46-7	1,4-Dichlorobenzene	216	166	174	**77**	**81**	63-124	5	25	
95-50-1	1,2-Dichlorobenzene	216	174	182	**81**	**84**	66-125	4	25	
5989-27-5	d-Limonene	211	198	207	**94**	**98**	64-135	4	25	
96-12-8	1,2-Dibromo-3-chloropropane	209	177	186	**85**	**89**	73-136	5	25	
120-82-1	1,2,4-Trichlorobenzene	214	170	178	**79**	**83**	70-141	5	25	
91-20-3	Naphthalene	203	147	154	**72**	**76**	71-146	5	25	
87-68-3	Hexachlorobutadiene	209	159	166	**76**	**79**	63-126	4	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 MS08

Method Path : I:\MS08\Methods\
Method File : R8082218.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Aug 22 11:13:29 2018
Response Via : Initial Calibration

RS 8/22/18

Calibration Files
0.1 =08211809.D 0.2 =08211810.D 0.5 =08211811.D 1.0 =08211812.D 5.0 =08211813.D 25 =08211814.D 50 =08211815.D
100 =08211816.D

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------	----------	ISTD	----------	----------	----------	----------	----------		
2)	T	Propene	2.059	1.874	1.700	1.801	1.510	1.326	1.289	1.306	1.608	18.23
3)	T	Dichlorodifluo...		2.948	2.840	2.698	2.281	1.994	1.867	1.760	2.341	20.86
4)	T	Chloromethane	2.683	2.640	2.411	2.526	2.169	2.175	2.246	1.955	2.351	10.91
5)	T	1,2-Dichloro-1...		1.653	1.507	1.480	1.172	1.087	1.038	0.967	1.272	21.18
6)	T	Vinyl Chloride	2.184	2.159	2.078	2.010	1.654	1.409	1.462	1.497	1.807	18.45
7)	T	1,3-Butadiene	1.903	1.751	1.676	1.661	1.367	1.331	1.324	1.306	1.540	15.22
8)	T	Bromomethane	1.420	1.338	1.182	1.234	1.017	0.976	0.981	0.986	1.142	15.51
9)	T	Chloroethane		1.255	1.206	1.212	0.959	0.929	0.899	0.887	1.050	15.79
10)	T	Ethanol	1.625	1.359	1.272	1.262	1.064	1.392	1.300	1.139	1.301	13.03
11)	T	Acetonitrile	3.836	3.161	3.146	3.055	2.724	3.020	3.057	2.762	3.095	11.01
12)	T	Acrolein	0.848	0.843	0.823	0.832	0.777	0.875	0.863	0.890	0.844	4.15
13)	T	Acetone	1.563	1.335	1.139	1.095	0.933	0.978	0.997	0.997	1.130	19.16
14)	T	Trichlorofluor...	2.466	2.438	2.203	2.027	1.802	1.650	1.630	1.603	1.977	18.16
15)	T	2-Propanol (Is...	4.662	4.069	3.910	4.088	3.656	4.419	4.109	3.573	4.061	8.92
16)	T	Acrylonitrile	1.513	1.743	1.869	1.954	1.643	1.786	1.730	1.676	1.739	7.83
17)	T	1,1-Dichloroet...	1.268	1.185	1.109	1.008	0.950	0.771	0.881	0.999	1.021	15.83
18)	T	2-Methyl-2-Pro...	3.963	3.740	3.558	3.780	3.477	4.147	3.901	3.225	3.724	7.91
19)	T	Methylene Chlo...	1.747	1.457	1.372	1.306	1.216	1.233	1.258	1.256	1.356	13.08
20)	T	3-Chloro-1-pro...	1.909	1.888	1.699	1.696	1.410	1.335	1.357	1.500	1.599	14.43
21)	T	Trichlorotrifl...	1.358	1.337	1.242	1.202	1.035	1.035	1.024	1.017	1.156	12.61
22)	T	Carbon Disulfide		6.839	5.356	4.938	4.036	3.312	3.607	3.857	4.564	27.15
23)	T	trans-1,2-Dich...	1.795	1.739	1.651	1.633	1.347	1.312	1.309	1.382	1.521	13.40
24)	T	1,1-Dichloroet...	2.906	2.555	2.244	2.268	1.730	1.698	1.605	1.554	2.070	24.08
25)	T	Methyl tert-Bu...	4.542	4.214	3.888	4.051	3.593	3.874	3.723	3.533	3.927	8.55
26)	T	Vinyl Acetate	0.312	0.331	0.349	0.376	0.319	0.341	0.325	0.294	0.331	7.53
27)	T	2-Butanone (MEK)	0.874	0.921	0.952	1.033	0.843	0.907	0.832	0.763	0.891	9.25
28)	T	cis-1,2-Dichlo...	2.113	1.905	1.782	1.808	1.430	1.487	1.410	1.344	1.660	16.84
29)	T	Diisopropyl Ether	1.610	1.445	1.372	1.389	1.171	1.271	1.221	1.141	1.327	11.84
30)	T	Ethyl Acetate	0.467	0.480	0.472	0.520	0.429	0.476	0.453	0.408	0.463	7.33
31)	T	n-Hexane			2.153	2.031	1.436	1.342	1.257	1.167	1.564	26.85
32)	T	Chloroform	2.836	2.624	2.267	2.235	1.821	1.901	1.762	1.610	2.132	20.42
33)	S	1,2-Dichloroet...	1.603	1.609	1.607	1.646	1.490	1.552	1.486	1.389	1.548	5.59
34)	T	Tetrahydrofura...	0.556	0.858	0.855	0.913	0.746	0.798	0.744	0.695	0.771	14.62
35)	T	Ethyl tert-But...	1.772	1.698	1.669	1.640	1.472	1.620	1.575	1.504	1.619	6.16
36)	T	1,2-Dichloroet...	2.126	2.071	1.846	1.884	1.513	1.567	1.434	1.288	1.716	17.98
37)	IR	1,4-Difluorobenzen...	----------	----------	ISTD	----------	----------	----------	----------	----------		
38)	T	1,1,1-Trichlor...	0.549	0.501	0.441	0.435	0.427	0.434	0.440	0.446	0.459	9.37
39)	T	Isopropyl Acetate	0.204	0.201	0.190	0.200	0.196	0.214	0.214	0.211	0.204	4.19
40)	T	1-Butanol	0.351	0.327	0.334	0.320	0.360	0.487	0.496	0.480	0.394	19.84
41)	T	Benzene	1.567	1.401	1.262	1.249	1.097	1.074	1.080	1.088	1.227	14.73
42)	T	Carbon Tetrach...	0.455	0.419	0.394	0.381	0.379	0.385	0.390	0.399	0.400	6.34

Method Path : I:\MS08\Methods\
Method File : R8082218.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

43)	T	Cyclohexane	0.617	0.555	0.512	0.499	0.501	0.511	0.533	0.549	0.535	7.37
44)	T	tert-Amyl Meth...	0.951	0.875	0.823	0.807	0.854	0.908	0.937	0.966	0.890	6.69
45)	T	1,2-Dichloropr...	0.365	0.342	0.306	0.308	0.287	0.293	0.286	0.286	0.309	9.44
46)	T	Bromodichlorom...	0.440	0.406	0.380	0.392	0.379	0.406	0.402	0.396	0.400	4.84
47)	T	Trichloroethene	0.364	0.355	0.308	0.322	0.297	0.297	0.296	0.301	0.318	8.62
48)	T	1,4-Dioxane	0.266	0.254	0.244	0.259	0.263	0.288	0.287	0.294	0.269	6.78
49)	T	2,2,4-Trimethy...	1.644	1.515	1.329	1.305	1.292	1.318	1.380	1.431	1.402	8.79
50)	T	Methyl Methacr...	0.111	0.119	0.122	0.127	0.131	0.141	0.141	0.141	0.129	8.94
51)	T	n-Heptane	0.370	0.350	0.317	0.315	0.283	0.271	0.267	0.267	0.305	13.00
52)	T	cis-1,3-Dichlo...	0.450	0.452	0.418	0.451	0.470	0.521	0.518	0.515	0.474	8.20
53)	T	4-Methyl-2-pen...	0.300	0.275	0.279	0.291	0.305	0.342	0.339	0.332	0.308	8.68
54)	T	trans-1,3-Dich...	0.315	0.321	0.341	0.379	0.435	0.500	0.498	0.490	0.410	19.67
55)	T	1,1,2-Trichlor...	0.339	0.315	0.300	0.307	0.294	0.308	0.304	0.297	0.308	4.60
56)	IR	Chlorobenzene-d5 (...	----------	----------	----------	ISTD	----------	----------	----------	----------	----------	
57)	S	Toluene-d8 (SS2)	2.391	2.354	2.333	2.318	2.235	2.135	2.145	2.153	2.258	4.60
58)	T	Toluene	3.543	3.095	2.712	2.674	2.332	2.241	2.202	2.176	2.622	18.73
59)	T	2-Hexanone	1.496	1.512	1.487	1.470	1.451	1.509	1.479	1.434	1.480	1.84
60)	T	Dibromochlorom...	0.743	0.666	0.632	0.653	0.614	0.634	0.636	0.634	0.651	6.14
61)	T	1,2-Dibromoethane	0.666	0.692	0.643	0.647	0.604	0.612	0.603	0.598	0.633	5.42
62)	T	n-Butyl Acetate	1.751	1.557	1.526	1.590	1.594	1.646	1.609	1.569	1.605	4.29
63)	T	n-Octane	0.591	0.624	0.527	0.557	0.501	0.488	0.489	0.497	0.534	9.62
64)	T	Tetrachloroethene	0.845	0.825	0.728	0.724	0.629	0.615	0.611	0.621	0.700	13.71
65)	T	Chlorobenzene	2.371	2.046	1.771	1.765	1.587	1.579	1.572	1.552	1.780	16.35
66)	T	Ethylbenzene	3.707	3.190	2.925	2.997	2.854	2.830	2.814	2.741	3.007	10.47
67)	T	m- & p-Xylenes	2.861	2.479	2.312	2.324	2.172	2.246	2.254	2.178	2.353	9.65
68)	T	Bromoform	0.562	0.504	0.519	0.538	0.546	0.596	0.593	0.592	0.556	6.39
69)	T	Styrene	1.917	1.714	1.646	1.726	1.756	1.866	1.869	1.823	1.790	5.22
70)	T	o-Xylene	2.845	2.485	2.286	2.363	2.229	2.301	2.306	2.241	2.382	8.55
71)	T	n-Nonane	1.593	1.358	1.349	1.377	1.316	1.332	1.323	1.276	1.366	7.09
72)	T	1,1,2,2-Tetrac...	1.304	1.211	1.103	1.136	1.076	1.126	1.135	1.117	1.151	6.34
73)	S	Bromofluoroben...	0.799	0.809	0.818	0.822	0.865	0.876	0.880	0.869	0.842	3.95
74)	T	Cumene	3.968	3.351	2.967	3.071	2.886	2.934	2.942	2.813	3.116	12.21
75)	T	alpha-Pinene	1.515	1.366	1.311	1.300	1.381	1.310	1.335	1.355	1.359	5.09
76)	T	n-Propylbenzene	4.337	3.770	3.521	3.616	3.425	3.519	3.465	3.276	3.616	8.97
77)	T	3-Ethyltoluene	3.732	3.007	2.850	2.973	2.843	3.141	3.091	3.050	3.086	9.12
78)	T	4-Ethyltoluene	3.378	3.096	2.818	2.955	2.771	2.723	2.787	2.530	2.882	9.01
79)	T	1,3,5-Trimethy...	3.040	2.626	2.399	2.539	2.404	2.490	2.513	2.411	2.553	8.29
80)	T	alpha-Methylst...	1.337	1.176	1.220	1.206	1.228	1.416	1.436	1.388	1.301	8.05
81)	T	2-Ethyltoluene		3.131	2.927	3.026	2.847	2.960	2.957	2.817	2.952	3.59
82)	T	1,2,4-Trimethy...	2.973	2.585	2.419	2.499	2.455	2.739	2.743	2.410	2.603	7.67
83)	T	n-Decane		0.083	0.049	0.056	0.056	0.064	0.065	0.063	0.062	16.96
84)	T	Benzyl Chloride				1.195	1.692	2.290	2.402	2.392	1.994	26.79
85)	T	1,3-Dichlorobe...	1.870	1.585	1.435	1.469	1.406	1.484	1.505	1.420	1.522	9.97
86)	T	1,4-Dichlorobe...	1.886	1.561	1.426	1.472	1.390	1.482	1.472	1.432	1.515	10.43
87)	T	sec-Butylbenzene	4.063	3.561	3.323	3.416	3.251	3.397	3.376	3.152	3.442	8.08
88)	T	4-Isopropyltol...	3.761	3.395	3.118	3.261	3.138	3.524	3.389	2.766	3.294	9.07
89)	T	1,2,3-Trimethy...	2.920	2.619	2.443	2.575	2.501	2.822	2.827	2.455	2.645	7.05
90)	T	1,2-Dichlorobe...	1.753	1.448	1.389	1.411	1.345	1.472	1.476	1.323	1.452	9.23
91)	T	d-Limonene	0.982	0.895	0.922	0.909	0.994	1.165	1.203	1.105	1.022	11.78
92)	T	1,2-Dibromo-3-...	0.520	0.459	0.470	0.490	0.511	0.561	0.559	0.553	0.516	7.79
93)	T	n-Undecane	1.147	0.954	1.037	1.303	1.313	1.532	1.560	1.489	1.292	17.78
94)	T	1,2,4-Trichlor...	1.139	0.946	0.890	1.003	0.973	1.142	1.160	1.123	1.047	10.10

Method Path : I:\MS08\Methods\
Method File : R8082218.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

95)	T	Naphthalene	4.725	3.995	4.002	3.251	3.307	4.141	4.126	3.613	3.895	12.52
96)	T	n-Dodecane				1.076	1.159	1.704	1.741	1.531	1.442	21.35
97)	T	Hexachlorobuta...	0.815	0.708	0.662	0.665	0.640	0.682	0.698	0.691	0.695	7.64
98)	T	Cyclohexanone	1.124	1.000	0.962	0.963	0.986	1.072	1.058	1.033	1.025	5.60
99)	T	tert-Butylbenzene	3.084	2.664	2.437	2.535	2.431	2.690	2.630	2.243	2.589	9.61
100)	T	n-Butylbenzene	3.171	2.706	2.565	2.687	2.632	2.798	2.765	2.582	2.738	7.05

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : I:\MS08\Data\2018 08\23\08241802.D Vial: 16
Acq On : 24 Aug 2018 4:04 Operator: RS
Sample : CCV R8082318 5ng Inst : MS08
Misc : S31-08091802/S31-08011811 (8/30)

RS 8/24/18

Quant Time: Aug 24 08:09:11 2018
Quant Method : I:\MS08\Methods\R8082218.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Aug 22 11:13:29 2018
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)
1	IR	Bromochloromethane (IS1)	1.000	1.000	0.0	123	-0.03
2	T	Propene	1.608	1.492	7.2	122	0.00
3	T	Dichlorodifluoromethane (CF	2.341	2.381	-1.7	129	0.00
4	T	Chloromethane	2.351	2.226	5.3	127	-0.01
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.272	1.363	-7.2	144	0.00
6	T	Vinyl Chloride	1.807	2.073	-14.7	155	-0.02
7	T	1,3-Butadiene	1.540	1.676	-8.8	151	-0.02
8	T	Bromomethane	1.142	1.111	2.7	135	-0.02
9	T	Chloroethane	1.050	1.010	3.8	130	-0.02
10	T	Ethanol	1.301	1.076	17.3	125	-0.11
11	T	Acetonitrile	3.095	2.632	15.0	119	-0.06
12	T	Acrolein	0.844	0.905	-7.2	144	-0.04
13	T	Acetone	1.130	1.066	5.7	141	-0.05
14	T	Trichlorofluoromethane	1.977	1.924	2.7	132	-0.02
15	T	2-Propanol (Isopropanol)	4.061	3.789	6.7	128	-0.08
16	T	Acrylonitrile	1.739	1.858	-6.8	140	-0.04
17	T	1,1-Dichloroethene	1.021	1.217	-19.2	158	-0.02
18	T	2-Methyl-2-Propanol (tert-B	3.724	3.536	5.0	126	-0.07
19	T	Methylene Chloride	1.356	1.276	5.9	130	-0.03
20	T	3-Chloro-1-propene (Allyl C	1.599	2.010	-25.7	176	-0.03
21	T	Trichlorotrifluoroethane	1.156	1.142	1.2	136	-0.01
22	T	Carbon Disulfide	4.564	4.536	0.6	139	-0.02
23	T	trans-1,2-Dichloroethene	1.521	1.850	-21.6	170	-0.02
24	T	1,1-Dichloroethane	2.070	2.214	-7.0	158	-0.02
25	T	Methyl tert-Butyl Ether	3.927	3.931	-0.1	135	0.00
26	T	Vinyl Acetate	0.331	0.375	-13.3	145	-0.03
27	T	2-Butanone (MEK)	0.891	0.959	-7.6	141	-0.02
28	T	cis-1,2-Dichloroethene	1.660	1.785	-7.5	154	-0.02
29	T	Diisopropyl Ether	1.327	1.335	-0.6	141	-0.02
30	T	Ethyl Acetate	0.463	0.477	-3.0	137	-0.02
31	T	n-Hexane	1.564	1.969	-25.9	169	-0.01
32	T	Chloroform	2.132	2.098	1.6	142	-0.02
33	S	1,2-Dichloroethane-d4(SS1)	1.548	1.537	0.7	127	-0.02
34	T	Tetrahydrofuran (THF)	0.771	0.890	-15.4	147	-0.01
35	T	Ethyl tert-Butyl Ether	1.619	1.651	-2.0	138	-0.01
36	T	1,2-Dichloroethane	1.716	1.686	1.7	138	-0.02
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	128	-0.02
38	T	1,1,1-Trichloroethane	0.459	0.438	4.6	131	-0.02
39	T	Isopropyl Acetate	0.204	0.207	-1.5	135	-0.01
40	T	1-Butanol	0.394	0.400	-1.5	142	-0.05
41	T	Benzene	1.227	1.193	2.8	139	-0.01
42	T	Carbon Tetrachloride	0.400	0.390	2.5	132	-0.02
43	T	Cyclohexane	0.535	0.511	4.5	131	-0.01
44	T	tert-Amyl Methyl Ether	0.890	0.892	-0.2	134	-0.01
45	T	1,2-Dichloropropane	0.309	0.296	4.2	132	-0.01
46	T	Bromodichloromethane	0.400	0.389	2.8	131	-0.01
47	T	Trichloroethene	0.318	0.317	0.3	136	-0.01
48	T	1,4-Dioxane	0.269	0.267	0.7	130	-0.01
49	T	2,2,4-Trimethylpentane (Iso	1.402	1.402	0.0	139	-0.01
50	T	Methyl Methacrylate	0.129	0.133	-3.1	129	-0.01
51	T	n-Heptane	0.305	0.312	-2.3	141	-0.01
52	T	cis-1,3-Dichloropropene	0.474	0.484	-2.1	132	-0.01
53	T	4-Methyl-2-pentanone	0.308	0.315	-2.3	132	0.00
54	T	trans-1,3-Dichloropropene	0.410	0.439	-7.1	129	0.00
55	T	1,1,2-Trichloroethane	0.308	0.284	7.8	124	-0.01

Evaluate Continuing Calibration Report

Data File : I:\MS08\Data\2018 08\23\08241802.D Vial: 16
Acq On : 24 Aug 2018 4:04 Operator: RS
Sample : CCV R8082318 5ng Inst : MS08
Misc : S31-08091802/S31-08011811 (8/30)

Quant Time: Aug 24 08:09:11 2018
Quant Method : I:\MS08\Methods\R8082218.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Aug 22 11:13:29 2018
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	116	0.00
57	S	Toluene-d8 (SS2)	2.258	2.330	-3.2	121	0.00
58	T	Toluene	2.622	2.566	2.1	128	0.00
59	T	2-Hexanone	1.480	1.587	-7.2	127	-0.01
60	T	Dibromochloromethane	0.651	0.669	-2.8	127	-0.01
61	T	1,2-Dibromoethane	0.633	0.664	-4.9	128	0.00
62	T	n-Butyl Acetate	1.605	1.707	-6.4	125	0.00
63	T	n-Octane	0.534	0.558	-4.5	129	-0.01
64	T	Tetrachloroethene	0.700	0.701	-0.1	130	0.00
65	T	Chlorobenzene	1.780	1.704	4.3	125	0.00
66	T	Ethylbenzene	3.007	3.047	-1.3	124	0.00
67	T	m- & p-Xylenes	2.353	2.289	2.7	123	-0.02
68	T	Bromoform	0.556	0.578	-4.0	123	0.00
69	T	Styrene	1.790	1.859	-3.9	123	0.00
70	T	o-Xylene	2.382	2.349	1.4	123	-0.01
71	T	n-Nonane	1.366	1.386	-1.5	123	-0.01
72	T	1,1,2,2-Tetrachloroethane	1.151	1.098	4.6	119	0.00
73	S	Bromofluorobenzene (SS3)	0.842	0.824	2.1	111	0.00
74	T	Cumene	3.116	3.028	2.8	122	0.00
75	T	alpha-Pinene	1.359	1.514	-11.4	127	0.00
76	T	n-Propylbenzene	3.616	3.570	1.3	121	0.00
77	T	3-Ethyltoluene	3.086	3.037	1.6	124	0.00
78	T	4-Ethyltoluene	2.882	2.808	2.6	118	-0.01
79	T	1,3,5-Trimethylbenzene	2.553	2.482	2.8	120	0.00
80	T	alpha-Methylstyrene	1.301	1.358	-4.4	129	-0.01
81	T	2-Ethyltoluene	2.952	2.934	0.6	120	-0.01
82	T	1,2,4-Trimethylbenzene	2.603	2.548	2.1	121	-0.01
83	T	n-Decane	0.062	0.062	0.0	128	-0.01
84	T	Benzyl Chloride	1.994	1.932	3.1	133	-0.02
85	T	1,3-Dichlorobenzene	1.522	1.465	3.7	121	-0.01
86	T	1,4-Dichlorobenzene	1.515	1.451	4.2	121	-0.01
87	T	sec-Butylbenzene	3.442	3.376	1.9	121	-0.01
88	T	4-Isopropyltoluene (p-Cymen	3.294	3.316	-0.7	123	0.00
89	T	1,2,3-Trimethylbenzene	2.645	2.595	1.9	121	-0.01
90	T	1,2-Dichlorobenzene	1.452	1.386	4.5	120	0.00
91	T	d-Limonene	1.022	1.072	-4.9	125	-0.01
92	T	1,2-Dibromo-3-Chloropropane	0.516	0.533	-3.3	121	0.00
93	T	n-Undecane	1.292	1.496	-15.8	132	0.00
94	T	1,2,4-Trichlorobenzene	1.047	1.086	-3.7	130	0.00
95	T	Naphthalene	3.895	3.773	3.1	133	0.00
96	T	n-Dodecane	1.442	1.563	-8.4	157	0.00
97	T	Hexachlorobutadiene	0.695	0.659	5.2	120	0.00
98	T	Cyclohexanone	1.025	1.056	-3.0	125	-0.02
99	T	tert-Butylbenzene	2.589	2.542	1.8	122	-0.01
100	T	n-Butylbenzene	2.738	2.731	0.3	121	0.00

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

MEMORANDUM

TO: Project File **DATE:** September 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: September 7, 2018 Air Sample

LAB: ALS Environmental P1804329

One (1) soil vapor extraction sample was collected on August 17, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1804329.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa Canister ™ canister (1Liter) 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. 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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

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

Laboratory Control Samples

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery and relative percent differences (RPDs) for all control compounds met laboratory control limit 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.

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LABORATORY REPORT

October 15, 2018

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

RE: MVSC / 1358.001.01.0007

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on October 1, 2018. For your reference, these analyses have been assigned our service request number P1805158.

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 4:07 pm, 10/15/18

Kate Kaneko
Laboratory Director

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: PES Environmental
Project: MVSC / 1358.001.01.0007

Service Request No: P1805158

CASE NARRATIVE

The sample was received intact under chain of custody on October 1, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
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
Project ID: MVSC / 1358.001.01.0007
Service Request: P1805158

Date Received: 10/1/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-092718	P1805158-001	Air	9/27/2018	11:30	1SC01357	-1.89	5.34	X

Air - Chain of Custody Record & Analytical Service Request

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: P18 05158

Company Name & Address (Reporting Information): PES ENVIRONMENTAL INC
1115 4th Ave STE 1350
SEATTLE, WA 98101

Project Name: MVSC

Project Number: 158.001.01.0007

Project Manager: Matt Dahl

P.O. # / Billing Information:

Phone: 206-529-3960 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springsteel

ALS Contact:

Analysis Method: 51-PI-15

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
SYS-092718		9-27-18	1130	SC01357	AV03594	30	5	1L	X		

5 of 16

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: EIM Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	9-27-18	1200		9/28/18	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: P1805158

Project: Manhattan Village Shopping Center / 1358.001.010007

Sample(s) received on: 10/1/18 Date opened: 10/1/18 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
P1805158-001.01	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: **SYS-092718** ALS Project ID: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P1805158-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 10/1/18
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01357

Initial Pressure (psig): -1.89 Final Pressure (psig): 5.34

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	2.0	ND	1.2	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.1**	2.0	**0.83**	0.41	
74-87-3	Chloromethane	ND	2.0	ND	0.94	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	ND	0.28	
75-01-4	Vinyl Chloride	ND	2.1	ND	0.81	
106-99-0	1,3-Butadiene	ND	2.0	ND	0.92	
74-83-9	Bromomethane	ND	2.0	ND	0.50	
75-00-3	Chloroethane	ND	2.0	ND	0.75	
64-17-5	Ethanol	ND	20	ND	11	
75-05-8	Acetonitrile	ND	2.0	ND	1.2	
107-02-8	Acrolein	ND	3.9	ND	1.7	
67-64-1	Acetone	ND	21	ND	8.9	
75-69-4	Trichlorofluoromethane (CFC 11)	**3.2**	2.1	**0.56**	0.37	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.2	ND	3.3	
107-13-1	Acrylonitrile	ND	2.0	ND	0.93	
75-35-4	1,1-Dichloroethene	ND	2.1	ND	0.53	
75-09-2	Methylene Chloride	ND	2.1	ND	0.61	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.1	ND	0.66	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	2.1	ND	0.27	
75-15-0	Carbon Disulfide	ND	4.3	ND	1.4	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	ND	0.52	
75-34-3	1,1-Dichloroethane	ND	2.0	ND	0.50	
1634-04-4	Methyl tert-Butyl Ether	ND	2.1	ND	0.58	
108-05-4	Vinyl Acetate	ND	21	ND	5.9	
78-93-3	2-Butanone (MEK)	ND	3.9	ND	1.3	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-092718** ALS Project ID: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P1805158-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 10/1/18
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01357

Initial Pressure (psig): -1.89 Final Pressure (psig): 5.34

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**2.3**	2.1	**0.58**	0.52	
141-78-6	Ethyl Acetate	ND	4.3	ND	1.2	
110-54-3	n-Hexane	ND	2.1	ND	0.60	
67-66-3	Chloroform	**6.3**	2.1	**1.3**	0.43	
109-99-9	Tetrahydrofuran (THF)	ND	2.1	ND	0.70	
107-06-2	1,2-Dichloroethane	ND	2.1	ND	0.51	
71-55-6	1,1,1-Trichloroethane	ND	2.1	ND	0.39	
71-43-2	Benzene	ND	2.0	ND	0.64	
56-23-5	Carbon Tetrachloride	ND	2.0	ND	0.32	
110-82-7	Cyclohexane	ND	3.9	ND	1.1	
78-87-5	1,2-Dichloropropane	ND	2.1	ND	0.46	
75-27-4	Bromodichloromethane	ND	2.1	ND	0.31	
79-01-6	Trichloroethene	ND	2.1	ND	0.38	
123-91-1	1,4-Dioxane	ND	2.1	ND	0.57	
80-62-6	Methyl Methacrylate	ND	4.3	ND	1.0	
142-82-5	n-Heptane	**2.2**	2.1	**0.54**	0.51	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	ND	0.48	
108-10-1	4-Methyl-2-pentanone	ND	2.1	ND	0.50	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	ND	0.46	
79-00-5	1,1,2-Trichloroethane	ND	2.1	ND	0.39	
108-88-3	Toluene	**15**	2.1	**3.9**	0.55	
591-78-6	2-Hexanone	ND	2.1	ND	0.51	
124-48-1	Dibromochloromethane	ND	2.1	ND	0.25	
106-93-4	1,2-Dibromoethane	ND	2.1	ND	0.27	
123-86-4	n-Butyl Acetate	ND	2.1	ND	0.44	

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: **SYS-092718** ALS Project ID: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P1805158-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 10/1/18
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
Sample Type: 1.0 L Summa Canister Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1SC01357

Initial Pressure (psig): -1.89 Final Pressure (psig): 5.34

Container Dilution Factor: 1.56

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	2.1	ND	0.45	
127-18-4	Tetrachloroethene	**210**	2.1	**31**	0.30	
108-90-7	Chlorobenzene	ND	2.1	ND	0.45	
100-41-4	Ethylbenzene	**160**	2.0	**37**	0.47	
179601-23-1	m,p-Xylenes	**470**	4.3	**110**	0.99	
75-25-2	Bromoform	ND	2.1	ND	0.20	
100-42-5	Styrene	ND	2.1	ND	0.49	
95-47-6	o-Xylene	**100**	2.1	**24**	0.48	
111-84-2	n-Nonane	ND	2.1	ND	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	ND	0.30	
98-82-8	Cumene	ND	2.1	ND	0.42	
80-56-8	alpha-Pinene	ND	2.0	ND	0.36	
103-65-1	n-Propylbenzene	**2.1**	2.1	**0.44**	0.43	
622-96-8	4-Ethyltoluene	**3.7**	2.1	**0.75**	0.42	
108-67-8	1,3,5-Trimethylbenzene	**2.4**	2.1	**0.48**	0.42	
95-63-6	1,2,4-Trimethylbenzene	**6.0**	2.1	**1.2**	0.42	
100-44-7	Benzyl Chloride	ND	4.3	ND	0.83	
541-73-1	1,3-Dichlorobenzene	ND	2.1	ND	0.35	
106-46-7	1,4-Dichlorobenzene	ND	2.1	ND	0.35	
95-50-1	1,2-Dichlorobenzene	ND	2.1	ND	0.35	
5989-27-5	d-Limonene	**2.0**	2.0	**0.36**	0.36	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ND	0.21	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	ND	0.28	
91-20-3	Naphthalene	ND	2.0	ND	0.38	
87-68-3	Hexachlorobutadiene	ND	2.1	ND	0.19	

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: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805158

Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805158

Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18

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
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.0007** ALS Project ID: P1805158

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 9/27/18
Analyst: Lusine Hakobyan/Topacio De Leon Date(s) Received: 10/1/18
Sample Type: 1.0 L Summa Canister(s) Date(s) Analyzed: 10/13/18
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	P181013-MB	**98**	**111**	**117**	70-130	
Lab Control Sample	P181013-LCS	**96**	**103**	**118**	70-130	
Duplicate Lab Control Sample	P181013-DLCS	**98**	**110**	**114**	70-130	
SYS-092718	P1805158-001	**101**	**110**	**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: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
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
115-07-1	Propene	211	155	159	**73**	**75**	54-133	3	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	174	166	**83**	**79**	64-115	5	25	
74-87-3	Chloromethane	211	157	142	**74**	**67**	47-140	10	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	185	172	**88**	**82**	60-112	7	25	
75-01-4	Vinyl Chloride	214	175	163	**82**	**76**	63-127	8	25	
106-99-0	1,3-Butadiene	210	162	168	**77**	**80**	57-149	4	25	
74-83-9	Bromomethane	212	177	168	**83**	**79**	63-132	5	25	
75-00-3	Chloroethane	214	165	157	**77**	**73**	68-129	5	25	
64-17-5	Ethanol	1,020	864	850	**85**	**83**	62-131	2	25	
75-05-8	Acetonitrile	206	166	173	**81**	**84**	56-136	4	25	
107-02-8	Acrolein	205	158	164	**77**	**80**	60-132	4	25	
67-64-1	Acetone	1,060	834	860	**79**	**81**	63-124	3	25	
75-69-4	Trichlorofluoromethane (CFC 11)	211	180	185	**85**	**88**	65-113	3	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	349	361	**85**	**87**	62-135	2	25	
107-13-1	Acrylonitrile	207	170	176	**82**	**85**	68-138	4	25	
75-35-4	1,1-Dichloroethene	218	177	184	**81**	**84**	72-118	4	25	
75-09-2	Methylene Chloride	217	172	178	**79**	**82**	67-116	4	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	182	188	**84**	**87**	61-143	4	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	187	193	**87**	**89**	68-113	2	25	
75-15-0	Carbon Disulfide	218	173	179	**79**	**82**	68-120	4	25	
156-60-5	trans-1,2-Dichloroethene	214	172	177	**80**	**83**	71-125	4	25	
75-34-3	1,1-Dichloroethane	216	171	175	**79**	**81**	68-118	3	25	
1634-04-4	Methyl tert-Butyl Ether	214	181	187	**85**	**87**	60-123	2	25	
108-05-4	Vinyl Acetate	1,060	901	916	**85**	**86**	73-135	1	25	
78-93-3	2-Butanone (MEK)	208	175	179	**84**	**86**	70-129	2	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
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
156-59-2	cis-1,2-Dichloroethene	211	169	172	**80**	**82**	69-121	2	25	
141-78-6	Ethyl Acetate	436	362	368	**83**	**84**	66-140	1	25	
110-54-3	n-Hexane	216	166	167	**77**	**77**	61-124	0	25	
67-66-3	Chloroform	217	179	182	**82**	**84**	69-113	2	25	
109-99-9	Tetrahydrofuran (THF)	216	171	174	**79**	**81**	66-121	3	25	
107-06-2	1,2-Dichloroethane	215	177	182	**82**	**85**	62-120	4	25	
71-55-6	1,1,1-Trichloroethane	215	192	189	**89**	**88**	65-116	1	25	
71-43-2	Benzene	211	172	172	**82**	**82**	66-111	0	25	
56-23-5	Carbon Tetrachloride	212	185	187	**87**	**88**	64-122	1	25	
110-82-7	Cyclohexane	416	352	354	**85**	**85**	69-115	0	25	
78-87-5	1,2-Dichloropropane	216	179	181	**83**	**84**	69-121	1	25	
75-27-4	Bromodichloromethane	215	194	197	**90**	**92**	69-123	2	25	
79-01-6	Trichloroethene	213	190	191	**89**	**90**	69-112	1	25	
123-91-1	1,4-Dioxane	214	185	187	**86**	**87**	74-123	1	25	
80-62-6	Methyl Methacrylate	431	377	378	**87**	**88**	75-125	1	25	
142-82-5	n-Heptane	215	167	174	**78**	**81**	68-118	4	25	
10061-01-5	cis-1,3-Dichloropropene	214	175	191	**82**	**89**	74-129	8	25	
108-10-1	4-Methyl-2-pentanone	209	165	182	**79**	**87**	66-138	10	25	
10061-02-6	trans-1,3-Dichloropropene	213	181	196	**85**	**92**	75-130	8	25	
79-00-5	1,1,2-Trichloroethane	215	176	191	**82**	**89**	73-117	8	25	
108-88-3	Toluene	212	159	171	**75**	**81**	66-114	8	25	
591-78-6	2-Hexanone	214	170	181	**79**	**85**	58-146	7	25	
124-48-1	Dibromochloromethane	213	195	205	**92**	**96**	67-130	4	25	
106-93-4	1,2-Dibromoethane	216	182	194	**84**	**90**	70-127	7	25	
123-86-4	n-Butyl Acetate	219	173	183	**79**	**84**	62-140	6	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805158
Client Project ID: **MVSC / 1358.001.01.0007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan/Topacio De Leon Date Analyzed: 10/13/18
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
111-65-9	n-Octane	217	163	171	**75**	**79**	65-121	5	25	
127-18-4	Tetrachloroethene	213	187	191	**88**	**90**	62-119	2	25	
108-90-7	Chlorobenzene	215	182	184	**85**	**86**	66-115	1	25	
100-41-4	Ethylbenzene	212	176	176	**83**	**83**	69-117	0	25	
179601-23-1	m,p-Xylenes	426	355	342	**83**	**80**	67-117	4	25	
75-25-2	Bromoform	213	215	212	**101**	**100**	67-135	1	25	
100-42-5	Styrene	212	191	189	**90**	**89**	70-128	1	25	
95-47-6	o-Xylene	214	179	178	**84**	**83**	67-118	1	25	
111-84-2	n-Nonane	215	177	176	**82**	**82**	61-127	0	25	
79-34-5	1,1,2,2-Tetrachloroethane	214	188	186	**88**	**87**	70-125	1	25	
98-82-8	Cumene	214	183	181	**86**	**85**	68-116	1	25	
80-56-8	alpha-Pinene	211	185	182	**88**	**86**	69-122	2	25	
103-65-1	n-Propylbenzene	218	188	184	**86**	**84**	70-118	2	25	
622-96-8	4-Ethyltoluene	214	199	181	**93**	**85**	69-124	9	25	
108-67-8	1,3,5-Trimethylbenzene	214	180	178	**84**	**83**	65-117	1	25	
95-63-6	1,2,4-Trimethylbenzene	215	187	172	**87**	**80**	67-124	8	25	
100-44-7	Benzyl Chloride	217	197	182	**91**	**84**	75-142	8	25	
541-73-1	1,3-Dichlorobenzene	216	189	179	**88**	**83**	70-124	6	25	
106-46-7	1,4-Dichlorobenzene	216	180	178	**83**	**82**	63-124	1	25	
95-50-1	1,2-Dichlorobenzene	216	197	184	**91**	**85**	66-125	7	25	
5989-27-5	d-Limonene	211	192	179	**91**	**85**	64-135	7	25	
96-12-8	1,2-Dibromo-3-chloropropane	209	209	195	**100**	**93**	73-136	7	25	
120-82-1	1,2,4-Trichlorobenzene	214	225	214	**105**	**100**	70-141	5	25	
91-20-3	Naphthalene	203	227	219	**112**	**108**	71-146	4	25	
87-68-3	Hexachlorobutadiene	209	205	198	**98**	**95**	63-126	3	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.

MEMORANDUM

TO: Project File **DATE:** November 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: September 27, 2018 Air Sample

LAB: ALS Environmental P1805158

One (1) soil vapor extraction system stack sample was collected on September 27, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1805158.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Summa Canister ™ canister (1Liter) 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. 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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

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

Laboratory Control Samples

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery and relative percent differences (RPDs) for all control compounds met laboratory control limit 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.

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LABORATORY REPORT

October 15, 2018

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

RE: MVSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the samples submitted to our laboratory on October 1, 2018. For your reference, these analyses have been assigned our service request number P1805166.

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 4:53 pm, 10/15/18
Kate Kaneko
Laboratory Director

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Client: PES Environmental
Project: MVSC / 1358.001.01.007

Service Request No: P1805166

CASE NARRATIVE

The samples were received intact under chain of custody on October 1, 2018 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	2016036
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	1347317
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
Project ID: MVSC / 1358.001.01.007

Service Request: P1805166

Date Received: 10/1/2018
Time Received: 09:30

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SVE-1-092718	P1805166-001	Air	9/27/2018	12:10	SC02225	-2.20	3.68	X
SVE-2-092718	P1805166-002	Air	9/27/2018	12:20	SC02086	-2.30	4.46	X
SVE-3-092718	P1805166-003	Air	9/27/2018	12:30	SC01001	-2.40	3.69	X
SVE-4-092718	P1805166-004	Air	9/27/2018	12:35	SC02099	-1.79	3.68	X
SVE-5-092718	P1805166-005	Air	9/27/2018	12:40	SC02220	-1.84	3.90	X
SVE-6-092718	P1805166-006	Air	9/27/2018	12:45	SC01500	-1.87	3.56	X
SVE-7-092718	P1805166-007	Air	9/27/2018	12:50	SC02206	-2.16	3.72	X
SVE-8-092718	P1805166-008	Air	9/27/2018	12:55	SC01819	-1.64	3.76	X
SVE-9-092718	P1805166-009	Air	9/27/2018	13:00	SC01944	-2.34	3.55	X
SVE-10-092718	P1805166-010	Air	9/27/2018	13:05	SC00868	-2.52	4.23	X
SVE-11A-092718	P1805166-011	Air	9/27/2018	13:10	SC00825	-3.11	3.76	X
SVE-11B-092718	P1805166-012	Air	9/27/2018	13:15	SC01489	-2.72	3.71	X
SVE-12A-092718	P1805166-013	Air	9/27/2018	13:20	SC00803	-2.05	3.66	X
SVE-12B-092718	P1805166-014	Air	9/27/2018	13:25	SC01086	-2.40	3.76	X
SVE-13A-092718	P1805166-015	Air	9/27/2018	00:00	SC01687	-2.29	3.64	X
SVE-13B-092718	P1805166-016	Air	9/27/2018	00:00	SC02203	-2.41	3.59	X
SVE-14-092718	P1805166-017	Air	9/27/2018	00:00	SC01649	-2.88	3.56	X
SVE-15-092718	P1805166-018	Air	9/27/2018	00:00	SC01569	-2.76	3.77	X
SVE-16-092718	P1805166-019	Air	9/27/2018	00:00	SC01825	-2.07	3.65	X
SVE-17-092718	P1805166-020	Air	9/27/2018	00:00	SC01547	-2.77	3.75	X
SVE-18-092718	P1805166-021	Air	9/27/2018	00:00	SC01980	-2.76	3.63	X
SVE-19-092718	P1805166-022	Air	9/27/2018	00:00	SC02217	-1.80	3.68	X

Air - Chain of Custody Record & Analytical Service Request

Page 1 of 2

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. P1805166

Company Name & Address (Reporting Information): PES ENVIRONMENTAL, INC. 1115 NW 46th Ave 1350 SEATTLE, WA 98101

Project Name: MNSL

Project Number: TSSB.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: TSSB.001.01.007

Phone: 206-524-3960 Fax: 206-524-3965

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Springstead

ALS Contact:

Analysis Method: TO-15

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
SVE-1-092718	1	9-27-18	1210	SC02225		30	5	6L	
SVE-2-092718	2		1220	SC02086					
SVE-3-092718	3		1230	SC01001					
SVE-4-092718	4		1235	SC02099					
SVE-5-092718	5		1240	SC02220					
SVE-6-092718	6		1245	SC01500					
SVE-7-092718	7		1250	SC02206					
SVE-8-092718	8		1255	SC01819					
SVE-9-092718	9		1300	SC01942					
SVE-10-092718	10		1305	SC00868			4		
SVE-11A-092718	11		1310	SC00825			5		
SVE-11B-092718	12		1315	SC01489					
SVE-12A-092718	13		1320	SC05803					
SVE-12B-092718	14		1325	SC01086					

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: EIM Units: ____

Chain of Custody Seal. (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
	9-27-18	1500			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
				10-1-18	0730

Cooler / Blank Temperature ____ °C

Air - Chain of Custody Record & Analytical Service Request

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: P1805166

Company Name & Address (Reporting Information): PBS ENVIRONMENTAL

Project Name: MVSL

Project Number: 1358.01.01.07

Project Manager: M. Dahl

P.O. # / Billing Information:

Phone:

Fax:

Email Address for Result Reporting: MDahl@pbsenv.com

Sampler (Print & Sign): Karsten Springstead

ALS Contact:

Analysis Method: TO-15

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
SVE-13A-092718	15	9-27-18		SC01697		30	5	6L	X		
SVE-13B-092718	16			SC02203		28			X		
SVE-11-092718	17			SC01649		30			X		
SVE-15-092718	18			SC01569		29			X		
SVE-16-092718	19			SC01825		30			X		
SVE-17-092718	20			SC01547					X		
SVE-18-092718	21			SC01980					X		
SVE-19-092718	22			SC02217					X		

Report Tier Levels - please select

Tier I - Results (Default in 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 Units: ____

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 9-27-18	Time: 1500	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 10-1-18	Time: 0930

Cooler / Blank Temperature ____ °C

ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1805166

Project: MVSC / 1358.001.01.007

Sample(s) received on: 10/1/18 Date opened: 10/1/18 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
P1805166-001.01	6.0 L Source Can					
P1805166-002.01	6.0 L Source Can					
P1805166-003.01	6.0 L Source Can					
P1805166-004.01	6.0 L Source Can					
P1805166-005.01	6.0 L Source Can					
P1805166-006.01	6.0 L Source Can					
P1805166-007.01	6.0 L Source Can					
P1805166-008.01	6.0 L Source Can					
P1805166-009.01	6.0 L Source Can					
P1805166-010.01	6.0 L Source Can					
P1805166-011.01	6.0 L Source Can					
P1805166-012.01	6.0 L Source Can					
P1805166-013.01	6.0 L Source Can					
P1805166-014.01	6.0 L Source Can					
P1805166-015.01	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
Sample Acceptance Check Form

Client: PES Environmental Work order: P1805166

Project: MVSC / 1358.001.01.007

Sample(s) received on: 10/1/18 Date opened: 10/1/18 by: ADAVID

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1805166-016.01	6.0 L Source Can					
P1805166-017.01	6.0 L Source Can					
P1805166-018.01	6.0 L Source Can					
P1805166-019.01	6.0 L Source Can					
P1805166-020.01	6.0 L Source Can					
P1805166-021.01	6.0 L Source Can					
P1805166-022.01	6.0 L Source Can					
P1805166-023.01	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: **SVE-1-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02225

Initial Pressure (psig): -2.20 Final Pressure (psig): 3.68

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.76	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.76	**0.42**	0.15	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.75	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.78	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.76	ND	0.35	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.75	ND	0.28	
64-17-5	Ethanol	ND	7.5	ND	4.0	
75-05-8	Acetonitrile	ND	0.76	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.64	
67-64-1	Acetone	ND	7.9	ND	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.6**	0.78	**0.28**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.1	ND	1.3	
107-13-1	Acrylonitrile	ND	0.76	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	ND	0.79	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.78	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.78	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.52	
156-60-5	trans-1,2-Dichloroethene	ND	0.78	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.76	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.50	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-1-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02225

Initial Pressure (psig): -2.20 Final Pressure (psig): 3.68

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.78	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.45	
110-54-3	n-Hexane	ND	0.79	ND	0.23	
67-66-3	Chloroform	**4.9**	0.79	**1.0**	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.78	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.78	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.15	
71-43-2	Benzene	ND	0.76	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.76	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.78	ND	0.12	
79-01-6	Trichloroethene	ND	0.78	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.78	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.78	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.15	
108-88-3	Toluene	**1.5**	0.78	**0.40**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.79	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.79	ND	0.17	

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: **SVE-1-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-001

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02225

Initial Pressure (psig): -2.20 Final Pressure (psig): 3.68

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.79	ND	0.17	
127-18-4	Tetrachloroethene	**160**	7.8	**23**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.78	ND	0.17	
100-41-4	Ethylbenzene	**29**	0.76	**6.7**	0.18	
179601-23-1	m,p-Xylenes	**110**	1.6	**26**	0.37	
75-25-2	Bromoform	ND	0.78	ND	0.075	
100-42-5	Styrene	ND	0.78	ND	0.18	
95-47-6	o-Xylene	**20**	0.78	**4.7**	0.18	
111-84-2	n-Nonane	ND	0.79	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.78	ND	0.11	
98-82-8	Cumene	ND	0.78	ND	0.16	
80-56-8	alpha-Pinene	ND	0.76	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	**0.78**	0.78	**0.16**	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.78	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**1.4**	0.78	**0.28**	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
5989-27-5	d-Limonene	ND	0.75	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.76	ND	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.78	ND	0.10	
91-20-3	Naphthalene	ND	0.75	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.78	ND	0.073	

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: **SVE-2-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-002

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02086

Initial Pressure (psig): -2.30 Final Pressure (psig): 4.46

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.81	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.3**	0.81	**0.46**	0.16	
74-87-3	Chloromethane	ND	0.78	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.81	ND	0.36	
74-83-9	Bromomethane	ND	0.78	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	Acrolein	**1.7**	1.6	**0.72**	0.68	
67-64-1	Acetone	ND	8.4	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.82	**0.21**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.3	ND	1.3	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.84	ND	0.21	
75-09-2	Methylene Chloride	ND	0.84	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.55	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.81	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.84	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.53	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-2-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-002

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02086

Initial Pressure (psig): -2.30 Final Pressure (psig): 4.46

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.84	ND	0.24	
67-66-3	Chloroform	**1.3**	0.84	**0.27**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.84	ND	0.15	
71-43-2	Benzene	ND	0.81	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.81	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.84	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.42	
142-82-5	n-Heptane	ND	0.84	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.87	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.84	ND	0.15	
108-88-3	Toluene	**1.5**	0.82	**0.39**	0.22	
591-78-6	2-Hexanone	ND	0.84	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.84	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.84	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.84	ND	0.18	

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: **SVE-2-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-002

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02086

Initial Pressure (psig): -2.30 Final Pressure (psig): 4.46

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.84	ND	0.18	
127-18-4	Tetrachloroethene	**240**	8.2	**35**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**25**	0.81	**5.7**	0.19	
179601-23-1	m,p-Xylenes	**91**	1.7	**21**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**17**	0.82	**4.0**	0.19	
111-84-2	n-Nonane	ND	0.84	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.81	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.84	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	**1.2**	0.82	**0.24**	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.84	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.84	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.84	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-3-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-003

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01001

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.69

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.78	ND	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.78	**0.42**	0.16	
74-87-3	Chloromethane	ND	0.75	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.78	ND	0.35	
74-83-9	Bromomethane	ND	0.75	ND	0.19	
75-00-3	Chloroethane	ND	0.77	ND	0.29	
64-17-5	Ethanol	ND	7.7	ND	4.1	
75-05-8	Acetonitrile	ND	0.78	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	8.1	ND	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.80	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.78	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.81	ND	0.20	
75-09-2	Methylene Chloride	ND	0.81	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.80	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.80	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.53	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.78	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.81	ND	0.22	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.51	

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: **SVE-3-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-003

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01001

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.69

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**6.2**	0.80	**1.6**	0.20	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.46	
110-54-3	n-Hexane	ND	0.81	ND	0.23	
67-66-3	Chloroform	ND	0.81	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.80	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.80	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.81	ND	0.15	
71-43-2	Benzene	ND	0.78	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.78	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.44	
78-87-5	1,2-Dichloropropane	ND	0.81	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.80	ND	0.12	
79-01-6	Trichloroethene	**5.3**	0.80	**0.98**	0.15	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.40	
142-82-5	n-Heptane	ND	0.81	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.84	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.80	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.81	ND	0.15	
108-88-3	Toluene	**1.5**	0.80	**0.39**	0.21	
591-78-6	2-Hexanone	ND	0.81	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.81	ND	0.095	
106-93-4	1,2-Dibromoethane	ND	0.81	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.81	ND	0.17	

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: **SVE-3-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-003

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01001

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.69

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.81	ND	0.17	
127-18-4	Tetrachloroethene	**750**	8.0	**110**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.80	ND	0.17	
100-41-4	Ethylbenzene	**26**	0.78	**5.9**	0.18	
179601-23-1	m,p-Xylenes	**91**	1.7	**21**	0.38	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	Styrene	ND	0.80	ND	0.19	
95-47-6	o-Xylene	**18**	0.80	**4.0**	0.18	
111-84-2	n-Nonane	ND	0.81	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	ND	0.12	
98-82-8	Cumene	ND	0.80	ND	0.16	
80-56-8	alpha-Pinene	ND	0.78	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.81	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**1.3**	0.80	**0.27**	0.16	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.32	
541-73-1	1,3-Dichlorobenzene	ND	0.81	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.81	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.81	ND	0.13	
5989-27-5	d-Limonene	ND	0.77	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	ND	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
91-20-3	Naphthalene	ND	0.77	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

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: **SVE-4-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-004

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02099

Initial Pressure (psig): -1.79 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**1.5**	0.74	**0.88**	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.74	**0.40**	0.15	
74-87-3	Chloromethane	ND	0.71	ND	0.34	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.72	ND	0.10	
75-01-4	Vinyl Chloride	ND	0.75	ND	0.29	
106-99-0	1,3-Butadiene	ND	0.74	ND	0.33	
74-83-9	Bromomethane	**0.73**	0.71	**0.19**	0.18	
75-00-3	Chloroethane	ND	0.72	ND	0.27	
64-17-5	Ethanol	**44**	7.2	**23**	3.8	
75-05-8	Acetonitrile	**6.7**	0.74	**4.0**	0.44	
107-02-8	Acrolein	**25**	1.4	**11**	0.62	
67-64-1	Acetone	**27**	7.7	**11**	3.2	
75-69-4	Trichlorofluoromethane (CFC 11)	**0.77**	0.75	**0.14**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	**3.3**	3.0	**1.3**	1.2	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.77	ND	0.19	
75-09-2	Methylene Chloride	ND	0.77	ND	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.75	ND	0.24	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.75	ND	0.098	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.50	
156-60-5	trans-1,2-Dichloroethene	ND	0.75	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.74	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	ND	0.21	
108-05-4	Vinyl Acetate	**140**	7.5	**40**	2.1	
78-93-3	2-Butanone (MEK)	**5.7**	1.4	**1.9**	0.48	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-4-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-004

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02099

Initial Pressure (psig): -1.79 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.75	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.43	
110-54-3	n-Hexane	ND	0.77	ND	0.22	
67-66-3	Chloroform	ND	0.77	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.75	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.75	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.77	ND	0.14	
71-43-2	Benzene	ND	0.74	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.4	ND	0.41	
78-87-5	1,2-Dichloropropane	ND	0.77	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.75	ND	0.11	
79-01-6	Trichloroethene	ND	0.75	ND	0.14	
123-91-1	1,4-Dioxane	**1.4**	0.75	**0.39**	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.77	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.75	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.77	ND	0.14	
108-88-3	Toluene	**1.1**	0.75	**0.30**	0.20	
591-78-6	2-Hexanone	**6.0**	0.77	**1.5**	0.19	
124-48-1	Dibromochloromethane	ND	0.77	ND	0.090	
106-93-4	1,2-Dibromoethane	ND	0.77	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.77	ND	0.16	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-4-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-004

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02099

Initial Pressure (psig): -1.79 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.77	ND	0.16	
127-18-4	Tetrachloroethene	**130**	0.75	**18**	0.11	
108-90-7	Chlorobenzene	ND	0.75	ND	0.16	
100-41-4	Ethylbenzene	**15**	0.74	**3.5**	0.17	
179601-23-1	m,p-Xylenes	**50**	1.6	**12**	0.36	
75-25-2	Bromoform	ND	0.75	ND	0.073	
100-42-5	Styrene	ND	0.75	ND	0.18	
95-47-6	o-Xylene	**13**	0.75	**3.0**	0.17	
111-84-2	n-Nonane	ND	0.77	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	ND	0.11	
98-82-8	Cumene	ND	0.75	ND	0.15	
80-56-8	alpha-Pinene	ND	0.74	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.77	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.75	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**1.1**	0.75	**0.23**	0.15	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.77	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.77	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.77	ND	0.13	
5989-27-5	d-Limonene	ND	0.72	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	**2.7**	0.72	**0.51**	0.14	
87-68-3	Hexachlorobutadiene	ND	0.75	ND	0.071	

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: **SVE-5-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-005

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02220

Initial Pressure (psig): -1.84 Final Pressure (psig): 3.90

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.75	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.75	**0.41**	0.15	
74-87-3	Chloromethane	ND	0.73	ND	0.35	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.77	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.75	ND	0.34	
74-83-9	Bromomethane	ND	0.73	ND	0.19	
75-00-3	Chloroethane	ND	0.74	ND	0.28	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	**3.6**	0.75	**2.2**	0.45	
107-02-8	Acrolein	ND	1.5	ND	0.63	
67-64-1	Acetone	ND	7.8	ND	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.77	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	ND	0.75	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.78	ND	0.20	
75-09-2	Methylene Chloride	ND	0.78	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.77	ND	0.10	
75-15-0	Carbon Disulfide	**2.9**	1.6	**0.95**	0.51	
156-60-5	trans-1,2-Dichloroethene	ND	0.77	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.75	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.78	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.7	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.49	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-5-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-005

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02220

Initial Pressure (psig): -1.84 Final Pressure (psig): 3.90

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.77	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.78	ND	0.22	
67-66-3	Chloroform	ND	0.78	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.77	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.77	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.78	ND	0.14	
71-43-2	Benzene	ND	0.75	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.75	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.42	
78-87-5	1,2-Dichloropropane	ND	0.78	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.77	ND	0.11	
79-01-6	Trichloroethene	ND	0.77	ND	0.14	
123-91-1	1,4-Dioxane	ND	0.77	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.39	
142-82-5	n-Heptane	ND	0.78	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.77	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.78	ND	0.14	
108-88-3	Toluene	**1.1**	0.77	**0.28**	0.20	
591-78-6	2-Hexanone	ND	0.78	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.78	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	0.78	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.78	ND	0.16	

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: **SVE-5-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-005

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02220

Initial Pressure (psig): -1.84 Final Pressure (psig): 3.90

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.78	ND	0.17	
127-18-4	Tetrachloroethene	**270**	7.7	**40**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.77	ND	0.17	
100-41-4	Ethylbenzene	**16**	0.75	**3.8**	0.17	
179601-23-1	m,p-Xylenes	**56**	1.6	**13**	0.37	
75-25-2	Bromoform	ND	0.77	ND	0.074	
100-42-5	Styrene	ND	0.77	ND	0.18	
95-47-6	o-Xylene	**12**	0.77	**2.7**	0.18	
111-84-2	n-Nonane	ND	0.78	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	ND	0.11	
98-82-8	Cumene	ND	0.77	ND	0.16	
80-56-8	alpha-Pinene	ND	0.75	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.78	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.77	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.77	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**0.90**	0.77	**0.18**	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.78	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.78	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.78	ND	0.13	
5989-27-5	d-Limonene	ND	0.74	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.75	ND	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	ND	0.10	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.77	ND	0.072	

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: **SVE-6-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-006

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01500

Initial Pressure (psig): -1.87 Final Pressure (psig): 3.56

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.74	ND	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.74	**0.40**	0.15	
74-87-3	Chloromethane	ND	0.71	ND	0.34	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.72	ND	0.10	
75-01-4	Vinyl Chloride	**1.4**	0.75	**0.53**	0.29	
106-99-0	1,3-Butadiene	ND	0.74	ND	0.33	
74-83-9	Bromomethane	ND	0.71	ND	0.18	
75-00-3	Chloroethane	ND	0.72	ND	0.27	
64-17-5	Ethanol	**12**	7.2	**6.2**	3.8	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	Acrolein	ND	1.4	ND	0.62	
67-64-1	Acetone	ND	7.7	ND	3.2	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.75	**0.19**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.77	ND	0.19	
75-09-2	Methylene Chloride	ND	0.77	ND	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.75	ND	0.24	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.75	ND	0.098	
75-15-0	Carbon Disulfide	**1.7**	1.6	**0.56**	0.50	
156-60-5	trans-1,2-Dichloroethene	ND	0.75	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.74	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.5	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	1.4	ND	0.48	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-6-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-006

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01500

Initial Pressure (psig): -1.87 Final Pressure (psig): 3.56

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**45**	0.75	**11**	0.19	
141-78-6	Ethyl Acetate	**44**	1.6	**12**	0.43	
110-54-3	n-Hexane	ND	0.77	ND	0.22	
67-66-3	Chloroform	ND	0.77	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.75	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.75	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.77	ND	0.14	
71-43-2	Benzene	ND	0.74	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.4	ND	0.41	
78-87-5	1,2-Dichloropropane	ND	0.77	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.75	ND	0.11	
79-01-6	Trichloroethene	**6.5**	0.75	**1.2**	0.14	
123-91-1	1,4-Dioxane	ND	0.75	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.77	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.75	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.77	ND	0.14	
108-88-3	Toluene	**3.1**	0.75	**0.82**	0.20	
591-78-6	2-Hexanone	ND	0.77	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.77	ND	0.090	
106-93-4	1,2-Dibromoethane	ND	0.77	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.77	ND	0.16	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-6-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-006

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01500

Initial Pressure (psig): -1.87 Final Pressure (psig): 3.56

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.77	ND	0.16	
127-18-4	Tetrachloroethene	**950**	7.5	**140**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.75	ND	0.16	
100-41-4	Ethylbenzene	**13**	0.74	**2.9**	0.17	
179601-23-1	m,p-Xylenes	**45**	1.6	**10**	0.36	
75-25-2	Bromoform	ND	0.75	ND	0.073	
100-42-5	Styrene	ND	0.75	ND	0.18	
95-47-6	o-Xylene	**9.6**	0.75	**2.2**	0.17	
111-84-2	n-Nonane	ND	0.77	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	ND	0.11	
98-82-8	Cumene	ND	0.75	ND	0.15	
80-56-8	alpha-Pinene	ND	0.74	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.77	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.75	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**0.89**	0.75	**0.18**	0.15	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.77	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.77	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.77	ND	0.13	
5989-27-5	d-Limonene	ND	0.72	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	ND	0.72	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.75	ND	0.071	

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: **SVE-7-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-007

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02206

Initial Pressure (psig): -2.16 Final Pressure (psig): 3.72

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.76	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.76	**0.42**	0.15	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.75	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.78	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.76	ND	0.35	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.75	ND	0.28	
64-17-5	Ethanol	ND	7.5	ND	4.0	
75-05-8	Acetonitrile	ND	0.76	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.64	
67-64-1	Acetone	ND	7.9	ND	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.9**	0.78	**0.51**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.1	ND	1.3	
107-13-1	Acrylonitrile	**1.6**	0.76	**0.76**	0.35	
75-35-4	1,1-Dichloroethene	ND	0.79	ND	0.20	
75-09-2	Methylene Chloride	ND	0.79	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.78	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.78	ND	0.10	
75-15-0	Carbon Disulfide	**6.3**	1.6	**2.0**	0.52	
156-60-5	trans-1,2-Dichloroethene	ND	0.78	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.76	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.50	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-7-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-007

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02206

Initial Pressure (psig): -2.16 Final Pressure (psig): 3.72

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.78	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.45	
110-54-3	n-Hexane	ND	0.79	ND	0.23	
67-66-3	Chloroform	**1.6**	0.79	**0.33**	0.16	
109-99-9	Tetrahydrofuran (THF)	**1.2**	0.78	**0.40**	0.26	
107-06-2	1,2-Dichloroethane	ND	0.78	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.79	ND	0.15	
71-43-2	Benzene	ND	0.76	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.76	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.79	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.78	ND	0.12	
79-01-6	Trichloroethene	ND	0.78	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.78	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.79	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.78	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.79	ND	0.15	
108-88-3	Toluene	**0.88**	0.78	**0.23**	0.21	
591-78-6	2-Hexanone	ND	0.79	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.79	ND	0.093	
106-93-4	1,2-Dibromoethane	ND	0.79	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.79	ND	0.17	

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: **SVE-7-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-007

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC02206

Initial Pressure (psig): -2.16 Final Pressure (psig): 3.72

Container Dilution Factor: 1.47

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.79	ND	0.17	
127-18-4	Tetrachloroethene	**400**	7.8	**59**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.78	ND	0.17	
100-41-4	Ethylbenzene	**15**	0.76	**3.5**	0.18	
179601-23-1	m,p-Xylenes	**53**	1.6	**12**	0.37	
75-25-2	Bromoform	ND	0.78	ND	0.075	
100-42-5	Styrene	ND	0.78	ND	0.18	
95-47-6	o-Xylene	**11**	0.78	**2.6**	0.18	
111-84-2	n-Nonane	ND	0.79	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.78	ND	0.11	
98-82-8	Cumene	ND	0.78	ND	0.16	
80-56-8	alpha-Pinene	ND	0.76	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.79	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.78	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.78	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**0.93**	0.78	**0.19**	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.79	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.79	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.79	ND	0.13	
5989-27-5	d-Limonene	ND	0.75	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.76	ND	0.079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.78	ND	0.10	
91-20-3	Naphthalene	ND	0.75	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.78	ND	0.073	

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: **SVE-8-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-008

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01819

Initial Pressure (psig): -1.64 Final Pressure (psig): 3.76

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.73	ND	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.7**	0.73	**0.55**	0.15	
74-87-3	Chloromethane	ND	0.71	ND	0.34	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.72	ND	0.10	
75-01-4	Vinyl Chloride	ND	0.75	ND	0.29	
106-99-0	1,3-Butadiene	ND	0.73	ND	0.33	
74-83-9	Bromomethane	ND	0.71	ND	0.18	
75-00-3	Chloroethane	ND	0.72	ND	0.27	
64-17-5	Ethanol	**27**	7.2	**14**	3.8	
75-05-8	Acetonitrile	ND	0.73	ND	0.44	
107-02-8	Acrolein	ND	1.4	ND	0.62	
67-64-1	Acetone	**23**	7.6	**9.9**	3.2	
75-69-4	Trichlorofluoromethane (CFC 11)	**2.1**	0.75	**0.37**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	**0.81**	0.73	**0.37**	0.34	
75-35-4	1,1-Dichloroethene	ND	0.76	ND	0.19	
75-09-2	Methylene Chloride	ND	0.76	ND	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.75	ND	0.24	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.75	ND	0.098	
75-15-0	Carbon Disulfide	**5.1**	1.6	**1.6**	0.50	
156-60-5	trans-1,2-Dichloroethene	ND	0.75	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.73	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.76	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.5	ND	2.1	
78-93-3	2-Butanone (MEK)	**1.6**	1.4	**0.55**	0.48	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-8-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-008

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01819

Initial Pressure (psig): -1.64 Final Pressure (psig): 3.76

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.75	ND	0.19	
141-78-6	Ethyl Acetate	**10**	1.6	**2.8**	0.43	
110-54-3	n-Hexane	ND	0.76	ND	0.22	
67-66-3	Chloroform	ND	0.76	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.75	ND	0.25	
107-06-2	1,2-Dichloroethane	ND	0.75	ND	0.18	
71-55-6	1,1,1-Trichloroethane	ND	0.76	ND	0.14	
71-43-2	Benzene	ND	0.73	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.73	ND	0.12	
110-82-7	Cyclohexane	ND	1.4	ND	0.41	
78-87-5	1,2-Dichloropropane	ND	0.76	ND	0.16	
75-27-4	Bromodichloromethane	ND	0.75	ND	0.11	
79-01-6	Trichloroethene	ND	0.75	ND	0.14	
123-91-1	1,4-Dioxane	ND	0.75	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.76	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	ND	0.17	
108-10-1	4-Methyl-2-pentanone	ND	0.75	ND	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	ND	0.16	
79-00-5	1,1,2-Trichloroethane	ND	0.76	ND	0.14	
108-88-3	Toluene	**11**	0.75	**3.0**	0.20	
591-78-6	2-Hexanone	ND	0.76	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.76	ND	0.089	
106-93-4	1,2-Dibromoethane	ND	0.76	ND	0.099	
123-86-4	n-Butyl Acetate	**0.93**	0.76	**0.20**	0.16	

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: **SVE-8-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-008

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01819

Initial Pressure (psig): -1.64 Final Pressure (psig): 3.76

Container Dilution Factor: 1.41

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.76	ND	0.16	
127-18-4	Tetrachloroethene	**210**	7.5	**31**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.75	ND	0.16	
100-41-4	Ethylbenzene	**16**	0.73	**3.6**	0.17	
179601-23-1	m,p-Xylenes	**55**	1.6	**13**	0.36	
75-25-2	Bromoform	ND	0.75	ND	0.072	
100-42-5	Styrene	ND	0.75	ND	0.18	
95-47-6	o-Xylene	**12**	0.75	**2.7**	0.17	
111-84-2	n-Nonane	ND	0.76	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	ND	0.11	
98-82-8	Cumene	ND	0.75	ND	0.15	
80-56-8	alpha-Pinene	ND	0.73	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.76	ND	0.15	
622-96-8	4-Ethyltoluene	ND	0.75	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	**1.0**	0.75	**0.21**	0.15	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.76	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.76	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.76	ND	0.13	
5989-27-5	d-Limonene	ND	0.72	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.73	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	ND	0.72	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.75	ND	0.070	

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: **SVE-9-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-009

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01944

Initial Pressure (psig): -2.34 Final Pressure (psig): 3.55

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.77	ND	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**3.0**	0.77	**0.60**	0.16	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.75	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.78	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.77	ND	0.35	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.75	ND	0.29	
64-17-5	Ethanol	ND	7.5	ND	4.0	
75-05-8	Acetonitrile	ND	0.77	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	8.0	ND	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**14**	0.78	**2.4**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.1	ND	1.3	
107-13-1	Acrylonitrile	ND	0.77	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	ND	0.80	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.78	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.78	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.52	
156-60-5	trans-1,2-Dichloroethene	ND	0.78	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.77	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.50	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-9-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-009

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01944

Initial Pressure (psig): -2.34 Final Pressure (psig): 3.55

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.78	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.45	
110-54-3	n-Hexane	ND	0.80	ND	0.23	
67-66-3	Chloroform	ND	0.80	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.78	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.78	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	ND	0.77	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.77	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.78	ND	0.12	
79-01-6	Trichloroethene	ND	0.78	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.78	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.80	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.78	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	**0.97**	0.78	**0.26**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.80	ND	0.094	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.80	ND	0.17	

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: **SVE-9-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-009

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01944

Initial Pressure (psig): -2.34 Final Pressure (psig): 3.55

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.80	ND	0.17	
127-18-4	Tetrachloroethene	**170**	7.8	**25**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.78	ND	0.17	
100-41-4	Ethylbenzene	**17**	0.77	**4.0**	0.18	
179601-23-1	m,p-Xylenes	**62**	1.6	**14**	0.37	
75-25-2	Bromoform	ND	0.78	ND	0.076	
100-42-5	Styrene	ND	0.78	ND	0.18	
95-47-6	o-Xylene	**13**	0.78	**2.9**	0.18	
111-84-2	n-Nonane	ND	0.80	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.78	ND	0.11	
98-82-8	Cumene	ND	0.78	ND	0.16	
80-56-8	alpha-Pinene	ND	0.77	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.78	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.78	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	**0.99**	0.78	**0.20**	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
5989-27-5	d-Limonene	ND	0.75	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.77	ND	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	0.78	ND	0.11	
91-20-3	Naphthalene	ND	0.75	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.78	ND	0.074	

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: **SVE-10-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-010

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00868

Initial Pressure (psig): -2.52 Final Pressure (psig): 4.23

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.81	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**31**	0.81	**6.3**	0.16	
74-87-3	Chloromethane	ND	0.78	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.81	ND	0.36	
74-83-9	Bromomethane	ND	0.78	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	Acrolein	ND	1.6	ND	0.68	
67-64-1	Acetone	ND	8.4	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**23**	0.82	**4.1**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.3	ND	1.3	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.84	ND	0.21	
75-09-2	Methylene Chloride	ND	0.84	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.55	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.81	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.84	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.53	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-10-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-010

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00868

Initial Pressure (psig): -2.52 Final Pressure (psig): 4.23

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.84	ND	0.24	
67-66-3	Chloroform	**3.8**	0.84	**0.78**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.84	ND	0.15	
71-43-2	Benzene	ND	0.81	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.81	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.84	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.42	
142-82-5	n-Heptane	ND	0.84	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.87	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.84	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.84	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.84	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.84	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.84	ND	0.18	

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: **SVE-10-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-010

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC00868

Initial Pressure (psig): -2.52 Final Pressure (psig): 4.23

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.84	ND	0.18	
127-18-4	Tetrachloroethene	**270**	8.2	**40**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**7.3**	0.81	**1.7**	0.19	
179601-23-1	m,p-Xylenes	**24**	1.7	**5.6**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**5.4**	0.82	**1.2**	0.19	
111-84-2	n-Nonane	ND	0.84	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.81	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.84	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.84	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.84	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.84	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-11A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-011

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00825

Initial Pressure (psig): -3.11 Final Pressure (psig): 3.76

Container Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.83	ND	0.48	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.83	**0.44**	0.17	
74-87-3	Chloromethane	ND	0.80	ND	0.39	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.81	ND	0.12	
75-01-4	Vinyl Chloride	ND	0.84	ND	0.33	
106-99-0	1,3-Butadiene	ND	0.83	ND	0.37	
74-83-9	Bromomethane	ND	0.80	ND	0.20	
75-00-3	Chloroethane	ND	0.81	ND	0.31	
64-17-5	Ethanol	ND	8.1	ND	4.3	
75-05-8	Acetonitrile	ND	0.83	ND	0.49	
107-02-8	Acrolein	ND	1.6	ND	0.69	
67-64-1	Acetone	ND	8.6	ND	3.6	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.84	**0.21**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.3	ND	1.4	
107-13-1	Acrylonitrile	ND	0.83	ND	0.38	
75-35-4	1,1-Dichloroethene	ND	0.86	ND	0.22	
75-09-2	Methylene Chloride	ND	0.86	ND	0.25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.84	ND	0.27	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.84	ND	0.11	
75-15-0	Carbon Disulfide	**2.5**	1.7	**0.79**	0.56	
156-60-5	trans-1,2-Dichloroethene	ND	0.84	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.83	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.86	ND	0.24	
108-05-4	Vinyl Acetate	ND	8.4	ND	2.4	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.54	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-11A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-011

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00825

Initial Pressure (psig): -3.11 Final Pressure (psig): 3.76

Container Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.84	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.49	
110-54-3	n-Hexane	ND	0.86	ND	0.24	
67-66-3	Chloroform	ND	0.86	ND	0.18	
109-99-9	Tetrahydrofuran (THF)	ND	0.84	ND	0.29	
107-06-2	1,2-Dichloroethane	ND	0.84	ND	0.21	
71-55-6	1,1,1-Trichloroethane	ND	0.86	ND	0.16	
71-43-2	Benzene	ND	0.83	ND	0.26	
56-23-5	Carbon Tetrachloride	ND	0.83	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.46	
78-87-5	1,2-Dichloropropane	ND	0.86	ND	0.19	
75-27-4	Bromodichloromethane	ND	0.84	ND	0.13	
79-01-6	Trichloroethene	ND	0.84	ND	0.16	
123-91-1	1,4-Dioxane	ND	0.84	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.43	
142-82-5	n-Heptane	ND	0.86	ND	0.21	
10061-01-5	cis-1,3-Dichloropropene	ND	0.89	ND	0.20	
108-10-1	4-Methyl-2-pentanone	ND	0.84	ND	0.21	
10061-02-6	trans-1,3-Dichloropropene	ND	0.84	ND	0.19	
79-00-5	1,1,2-Trichloroethane	ND	0.86	ND	0.16	
108-88-3	Toluene	ND	0.84	ND	0.22	
591-78-6	2-Hexanone	ND	0.86	ND	0.21	
124-48-1	Dibromochloromethane	ND	0.86	ND	0.10	
106-93-4	1,2-Dibromoethane	ND	0.86	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.86	ND	0.18	

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: **SVE-11A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-011

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00825

Initial Pressure (psig): -3.11 Final Pressure (psig): 3.76

Container Dilution Factor: 1.59

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.86	ND	0.18	
127-18-4	Tetrachloroethene	**100**	0.84	**15**	0.12	
108-90-7	Chlorobenzene	ND	0.84	ND	0.18	
100-41-4	Ethylbenzene	**14**	0.83	**3.2**	0.19	
179601-23-1	m,p-Xylenes	**49**	1.7	**11**	0.40	
75-25-2	Bromoform	ND	0.84	ND	0.082	
100-42-5	Styrene	ND	0.84	ND	0.20	
95-47-6	o-Xylene	**10**	0.84	**2.3**	0.19	
111-84-2	n-Nonane	ND	0.86	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.84	ND	0.12	
98-82-8	Cumene	ND	0.84	ND	0.17	
80-56-8	alpha-Pinene	ND	0.83	ND	0.15	
103-65-1	n-Propylbenzene	ND	0.86	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.84	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.84	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.84	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.34	
541-73-1	1,3-Dichlorobenzene	ND	0.86	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.86	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.86	ND	0.14	
5989-27-5	d-Limonene	ND	0.81	ND	0.15	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.83	ND	0.086	
120-82-1	1,2,4-Trichlorobenzene	ND	0.84	ND	0.11	
91-20-3	Naphthalene	ND	0.81	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.84	ND	0.079	

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: **SVE-11B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-012

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01489

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.71

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.80	**0.44**	0.16	
74-87-3	Chloromethane	ND	0.77	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.77	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.80	ND	0.48	
107-02-8	Acrolein	ND	1.5	ND	0.67	
67-64-1	Acetone	ND	8.3	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.3**	0.82	**0.23**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	ND	0.83	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.54	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-11B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-012

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01489

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.71

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.83	ND	0.24	
67-66-3	Chloroform	**120**	0.83	**25**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.83	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.5	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	**4.0**	0.82	**0.59**	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.41	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.83	ND	0.18	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-11B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-012

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01489

Initial Pressure (psig): -2.72 Final Pressure (psig): 3.71

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	**68**	0.82	**10**	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**8.9**	0.80	**2.0**	0.18	
179601-23-1	m,p-Xylenes	**31**	1.7	**7.1**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**6.6**	0.82	**1.5**	0.19	
111-84-2	n-Nonane	ND	0.83	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.80	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-12A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-013

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00803

Initial Pressure (psig): -2.05 Final Pressure (psig): 3.66

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.75	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.75	**0.41**	0.15	
74-87-3	Chloromethane	ND	0.73	ND	0.35	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.77	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.75	ND	0.34	
74-83-9	Bromomethane	ND	0.73	ND	0.19	
75-00-3	Chloroethane	ND	0.74	ND	0.28	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	ND	0.75	ND	0.45	
107-02-8	Acrolein	ND	1.5	ND	0.63	
67-64-1	Acetone	ND	7.8	ND	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.77	**0.21**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	ND	0.75	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.78	ND	0.20	
75-09-2	Methylene Chloride	ND	0.78	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.77	ND	0.10	
75-15-0	Carbon Disulfide	**1.7**	1.6	**0.54**	0.51	
156-60-5	trans-1,2-Dichloroethene	ND	0.77	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.75	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.78	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.7	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.49	

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: **SVE-12A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-013

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00803

Initial Pressure (psig): -2.05 Final Pressure (psig): 3.66

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.77	ND	0.19	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.78	ND	0.22	
67-66-3	Chloroform	**3.3**	0.78	**0.67**	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.77	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.77	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.78	ND	0.14	
71-43-2	Benzene	ND	0.75	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.75	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.42	
78-87-5	1,2-Dichloropropane	ND	0.78	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.77	ND	0.11	
79-01-6	Trichloroethene	ND	0.77	ND	0.14	
123-91-1	1,4-Dioxane	ND	0.77	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.39	
142-82-5	n-Heptane	ND	0.78	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.77	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.78	ND	0.14	
108-88-3	Toluene	ND	0.77	ND	0.20	
591-78-6	2-Hexanone	ND	0.78	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.78	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	0.78	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.78	ND	0.16	

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: **SVE-12A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-013

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC00803

Initial Pressure (psig): -2.05 Final Pressure (psig): 3.66

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.78	ND	0.17	
127-18-4	Tetrachloroethene	**110**	0.77	**16**	0.11	
108-90-7	Chlorobenzene	ND	0.77	ND	0.17	
100-41-4	Ethylbenzene	**9.5**	0.75	**2.2**	0.17	
179601-23-1	m,p-Xylenes	**31**	1.6	**7.2**	0.37	
75-25-2	Bromoform	ND	0.77	ND	0.074	
100-42-5	Styrene	ND	0.77	ND	0.18	
95-47-6	o-Xylene	**7.0**	0.77	**1.6**	0.18	
111-84-2	n-Nonane	ND	0.78	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	ND	0.11	
98-82-8	Cumene	ND	0.77	ND	0.16	
80-56-8	alpha-Pinene	ND	0.75	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.78	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.77	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.77	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.77	ND	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.78	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.78	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.78	ND	0.13	
5989-27-5	d-Limonene	ND	0.74	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.75	ND	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	ND	0.10	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.77	ND	0.072	

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: **SVE-12B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-014

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01086

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.76

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.78	ND	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.78	**0.40**	0.16	
74-87-3	Chloromethane	ND	0.75	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.80	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.78	ND	0.35	
74-83-9	Bromomethane	ND	0.75	ND	0.19	
75-00-3	Chloroethane	ND	0.77	ND	0.29	
64-17-5	Ethanol	ND	7.7	ND	4.1	
75-05-8	Acetonitrile	ND	0.78	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	8.1	ND	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.5**	0.80	**0.26**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.78	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.81	ND	0.20	
75-09-2	Methylene Chloride	ND	0.81	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.80	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.80	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.53	
156-60-5	trans-1,2-Dichloroethene	ND	0.80	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.78	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.81	ND	0.22	
108-05-4	Vinyl Acetate	ND	8.0	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.51	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-12B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-014

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01086

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.76

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.80	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.46	
110-54-3	n-Hexane	ND	0.81	ND	0.23	
67-66-3	Chloroform	**39**	0.81	**8.0**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.80	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.80	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.81	ND	0.15	
71-43-2	Benzene	ND	0.78	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.78	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.44	
78-87-5	1,2-Dichloropropane	ND	0.81	ND	0.18	
75-27-4	Bromodichloromethane	**1.8**	0.80	**0.27**	0.12	
79-01-6	Trichloroethene	ND	0.80	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.80	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.40	
142-82-5	n-Heptane	ND	0.81	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.84	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.80	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.81	ND	0.15	
108-88-3	Toluene	ND	0.80	ND	0.21	
591-78-6	2-Hexanone	ND	0.81	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.81	ND	0.095	
106-93-4	1,2-Dibromoethane	ND	0.81	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.81	ND	0.17	

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: **SVE-12B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-014

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01086

Initial Pressure (psig): -2.40 Final Pressure (psig): 3.76

Container Dilution Factor: 1.50

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.81	ND	0.17	
127-18-4	Tetrachloroethene	**160**	8.0	**23**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.80	ND	0.17	
100-41-4	Ethylbenzene	**7.9**	0.78	**1.8**	0.18	
179601-23-1	m,p-Xylenes	**26**	1.7	**6.0**	0.38	
75-25-2	Bromoform	ND	0.80	ND	0.077	
100-42-5	Styrene	ND	0.80	ND	0.19	
95-47-6	o-Xylene	**6.7**	0.80	**1.5**	0.18	
111-84-2	n-Nonane	ND	0.81	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.80	ND	0.12	
98-82-8	Cumene	ND	0.80	ND	0.16	
80-56-8	alpha-Pinene	ND	0.78	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.81	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.80	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.80	ND	0.16	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.32	
541-73-1	1,3-Dichlorobenzene	ND	0.81	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.81	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.81	ND	0.13	
5989-27-5	d-Limonene	ND	0.77	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	ND	0.081	
120-82-1	1,2,4-Trichlorobenzene	ND	0.80	ND	0.11	
91-20-3	Naphthalene	ND	0.77	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.80	ND	0.075	

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: **SVE-13A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-015

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01687

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.64

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.77	ND	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.77	**0.41**	0.16	
74-87-3	Chloromethane	ND	0.74	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.75	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.78	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.77	ND	0.35	
74-83-9	Bromomethane	ND	0.74	ND	0.19	
75-00-3	Chloroethane	ND	0.75	ND	0.29	
64-17-5	Ethanol	ND	7.5	ND	4.0	
75-05-8	Acetonitrile	ND	0.77	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	8.0	ND	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.3**	0.78	**0.24**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.1	ND	1.3	
107-13-1	Acrylonitrile	ND	0.77	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	ND	0.80	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.78	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.78	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.52	
156-60-5	trans-1,2-Dichloroethene	ND	0.78	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.77	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.8	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.50	

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: **SVE-13A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-015

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01687

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.64

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.78	ND	0.20	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.45	
110-54-3	n-Hexane	ND	0.80	ND	0.23	
67-66-3	Chloroform	**5.7**	0.80	**1.2**	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.78	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.78	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	ND	0.77	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.77	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.78	ND	0.12	
79-01-6	Trichloroethene	ND	0.78	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.78	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.80	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.78	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	ND	0.78	ND	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.80	ND	0.094	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.80	ND	0.17	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-13A-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-015

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01687

Initial Pressure (psig): -2.29 Final Pressure (psig): 3.64

Container Dilution Factor: 1.48

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.80	ND	0.17	
127-18-4	Tetrachloroethene	**94**	0.78	**14**	0.12	
108-90-7	Chlorobenzene	ND	0.78	ND	0.17	
100-41-4	Ethylbenzene	**3.4**	0.77	**0.77**	0.18	
179601-23-1	m,p-Xylenes	**4.4**	1.6	**1.0**	0.37	
75-25-2	Bromoform	ND	0.78	ND	0.076	
100-42-5	Styrene	ND	0.78	ND	0.18	
95-47-6	o-Xylene	ND	0.78	ND	0.18	
111-84-2	n-Nonane	ND	0.80	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.78	ND	0.11	
98-82-8	Cumene	ND	0.78	ND	0.16	
80-56-8	alpha-Pinene	ND	0.77	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.78	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.78	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.78	ND	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
5989-27-5	d-Limonene	ND	0.75	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.77	ND	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	0.78	ND	0.11	
91-20-3	Naphthalene	ND	0.75	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.78	ND	0.074	

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: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	**1.7**	0.77	**1.0**	0.45	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.77	**0.42**	0.16	
74-87-3	Chloromethane	ND	0.75	ND	0.36	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.76	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.79	ND	0.31	
106-99-0	1,3-Butadiene	ND	0.77	ND	0.35	
74-83-9	Bromomethane	ND	0.75	ND	0.19	
75-00-3	Chloroethane	ND	0.76	ND	0.29	
64-17-5	Ethanol	ND	7.6	ND	4.0	
75-05-8	Acetonitrile	ND	0.77	ND	0.46	
107-02-8	Acrolein	ND	1.5	ND	0.65	
67-64-1	Acetone	ND	8.0	ND	3.4	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.3**	0.79	**0.22**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	**7.7**	3.1	**3.1**	1.3	
107-13-1	Acrylonitrile	ND	0.77	ND	0.36	
75-35-4	1,1-Dichloroethene	ND	0.80	ND	0.20	
75-09-2	Methylene Chloride	ND	0.80	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.79	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.79	ND	0.10	
75-15-0	Carbon Disulfide	**1.8**	1.6	**0.58**	0.53	
156-60-5	trans-1,2-Dichloroethene	ND	0.79	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.77	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.80	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.9	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.51	

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: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.79	ND	0.20	
141-78-6	Ethyl Acetate	**39**	1.6	**11**	0.46	
110-54-3	n-Hexane	ND	0.80	ND	0.23	
67-66-3	Chloroform	**1.5**	0.80	**0.30**	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.79	ND	0.27	
107-06-2	1,2-Dichloroethane	ND	0.79	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.80	ND	0.15	
71-43-2	Benzene	ND	0.77	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.77	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.43	
78-87-5	1,2-Dichloropropane	ND	0.80	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.79	ND	0.12	
79-01-6	Trichloroethene	ND	0.79	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.79	ND	0.22	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.40	
142-82-5	n-Heptane	ND	0.80	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.79	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.80	ND	0.15	
108-88-3	Toluene	**2.5**	0.79	**0.67**	0.21	
591-78-6	2-Hexanone	ND	0.80	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.80	ND	0.094	
106-93-4	1,2-Dibromoethane	ND	0.80	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.80	ND	0.17	

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: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

Container Dilution Factor: 1.49

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.80	ND	0.17	
127-18-4	Tetrachloroethene	**96**	0.79	**14**	0.12	
108-90-7	Chlorobenzene	ND	0.79	ND	0.17	
100-41-4	Ethylbenzene	**8.6**	0.77	**2.0**	0.18	
179601-23-1	m,p-Xylenes	**29**	1.6	**6.7**	0.38	
75-25-2	Bromoform	ND	0.79	ND	0.076	
100-42-5	Styrene	**1.5**	0.79	**0.35**	0.19	
95-47-6	o-Xylene	**6.6**	0.79	**1.5**	0.18	
111-84-2	n-Nonane	ND	0.80	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.79	ND	0.12	
98-82-8	Cumene	ND	0.79	ND	0.16	
80-56-8	alpha-Pinene	ND	0.77	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.80	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.79	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.79	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.79	ND	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.32	
541-73-1	1,3-Dichlorobenzene	ND	0.80	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.80	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.80	ND	0.13	
5989-27-5	d-Limonene	ND	0.76	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.77	ND	0.080	
120-82-1	1,2,4-Trichlorobenzene	ND	0.79	ND	0.11	
91-20-3	Naphthalene	ND	0.76	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.79	ND	0.074	

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: **SVE-14-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-017

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01649

Initial Pressure (psig): -2.88 Final Pressure (psig): 3.56

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.80	**0.42**	0.16	
74-87-3	Chloromethane	ND	0.77	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.77	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.80	ND	0.48	
107-02-8	Acrolein	ND	1.5	ND	0.67	
67-64-1	Acetone	ND	8.3	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.82	**0.19**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	ND	0.83	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	**2.6**	1.7	**0.82**	0.54	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-14-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-017

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01649

Initial Pressure (psig): -2.88 Final Pressure (psig): 3.56

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.83	ND	0.24	
67-66-3	Chloroform	ND	0.83	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.83	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.5	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.41	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.83	ND	0.18	

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: **SVE-14-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-017

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01649

Initial Pressure (psig): -2.88 Final Pressure (psig): 3.56

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	**110**	0.82	**16**	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**9.5**	0.80	**2.2**	0.18	
179601-23-1	m,p-Xylenes	**32**	1.7	**7.4**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**8.4**	0.82	**1.9**	0.19	
111-84-2	n-Nonane	ND	0.83	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.80	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-15-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-018

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01569

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.77

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.81	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.0**	0.81	**0.41**	0.16	
74-87-3	Chloromethane	ND	0.78	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.81	ND	0.36	
74-83-9	Bromomethane	ND	0.78	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	Acrolein	ND	1.6	ND	0.68	
67-64-1	Acetone	ND	8.4	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.82	**0.20**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.3	ND	1.3	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.84	ND	0.21	
75-09-2	Methylene Chloride	ND	0.84	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.55	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.81	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.84	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.53	

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: **SVE-15-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-018

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01569

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.77

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.84	ND	0.24	
67-66-3	Chloroform	**1.4**	0.84	**0.30**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.84	ND	0.15	
71-43-2	Benzene	ND	0.81	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.81	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.84	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.42	
142-82-5	n-Heptane	ND	0.84	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.87	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.84	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.84	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.84	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.84	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.84	ND	0.18	

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: **SVE-15-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-018

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01569

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.77

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.84	ND	0.18	
127-18-4	Tetrachloroethene	**170**	8.2	**25**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**6.4**	0.81	**1.5**	0.19	
179601-23-1	m,p-Xylenes	**21**	1.7	**4.9**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**4.9**	0.82	**1.1**	0.19	
111-84-2	n-Nonane	ND	0.84	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.81	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.84	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.84	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.84	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.84	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-16-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-019

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01825

Initial Pressure (psig): -2.07 Final Pressure (psig): 3.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.75	ND	0.44	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.75	**0.43**	0.15	
74-87-3	Chloromethane	ND	0.73	ND	0.35	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.74	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.77	ND	0.30	
106-99-0	1,3-Butadiene	ND	0.75	ND	0.34	
74-83-9	Bromomethane	ND	0.73	ND	0.19	
75-00-3	Chloroethane	ND	0.74	ND	0.28	
64-17-5	Ethanol	ND	7.4	ND	3.9	
75-05-8	Acetonitrile	ND	0.75	ND	0.45	
107-02-8	Acrolein	ND	1.5	ND	0.63	
67-64-1	Acetone	ND	7.8	ND	3.3	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.77	**0.20**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	ND	0.75	ND	0.35	
75-35-4	1,1-Dichloroethene	ND	0.78	ND	0.20	
75-09-2	Methylene Chloride	ND	0.78	ND	0.23	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	ND	0.25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.77	ND	0.10	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.51	
156-60-5	trans-1,2-Dichloroethene	ND	0.77	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.75	ND	0.19	
1634-04-4	Methyl tert-Butyl Ether	ND	0.78	ND	0.22	
108-05-4	Vinyl Acetate	ND	7.7	ND	2.2	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.49	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-16-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-019

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01825

Initial Pressure (psig): -2.07 Final Pressure (psig): 3.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**2.4**	0.77	**0.61**	0.19	
141-78-6	Ethyl Acetate	ND	1.6	ND	0.44	
110-54-3	n-Hexane	ND	0.78	ND	0.22	
67-66-3	Chloroform	ND	0.78	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.77	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.77	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.78	ND	0.14	
71-43-2	Benzene	ND	0.75	ND	0.24	
56-23-5	Carbon Tetrachloride	ND	0.75	ND	0.12	
110-82-7	Cyclohexane	ND	1.5	ND	0.42	
78-87-5	1,2-Dichloropropane	ND	0.78	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.77	ND	0.11	
79-01-6	Trichloroethene	**3.2**	0.77	**0.59**	0.14	
123-91-1	1,4-Dioxane	ND	0.77	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.39	
142-82-5	n-Heptane	ND	0.78	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	ND	0.18	
108-10-1	4-Methyl-2-pentanone	ND	0.77	ND	0.19	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.78	ND	0.14	
108-88-3	Toluene	ND	0.77	ND	0.20	
591-78-6	2-Hexanone	ND	0.78	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.78	ND	0.092	
106-93-4	1,2-Dibromoethane	ND	0.78	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.78	ND	0.16	

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: **SVE-16-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-019

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: SC01825

Initial Pressure (psig): -2.07 Final Pressure (psig): 3.65

Container Dilution Factor: 1.45

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.78	ND	0.17	
127-18-4	Tetrachloroethene	**330**	7.7	**49**	1.1	**D**
108-90-7	Chlorobenzene	ND	0.77	ND	0.17	
100-41-4	Ethylbenzene	**6.9**	0.75	**1.6**	0.17	
179601-23-1	m,p-Xylenes	**23**	1.6	**5.4**	0.37	
75-25-2	Bromoform	ND	0.77	ND	0.074	
100-42-5	Styrene	ND	0.77	ND	0.18	
95-47-6	o-Xylene	**5.3**	0.77	**1.2**	0.18	
111-84-2	n-Nonane	ND	0.78	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	ND	0.11	
98-82-8	Cumene	ND	0.77	ND	0.16	
80-56-8	alpha-Pinene	ND	0.75	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.78	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.77	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	ND	0.77	ND	0.16	
95-63-6	1,2,4-Trimethylbenzene	ND	0.77	ND	0.16	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.31	
541-73-1	1,3-Dichlorobenzene	ND	0.78	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.78	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.78	ND	0.13	
5989-27-5	d-Limonene	ND	0.74	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.75	ND	0.078	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	ND	0.10	
91-20-3	Naphthalene	ND	0.74	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.77	ND	0.072	

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: **SVE-17-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-020

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01547

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.75

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.81	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.1**	0.81	**0.43**	0.16	
74-87-3	Chloromethane	ND	0.78	ND	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.81	ND	0.36	
74-83-9	Bromomethane	ND	0.78	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	ND	0.81	ND	0.48	
107-02-8	Acrolein	**2.6**	1.6	**1.1**	0.68	
67-64-1	Acetone	ND	8.4	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.2**	0.82	**0.21**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.3	ND	1.3	
107-13-1	Acrylonitrile	ND	0.81	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.84	ND	0.21	
75-09-2	Methylene Chloride	ND	0.84	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.55	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.81	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.84	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.2	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.6	ND	0.53	

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: **SVE-17-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-020

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01547

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.75

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.84	ND	0.24	
67-66-3	Chloroform	**3.2**	0.84	**0.65**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.84	ND	0.15	
71-43-2	Benzene	ND	0.81	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.81	ND	0.13	
110-82-7	Cyclohexane	ND	1.6	ND	0.45	
78-87-5	1,2-Dichloropropane	ND	0.84	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.42	
142-82-5	n-Heptane	ND	0.84	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.87	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.84	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.84	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.84	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.84	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.84	ND	0.18	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-17-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-020

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01547

Initial Pressure (psig): -2.77 Final Pressure (psig): 3.75

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.84	ND	0.18	
127-18-4	Tetrachloroethene	**3.3**	0.82	**0.49**	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	ND	0.81	ND	0.19	
179601-23-1	m,p-Xylenes	ND	1.7	ND	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	ND	0.82	ND	0.19	
111-84-2	n-Nonane	ND	0.84	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.81	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.84	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.84	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.84	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.84	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	ND	0.79	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-18-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-021

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01980

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.63

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.47	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.80	**0.44**	0.16	
74-87-3	Chloromethane	ND	0.77	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.79	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.82	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.77	ND	0.20	
75-00-3	Chloroethane	ND	0.79	ND	0.30	
64-17-5	Ethanol	ND	7.9	ND	4.2	
75-05-8	Acetonitrile	**1.1**	0.80	**0.67**	0.48	
107-02-8	Acrolein	**6.9**	1.5	**3.0**	0.67	
67-64-1	Acetone	ND	8.3	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.0**	0.82	**0.18**	0.15	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	ND	0.83	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.82	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.82	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.54	
156-60-5	trans-1,2-Dichloroethene	ND	0.82	ND	0.21	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	**19**	8.2	**5.5**	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-18-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-021

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01980

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.63

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.82	ND	0.21	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.83	ND	0.24	
67-66-3	Chloroform	ND	0.83	ND	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.82	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.82	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.83	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	**1.7**	1.5	**0.51**	0.45	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.82	ND	0.12	
79-01-6	Trichloroethene	ND	0.82	ND	0.15	
123-91-1	1,4-Dioxane	ND	0.82	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.41	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.82	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	ND	0.82	ND	0.22	
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.098	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.83	ND	0.18	

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: **SVE-18-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-021

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC01980

Initial Pressure (psig): -2.76 Final Pressure (psig): 3.63

Container Dilution Factor: 1.54

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	**110**	0.82	**16**	0.12	
108-90-7	Chlorobenzene	ND	0.82	ND	0.18	
100-41-4	Ethylbenzene	**5.2**	0.80	**1.2**	0.18	
179601-23-1	m,p-Xylenes	**17**	1.7	**3.9**	0.39	
75-25-2	Bromoform	ND	0.82	ND	0.079	
100-42-5	Styrene	ND	0.82	ND	0.19	
95-47-6	o-Xylene	**4.8**	0.82	**1.1**	0.19	
111-84-2	n-Nonane	ND	0.83	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.82	ND	0.12	
98-82-8	Cumene	ND	0.82	ND	0.17	
80-56-8	alpha-Pinene	ND	0.80	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.82	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.82	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.82	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	ND	0.79	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.083	
120-82-1	1,2,4-Trichlorobenzene	ND	0.82	ND	0.11	
91-20-3	Naphthalene	**0.91**	0.79	**0.17**	0.15	
87-68-3	Hexachlorobutadiene	ND	0.82	ND	0.077	

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: **SVE-19-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-022

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02217

Initial Pressure (psig): -1.80 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.74	ND	0.43	
75-71-8	Dichlorodifluoromethane (CFC 12)	**2.2**	0.74	**0.45**	0.15	
74-87-3	Chloromethane	ND	0.71	ND	0.34	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.72	ND	0.10	
75-01-4	Vinyl Chloride	ND	0.75	ND	0.29	
106-99-0	1,3-Butadiene	ND	0.74	ND	0.33	
74-83-9	Bromomethane	ND	0.71	ND	0.18	
75-00-3	Chloroethane	ND	0.72	ND	0.27	
64-17-5	Ethanol	**7.7**	7.2	**4.1**	3.8	
75-05-8	Acetonitrile	ND	0.74	ND	0.44	
107-02-8	Acrolein	ND	1.4	ND	0.62	
67-64-1	Acetone	**10**	7.7	**4.4**	3.2	
75-69-4	Trichlorofluoromethane (CFC 11)	**1.1**	0.75	**0.20**	0.13	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.0	ND	1.2	
107-13-1	Acrylonitrile	ND	0.74	ND	0.34	
75-35-4	1,1-Dichloroethene	ND	0.77	ND	0.19	
75-09-2	Methylene Chloride	ND	0.77	ND	0.22	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.75	ND	0.24	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.75	ND	0.098	
75-15-0	Carbon Disulfide	ND	1.6	ND	0.50	
156-60-5	trans-1,2-Dichloroethene	ND	0.75	ND	0.19	
75-34-3	1,1-Dichloroethane	ND	0.74	ND	0.18	
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	ND	0.21	
108-05-4	Vinyl Acetate	ND	7.5	ND	2.1	
78-93-3	2-Butanone (MEK)	ND	1.4	ND	0.48	

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: **SVE-19-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-022

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02217

Initial Pressure (psig): -1.80 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.75	ND	0.19	
141-78-6	Ethyl Acetate	**4.4**	1.6	**1.2**	0.43	
110-54-3	n-Hexane	ND	0.77	ND	0.22	
67-66-3	Chloroform	ND	0.77	ND	0.16	
109-99-9	Tetrahydrofuran (THF)	ND	0.75	ND	0.26	
107-06-2	1,2-Dichloroethane	ND	0.75	ND	0.19	
71-55-6	1,1,1-Trichloroethane	ND	0.77	ND	0.14	
71-43-2	Benzene	ND	0.74	ND	0.23	
56-23-5	Carbon Tetrachloride	ND	0.74	ND	0.12	
110-82-7	Cyclohexane	ND	1.4	ND	0.41	
78-87-5	1,2-Dichloropropane	ND	0.77	ND	0.17	
75-27-4	Bromodichloromethane	ND	0.75	ND	0.11	
79-01-6	Trichloroethene	ND	0.75	ND	0.14	
123-91-1	1,4-Dioxane	ND	0.75	ND	0.21	
80-62-6	Methyl Methacrylate	ND	1.6	ND	0.38	
142-82-5	n-Heptane	ND	0.77	ND	0.19	
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	ND	0.18	
108-10-1	4-Methyl-2-pentanone	**1.3**	0.75	**0.32**	0.18	
10061-02-6	trans-1,3-Dichloropropene	ND	0.75	ND	0.17	
79-00-5	1,1,2-Trichloroethane	ND	0.77	ND	0.14	
108-88-3	Toluene	**4.5**	0.75	**1.2**	0.20	
591-78-6	2-Hexanone	ND	0.77	ND	0.19	
124-48-1	Dibromochloromethane	ND	0.77	ND	0.090	
106-93-4	1,2-Dibromoethane	ND	0.77	ND	0.10	
123-86-4	n-Butyl Acetate	ND	0.77	ND	0.16	

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.

Client: **PES Environmental**
Client Sample ID: **SVE-19-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-022

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02217

Initial Pressure (psig): -1.80 Final Pressure (psig): 3.68

Container Dilution Factor: 1.42

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.77	ND	0.16	
127-18-4	Tetrachloroethene	**71**	0.75	**11**	0.11	
108-90-7	Chlorobenzene	ND	0.75	ND	0.16	
100-41-4	Ethylbenzene	**5.1**	0.74	**1.2**	0.17	
179601-23-1	m,p-Xylenes	**17**	1.6	**3.8**	0.36	
75-25-2	Bromoform	ND	0.75	ND	0.073	
100-42-5	Styrene	ND	0.75	ND	0.18	
95-47-6	o-Xylene	**4.3**	0.75	**0.99**	0.17	
111-84-2	n-Nonane	ND	0.77	ND	0.15	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.75	ND	0.11	
98-82-8	Cumene	ND	0.75	ND	0.15	
80-56-8	alpha-Pinene	ND	0.74	ND	0.13	
103-65-1	n-Propylbenzene	ND	0.77	ND	0.16	
622-96-8	4-Ethyltoluene	ND	0.75	ND	0.15	
108-67-8	1,3,5-Trimethylbenzene	ND	0.75	ND	0.15	
95-63-6	1,2,4-Trimethylbenzene	ND	0.75	ND	0.15	
100-44-7	Benzyl Chloride	ND	1.6	ND	0.30	
541-73-1	1,3-Dichlorobenzene	ND	0.77	ND	0.13	
106-46-7	1,4-Dichlorobenzene	ND	0.77	ND	0.13	
95-50-1	1,2-Dichlorobenzene	ND	0.77	ND	0.13	
5989-27-5	d-Limonene	ND	0.72	ND	0.13	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	ND	0.076	
120-82-1	1,2,4-Trichlorobenzene	ND	0.75	ND	0.10	
91-20-3	Naphthalene	ND	0.72	ND	0.14	
87-68-3	Hexachlorobutadiene	ND	0.75	ND	0.071	

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: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805166

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805166

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18

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**
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1805166

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date(s) Collected: 9/27/18
Analyst: Anusha Bayyarapu Date(s) Received: 10/1/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 10/12 - 10/13/18
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	P181012-MB	**106**	**103**	**95**	70-130	
Method Blank	P181013-MB	**108**	**103**	**90**	70-130	
Lab Control Sample	P181012-LCS	**89**	**101**	**107**	70-130	
Lab Control Sample	P181013-LCS	**88**	**102**	**106**	70-130	
Duplicate Lab Control Sample	P181012-DLCS	**93**	**98**	**104**	70-130	
Duplicate Lab Control Sample	P181013-DLCS	**87**	**101**	**107**	70-130	
SVE-1-092718	P1805166-001	**110**	**98**	**102**	70-130	
SVE-2-092718	P1805166-002	**109**	**98**	**100**	70-130	
SVE-3-092718	P1805166-003	**102**	**91**	**100**	70-130	
SVE-4-092718	P1805166-004	**99**	**88**	**115**	70-130	
SVE-5-092718	P1805166-005	**101**	**99**	**105**	70-130	
SVE-6-092718	P1805166-006	**102**	**90**	**108**	70-130	
SVE-7-092718	P1805166-007	**106**	**93**	**108**	70-130	
SVE-8-092718	P1805166-008	**108**	**94**	**106**	70-130	
SVE-9-092718	P1805166-009	**108**	**97**	**105**	70-130	
SVE-10-092718	P1805166-010	**108**	**97**	**103**	70-130	
SVE-11A-092718	P1805166-011	**109**	**98**	**103**	70-130	
SVE-11B-092718	P1805166-012	**111**	**98**	**100**	70-130	
SVE-12A-092718	P1805166-013	**100**	**95**	**97**	70-130	
SVE-12B-092718	P1805166-014	**103**	**98**	**102**	70-130	
SVE-13A-092718	P1805166-015	**106**	**101**	**96**	70-130	
SVE-13B-092718	P1805166-016	**106**	**98**	**101**	70-130	
SVE-13B-092718	P1805166-016DUP	**106**	**99**	**102**	70-130	
SVE-14-092718	P1805166-017	**106**	**98**	**107**	70-130	
SVE-15-092718	P1805166-018	**106**	**99**	**102**	70-130	
SVE-16-092718	P1805166-019	**107**	**98**	**100**	70-130	
SVE-17-092718	P1805166-020	**108**	**102**	**96**	70-130	
SVE-18-092718	P1805166-021	**103**	**97**	**112**	70-130	
SVE-19-092718	P1805166-022	**105**	**99**	**104**	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: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 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
115-07-1	Propene	211	142	146	**67**	**69**	54-133	3	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	148	148	**70**	**70**	64-115	0	25	
74-87-3	Chloromethane	211	146	134	**69**	**64**	47-140	8	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	150	154	**71**	**73**	60-112	3	25	
75-01-4	Vinyl Chloride	214	162	164	**76**	**77**	63-127	1	25	
106-99-0	1,3-Butadiene	210	184	193	**88**	**92**	57-149	4	25	
74-83-9	Bromomethane	212	134	137	**63**	**65**	63-132	3	25	
75-00-3	Chloroethane	214	147	148	**69**	**69**	68-129	0	25	
64-17-5	Ethanol	1,020	809	834	**79**	**82**	62-131	4	25	
75-05-8	Acetonitrile	206	153	155	**74**	**75**	56-136	1	25	
107-02-8	Acrolein	205	170	172	**83**	**84**	60-132	1	25	
67-64-1	Acetone	1,060	875	881	**83**	**83**	63-124	0	25	
75-69-4	Trichlorofluoromethane (CFC 11)	211	153	156	**73**	**74**	65-113	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	308	303	**75**	**73**	62-135	3	25	
107-13-1	Acrylonitrile	207	174	174	**84**	**84**	68-138	0	25	
75-35-4	1,1-Dichloroethene	218	170	169	**78**	**78**	72-118	0	25	
75-09-2	Methylene Chloride	217	169	169	**78**	**78**	67-116	0	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	162	163	**75**	**75**	61-143	0	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	159	163	**74**	**75**	68-113	1	25	
75-15-0	Carbon Disulfide	218	163	163	**75**	**75**	68-120	0	25	
156-60-5	trans-1,2-Dichloroethene	214	168	167	**79**	**78**	71-125	1	25	
75-34-3	1,1-Dichloroethane	216	154	153	**71**	**71**	68-118	0	25	
1634-04-4	Methyl tert-Butyl Ether	214	159	155	**74**	**72**	60-123	3	25	
108-05-4	Vinyl Acetate	1,060	982	954	**93**	**90**	73-135	3	25	
78-93-3	2-Butanone (MEK)	208	186	182	**89**	**88**	70-129	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	211	156	155	**74**	**73**	69-121	1	25	
141-78-6	Ethyl Acetate	436	397	386	**91**	**89**	66-140	2	25	
110-54-3	n-Hexane	216	180	175	**83**	**81**	61-124	2	25	
67-66-3	Chloroform	217	159	157	**73**	**72**	69-113	1	25	
109-99-9	Tetrahydrofuran (THF)	216	171	169	**79**	**78**	66-121	1	25	
107-06-2	1,2-Dichloroethane	215	147	144	**68**	**67**	62-120	1	25	
71-55-6	1,1,1-Trichloroethane	215	160	161	**74**	**75**	65-116	1	25	
71-43-2	Benzene	211	165	162	**78**	**77**	66-111	1	25	
56-23-5	Carbon Tetrachloride	212	166	166	**78**	**78**	64-122	0	25	
110-82-7	Cyclohexane	416	347	342	**83**	**82**	69-115	1	25	
78-87-5	1,2-Dichloropropane	216	162	159	**75**	**74**	69-121	1	25	
75-27-4	Bromodichloromethane	215	174	173	**81**	**80**	69-123	1	25	
79-01-6	Trichloroethene	213	170	170	**80**	**80**	69-112	0	25	
123-91-1	1,4-Dioxane	214	180	180	**84**	**84**	74-123	0	25	
80-62-6	Methyl Methacrylate	431	391	386	**91**	**90**	75-125	1	25	
142-82-5	n-Heptane	215	172	168	**80**	**78**	68-118	3	25	
10061-01-5	cis-1,3-Dichloropropene	214	187	188	**87**	**88**	74-129	1	25	
108-10-1	4-Methyl-2-pentanone	209	189	185	**90**	**89**	66-138	1	25	
10061-02-6	trans-1,3-Dichloropropene	213	193	197	**91**	**92**	75-130	1	25	
79-00-5	1,1,2-Trichloroethane	215	177	175	**82**	**81**	73-117	1	25	
108-88-3	Toluene	212	179	178	**84**	**84**	66-114	0	25	
591-78-6	2-Hexanone	214	182	179	**85**	**84**	58-146	1	25	
124-48-1	Dibromochloromethane	213	202	200	**95**	**94**	67-130	1	25	
106-93-4	1,2-Dibromoethane	216	201	201	**93**	**93**	70-127	0	25	
123-86-4	n-Butyl Acetate	219	184	180	**84**	**82**	62-140	2	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181013-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 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
111-65-9	n-Octane	217	180	179	**83**	**82**	65-121	1	25	
127-18-4	Tetrachloroethene	213	185	191	**87**	**90**	62-119	3	25	
108-90-7	Chlorobenzene	215	184	181	**86**	**84**	66-115	2	25	
100-41-4	Ethylbenzene	212	186	183	**88**	**86**	69-117	2	25	
179601-23-1	m,p-Xylenes	426	392	386	**92**	**91**	67-117	1	25	
75-25-2	Bromoform	213	202	199	**95**	**93**	67-135	2	25	
100-42-5	Styrene	212	214	211	**101**	**100**	70-128	1	25	
95-47-6	o-Xylene	214	196	194	**92**	**91**	67-118	1	25	
111-84-2	n-Nonane	215	182	179	**85**	**83**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	214	199	194	**93**	**91**	70-125	2	25	
98-82-8	Cumene	214	198	194	**93**	**91**	68-116	2	25	
80-56-8	alpha-Pinene	211	195	192	**92**	**91**	69-122	1	25	
103-65-1	n-Propylbenzene	218	203	199	**93**	**91**	70-118	2	25	
622-96-8	4-Ethyltoluene	214	217	215	**101**	**100**	69-124	1	25	
108-67-8	1,3,5-Trimethylbenzene	214	201	196	**94**	**92**	65-117	2	25	
95-63-6	1,2,4-Trimethylbenzene	215	235	229	**109**	**107**	67-124	2	25	
100-44-7	Benzyl Chloride	217	183	189	**84**	**87**	75-142	4	25	
541-73-1	1,3-Dichlorobenzene	216	223	218	**103**	**101**	70-124	2	25	
106-46-7	1,4-Dichlorobenzene	216	216	210	**100**	**97**	63-124	3	25	
95-50-1	1,2-Dichlorobenzene	216	230	221	**106**	**102**	66-125	4	25	
5989-27-5	d-Limonene	211	213	209	**101**	**99**	64-135	2	25	
96-12-8	1,2-Dibromo-3-chloropropane	209	200	192	**96**	**92**	73-136	4	25	
120-82-1	1,2,4-Trichlorobenzene	214	205	191	**96**	**89**	70-141	8	25	
91-20-3	Naphthalene	203	215	198	**106**	**98**	71-146	8	25	
87-68-3	Hexachlorobutadiene	209	198	191	**95**	**91**	63-126	4	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: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016DUP

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

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
Propene	1.74	1.01	1.52	0.881	1.63	**13**	25	
Dichlorodifluoromethane (CFC 12)	2.05	0.415	2.07	0.418	2.06	**1**	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Butadiene	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
Acetonitrile	ND	ND	ND	ND	-	-	25	
Acrolein	ND	ND	ND	ND	-	-	25	
Acetone	ND	ND	ND	ND	-	-	25	
Trichlorofluoromethane	1.26	0.224	1.26	0.224	1.26	**0**	25	
2-Propanol (Isopropyl Alcohol)	7.69	3.13	7.90	3.22	7.795	**3**	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
Methylene Chloride	ND	ND	ND	ND	-	-	25	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	1.80	0.578	1.79	0.575	1.795	**0.6**	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	

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

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **PES Environmental**
Client Sample ID: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016DUP

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

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
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Ethyl Acetate	39.2	10.9	39.2	10.9	39.2	**0**	25	
n-Hexane	ND	ND	ND	ND	-	-	25	
Chloroform	1.46	0.299	1.41	0.288	1.435	**3**	25	
Tetrahydrofuran (THF)	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	ND	ND	ND	ND	-	-	25	
Carbon Tetrachloride	ND	ND	ND	ND	-	-	25	
Cyclohexane	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	2.51	0.667	2.61	0.692	2.56	**4**	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Butyl Acetate	ND	ND	ND	ND	-	-	25	

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

ALS ENVIRONMENTAL

LABORATORY DUPLICATE SUMMARY RESULTS

Client: **PES Environmental**
Client Sample ID: **SVE-13B-092718** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805166-016DUP

Test Code: EPA TO-15 Date Collected: 9/27/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: 10/1/18
Analyst: Anusha Bayyarapu Date Analyzed: 10/13/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: SC02203

Initial Pressure (psig): -2.41 Final Pressure (psig): 3.59

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
n-Octane	ND	ND	ND	ND	-	-	25	
Tetrachloroethene	96.1	14.2	96.2	14.2	96.15	**0.1**	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	
Ethylbenzene	8.62	1.99	8.61	1.98	8.615	**0.1**	25	
m,p-Xylenes	29.0	6.67	28.7	6.61	28.85	**1**	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	1.50	0.352	1.48	0.347	1.49	**1**	25	
o-Xylene	6.58	1.52	6.52	1.50	6.55	**0.9**	25	
n-Nonane	ND	ND	ND	ND	-	-	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
alpha-Pinene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
d-Limonene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	

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

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Client: **PES Environmental**
Client Sample ID: **Method Blank** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-MB

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805166

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805166

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-MB

Test Code: EPA TO-15 Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA

Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18

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
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 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
115-07-1	Propene	211	148	133	**70**	**63**	54-133	11	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	155	156	**74**	**74**	64-115	0	25	
74-87-3	Chloromethane	211	158	147	**75**	**70**	47-140	7	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	159	159	**75**	**75**	60-112	0	25	
75-01-4	Vinyl Chloride	214	170	173	**79**	**81**	63-127	3	25	
106-99-0	1,3-Butadiene	210	189	147	**90**	**70**	57-149	25	25	
74-83-9	Bromomethane	212	140	140	**66**	**66**	63-132	0	25	
75-00-3	Chloroethane	214	154	155	**72**	**72**	68-129	0	25	
64-17-5	Ethanol	1,020	859	887	**84**	**87**	62-131	4	25	
75-05-8	Acetonitrile	206	160	165	**78**	**80**	56-136	3	25	
107-02-8	Acrolein	205	180	180	**88**	**88**	60-132	0	25	
67-64-1	Acetone	1,060	914	966	**86**	**91**	63-124	6	25	
75-69-4	Trichlorofluoromethane (CFC 11)	211	160	162	**76**	**77**	65-113	1	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	328	332	**79**	**80**	62-135	1	25	
107-13-1	Acrylonitrile	207	182	189	**88**	**91**	68-138	3	25	
75-35-4	1,1-Dichloroethene	218	176	179	**81**	**82**	72-118	1	25	
75-09-2	Methylene Chloride	217	175	180	**81**	**83**	67-116	2	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	172	181	**80**	**84**	61-143	5	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	162	164	**75**	**76**	68-113	1	25	
75-15-0	Carbon Disulfide	218	170	179	**78**	**82**	68-120	5	25	
156-60-5	trans-1,2-Dichloroethene	214	175	181	**82**	**85**	71-125	4	25	
75-34-3	1,1-Dichloroethane	216	161	166	**75**	**77**	68-118	3	25	
1634-04-4	Methyl tert-Butyl Ether	214	168	157	**79**	**73**	60-123	8	25	
108-05-4	Vinyl Acetate	1,060	1030	1090	**97**	**103**	73-135	6	25	
78-93-3	2-Butanone (MEK)	208	195	203	**94**	**98**	70-129	4	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 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
156-59-2	cis-1,2-Dichloroethene	211	164	171	**78**	**81**	69-121	4	25	
141-78-6	Ethyl Acetate	436	417	433	**96**	**99**	66-140	3	25	
110-54-3	n-Hexane	216	188	196	**87**	**91**	61-124	4	25	
67-66-3	Chloroform	217	167	174	**77**	**80**	69-113	4	25	
109-99-9	Tetrahydrofuran (THF)	216	179	186	**83**	**86**	66-121	4	25	
107-06-2	1,2-Dichloroethane	215	154	160	**72**	**74**	62-120	3	25	
71-55-6	1,1,1-Trichloroethane	215	167	165	**78**	**77**	65-116	1	25	
71-43-2	Benzene	211	173	172	**82**	**82**	66-111	0	25	
56-23-5	Carbon Tetrachloride	212	173	173	**82**	**82**	64-122	0	25	
110-82-7	Cyclohexane	416	360	356	**87**	**86**	69-115	1	25	
78-87-5	1,2-Dichloropropane	216	169	168	**78**	**78**	69-121	0	25	
75-27-4	Bromodichloromethane	215	182	182	**85**	**85**	69-123	0	25	
79-01-6	Trichloroethene	213	178	175	**84**	**82**	69-112	2	25	
123-91-1	1,4-Dioxane	214	188	188	**88**	**88**	74-123	0	25	
80-62-6	Methyl Methacrylate	431	407	408	**94**	**95**	75-125	1	25	
142-82-5	n-Heptane	215	179	178	**83**	**83**	68-118	0	25	
10061-01-5	cis-1,3-Dichloropropene	214	196	197	**92**	**92**	74-129	0	25	
108-10-1	4-Methyl-2-pentanone	209	197	198	**94**	**95**	66-138	1	25	
10061-02-6	trans-1,3-Dichloropropene	213	203	211	**95**	**99**	75-130	4	25	
79-00-5	1,1,2-Trichloroethane	215	184	186	**86**	**87**	73-117	1	25	
108-88-3	Toluene	212	186	180	**88**	**85**	66-114	3	25	
591-78-6	2-Hexanone	214	190	186	**89**	**87**	58-146	2	25	
124-48-1	Dibromochloromethane	213	209	203	**98**	**95**	67-130	3	25	
106-93-4	1,2-Dibromoethane	216	208	202	**96**	**94**	70-127	2	25	
123-86-4	n-Butyl Acetate	219	191	187	**87**	**85**	62-140	2	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805166
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181012-DLCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8 Date Received: NA
Analyst: Anusha Bayyarapu Date Analyzed: 10/12/18
Sample Type: 6.0 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
111-65-9	n-Octane	217	189	183	**87**	**84**	65-121	4	25	
127-18-4	Tetrachloroethene	213	191	184	**90**	**86**	62-119	5	25	
108-90-7	Chlorobenzene	215	189	187	**88**	**87**	66-115	1	25	
100-41-4	Ethylbenzene	212	191	189	**90**	**89**	69-117	1	25	
179601-23-1	m,p-Xylenes	426	404	398	**95**	**93**	67-117	2	25	
75-25-2	Bromoform	213	208	204	**98**	**96**	67-135	2	25	
100-42-5	Styrene	212	219	215	**103**	**101**	70-128	2	25	
95-47-6	o-Xylene	214	202	199	**94**	**93**	67-118	1	25	
111-84-2	n-Nonane	215	189	187	**88**	**87**	61-127	1	25	
79-34-5	1,1,2,2-Tetrachloroethane	214	206	202	**96**	**94**	70-125	2	25	
98-82-8	Cumene	214	203	199	**95**	**93**	68-116	2	25	
80-56-8	alpha-Pinene	211	199	164	**94**	**78**	69-122	19	25	
103-65-1	n-Propylbenzene	218	209	205	**96**	**94**	70-118	2	25	
622-96-8	4-Ethyltoluene	214	221	218	**103**	**102**	69-124	1	25	
108-67-8	1,3,5-Trimethylbenzene	214	206	202	**96**	**94**	65-117	2	25	
95-63-6	1,2,4-Trimethylbenzene	215	242	239	**113**	**111**	67-124	2	25	
100-44-7	Benzyl Chloride	217	190	194	**88**	**89**	75-142	1	25	
541-73-1	1,3-Dichlorobenzene	216	229	225	**106**	**104**	70-124	2	25	
106-46-7	1,4-Dichlorobenzene	216	222	217	**103**	**100**	63-124	3	25	
95-50-1	1,2-Dichlorobenzene	216	237	231	**110**	**107**	66-125	3	25	
5989-27-5	d-Limonene	211	219	200	**104**	**95**	64-135	9	25	
96-12-8	1,2-Dibromo-3-chloropropane	209	206	206	**99**	**99**	73-136	0	25	
120-82-1	1,2,4-Trichlorobenzene	214	212	209	**99**	**98**	70-141	1	25	
91-20-3	Naphthalene	203	221	219	**109**	**108**	71-146	0.9	25	
87-68-3	Hexachlorobutadiene	209	206	201	**99**	**96**	63-126	3	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.

MEMORANDUM

TO: Project File **DATE:** November 7, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: September 27, 2018 Air Samples

LAB: ALS Environmental P1805166

Twenty-two (22) soil vapor extraction well samples were collected on September 27, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, 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 number P1805166.

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 a Summa Canister ™ canister (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 analysis for VOCs by Method TO-15 was performed within the 30-day recommended holding time limit for the air samples collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

The surrogate percent recovery (% R) results for the VOCs by TO-15 air samples, method blank, 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/laboratory control sample duplicates (LCS/LCSDs) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recoveries and relative percent differences (RPDs) for all control compounds met laboratory control limit 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.

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Simi Valley, CA 93065
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www.alsglobal.com

LABORATORY REPORT

November 21, 2018

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

RE: MVSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on November 2, 2018. For your reference, these analyses have been assigned our service request number P1805998.

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 9:55 am, Nov 21, 2018

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: MVSC / 1358.001.01.007

Service Request No: P1805998

CASE NARRATIVE

The sample was received intact under chain of custody on November 2, 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. The use of Bottle Vac Glass is considered a method modification. 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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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	1347317
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
Project ID: MVSC / 1358.001.01.007
Service Request: P1805998

Date Received: 11/2/2018
Time Received: 09:15

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-103118-B	P1805998-002	Air	10/31/2018	11:45	1BV13161	-1.78	5.35	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: 1805998

Company Name & Address (Reporting Information): PES Environmental Inc 1215 4th Ave Ste 850, Seattle WA 98161

Project Name: MUSC

Project Number: 1358.001.01.1007

Project Manager: Matt Duhl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDuhl@peserv.com

Sampler (Print & Sign): Karsten Spinkstead

ALS Contact:

Analysis Method: TO-15

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
SYS-103118	1	10-31-18	1140	SC01063		-30	0	1L			HOLD
SYS-103118-B	2	10-31-18	1145	IBU13161		-30	5	1L	X		

5 of 20

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: Excel Units: ____

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

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature)	Date: 10-31-18	Time: 1200	Received by: (Signature)	Date: 10/31/18	Time: 12:00	
Relinquished by: (Signature)	Date: 10/31/18	Time: 1300	Received by: (Signature)	Date: 11/2/18	Time: 0915	Cooler / Blank Temperature ____ °C

ALS Environmental

Sample Acceptance Check Form

Client: PES Environmental Work order: P1805998

Project: MVSC / 1358.001.01.007

Sample(s) received on: 11/2/18 Date opened: 11/2/18 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
P1805998-001.01	1.0 L Source Can					
P1805998-002.01	1.0 L Bottle-Vac™					

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: **SYS-103118-B** ALS Project ID: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805998-002

Test Code: EPA TO-15 Modified Date Collected: 10/31/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 11/2/18
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1BV13161

Initial Pressure (psig): -1.78 Final Pressure (psig): 5.35

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	2.0	ND	1.2	
75-71-8	Dichlorodifluoromethane (CFC 12)	**5.3**	2.0	**1.1**	0.41	
74-87-3	Chloromethane	ND	1.9	ND	0.94	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	ND	0.28	
75-01-4	Vinyl Chloride	ND	2.1	ND	0.80	
106-99-0	1,3-Butadiene	ND	2.0	ND	0.91	
74-83-9	Bromomethane	ND	1.9	ND	0.50	
75-00-3	Chloroethane	ND	2.0	ND	0.75	
64-17-5	Ethanol	ND	20	ND	10	
75-05-8	Acetonitrile	ND	2.0	ND	1.2	
107-02-8	Acrolein	ND	3.9	ND	1.7	
67-64-1	Acetone	ND	21	ND	8.8	
75-69-4	Trichlorofluoromethane (CFC 11)	**4.0**	2.1	**0.72**	0.37	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	8.1	ND	3.3	
107-13-1	Acrylonitrile	ND	2.0	ND	0.93	
75-35-4	1,1-Dichloroethene	ND	2.1	ND	0.53	
75-09-2	Methylene Chloride	ND	2.1	ND	0.60	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.1	ND	0.66	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	2.1	ND	0.27	
75-15-0	Carbon Disulfide	ND	4.3	ND	1.4	
156-60-5	trans-1,2-Dichloroethene	ND	2.1	ND	0.52	
75-34-3	1,1-Dichloroethane	ND	2.0	ND	0.50	
1634-04-4	Methyl tert-Butyl Ether	ND	2.1	ND	0.58	
108-05-4	Vinyl Acetate	ND	21	ND	5.8	
78-93-3	2-Butanone (MEK)	ND	3.9	ND	1.3	

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: **SYS-103118-B** ALS Project ID: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805998-002

Test Code: EPA TO-15 Modified Date Collected: 10/31/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 11/2/18
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1BV13161

Initial Pressure (psig): -1.78 Final Pressure (psig): 5.35

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	2.1	ND	0.52	
141-78-6	Ethyl Acetate	ND	4.3	ND	1.2	
110-54-3	n-Hexane	**10**	2.1	**2.9**	0.59	
67-66-3	Chloroform	**21**	2.1	**4.4**	0.43	
109-99-9	Tetrahydrofuran (THF)	ND	2.1	ND	0.70	
107-06-2	1,2-Dichloroethane	ND	2.1	ND	0.51	
71-55-6	1,1,1-Trichloroethane	ND	2.1	ND	0.38	
71-43-2	Benzene	ND	2.0	ND	0.63	
56-23-5	Carbon Tetrachloride	ND	2.0	ND	0.32	
110-82-7	Cyclohexane	**5.6**	3.9	**1.6**	1.1	
78-87-5	1,2-Dichloropropane	ND	2.1	ND	0.45	
75-27-4	Bromodichloromethane	ND	2.1	ND	0.31	
79-01-6	Trichloroethene	ND	2.1	ND	0.38	
123-91-1	1,4-Dioxane	ND	2.1	ND	0.57	
80-62-6	Methyl Methacrylate	ND	4.3	ND	1.0	
142-82-5	n-Heptane	ND	2.1	ND	0.51	
10061-01-5	cis-1,3-Dichloropropene	ND	2.2	ND	0.48	
108-10-1	4-Methyl-2-pentanone	ND	2.1	ND	0.50	
10061-02-6	trans-1,3-Dichloropropene	ND	2.1	ND	0.45	
79-00-5	1,1,2-Trichloroethane	ND	2.1	ND	0.38	
108-88-3	Toluene	ND	2.1	ND	0.55	
591-78-6	2-Hexanone	ND	2.1	ND	0.51	
124-48-1	Dibromochloromethane	ND	2.1	ND	0.25	
106-93-4	1,2-Dibromoethane	ND	2.1	ND	0.27	
123-86-4	n-Butyl Acetate	ND	2.1	ND	0.44	

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: **SYS-103118-B** ALS Project ID: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1805998-002

Test Code: EPA TO-15 Modified Date Collected: 10/31/18
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: 11/2/18
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ Volume(s) Analyzed: 0.40 Liter(s)
Test Notes:
Container ID: 1BV13161

Initial Pressure (psig): -1.78 Final Pressure (psig): 5.35

Container Dilution Factor: 1.55

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	2.1	ND	0.45	
127-18-4	Tetrachloroethene	**250**	2.1	**37**	0.30	
108-90-7	Chlorobenzene	ND	2.1	ND	0.45	
100-41-4	Ethylbenzene	**76**	2.0	**17**	0.46	
179601-23-1	m,p-Xylenes	**230**	4.3	**53**	0.98	
75-25-2	Bromoform	ND	2.1	ND	0.20	
100-42-5	Styrene	ND	2.1	ND	0.48	
95-47-6	o-Xylene	**41**	2.1	**9.5**	0.47	
111-84-2	n-Nonane	ND	2.1	ND	0.40	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.1	ND	0.30	
98-82-8	Cumene	ND	2.1	ND	0.42	
80-56-8	alpha-Pinene	ND	2.0	ND	0.36	
103-65-1	n-Propylbenzene	ND	2.1	ND	0.43	
622-96-8	4-Ethyltoluene	ND	2.1	ND	0.42	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	ND	0.42	
95-63-6	1,2,4-Trimethylbenzene	**2.2**	2.1	**0.44**	0.42	
100-44-7	Benzyl Chloride	ND	4.3	ND	0.82	
541-73-1	1,3-Dichlorobenzene	ND	2.1	ND	0.35	
106-46-7	1,4-Dichlorobenzene	ND	2.1	ND	0.35	
95-50-1	1,2-Dichlorobenzene	ND	2.1	ND	0.35	
5989-27-5	d-Limonene	ND	2.0	ND	0.35	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	ND	0.21	
120-82-1	1,2,4-Trichlorobenzene	ND	2.1	ND	0.28	
91-20-3	Naphthalene	ND	2.0	ND	0.38	
87-68-3	Hexachlorobutadiene	ND	2.1	ND	0.19	

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: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-MB

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ 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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805998

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-MB

Test Code: EPA TO-15 Modified Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Lusine Hakobyan Date Analyzed: 11/20/18

Sample Type: 1.0 L Bottle-Vac™ 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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1805998

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-MB

Test Code: EPA TO-15 Modified Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA

Analyst: Lusine Hakobyan Date Analyzed: 11/20/18

Sample Type: 1.0 L Bottle-Vac™ 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
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1805998

Test Code: EPA TO-15 Modified
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date(s) Collected: 10/31/18
Analyst: Lusine Hakobyan Date(s) Received: 11/2/18
Sample Type: 1.0 L Bottle-Vac™(s) Date(s) Analyzed: 11/20/18
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	P181120-MB	**103**	**100**	**88**	70-130	
Lab Control Sample	P181120-LCS	**101**	**98**	**89**	70-130	
Duplicate Lab Control Sample	P181120-DLCS	**100**	**98**	**88**	70-130	
SYS-103118-B	P1805998-002	**103**	**98**	**90**	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: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-DLCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ 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
115-07-1	Propene	211	200	217	**95**	**103**	54-133	8	25	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	179	188	**85**	**90**	64-115	6	25	
74-87-3	Chloromethane	211	206	209	**98**	**99**	47-140	1	25	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	181	183	**86**	**87**	60-112	1	25	
75-01-4	Vinyl Chloride	214	201	206	**94**	**96**	63-127	2	25	
106-99-0	1,3-Butadiene	210	195	208	**93**	**99**	57-149	6	25	
74-83-9	Bromomethane	212	193	200	**91**	**94**	63-132	3	25	
75-00-3	Chloroethane	214	196	203	**92**	**95**	68-129	3	25	
64-17-5	Ethanol	1,020	1120	1180	**110**	**116**	62-131	5	25	
75-05-8	Acetonitrile	206	192	206	**93**	**100**	56-136	7	25	
107-02-8	Acrolein	205	201	211	**98**	**103**	60-132	5	25	
67-64-1	Acetone	1,060	985	1050	**93**	**99**	63-124	6	25	
75-69-4	Trichlorofluoromethane (CFC 11)	211	186	190	**88**	**90**	65-113	2	25	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	376	385	**91**	**93**	62-135	2	25	
107-13-1	Acrylonitrile	207	216	227	**104**	**110**	68-138	6	25	
75-35-4	1,1-Dichloroethene	218	191	196	**88**	**90**	72-118	2	25	
75-09-2	Methylene Chloride	217	193	200	**89**	**92**	67-116	3	25	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	202	211	**94**	**98**	61-143	4	25	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	180	184	**83**	**85**	68-113	2	25	
75-15-0	Carbon Disulfide	218	197	201	**90**	**92**	68-120	2	25	
156-60-5	trans-1,2-Dichloroethene	214	201	207	**94**	**97**	71-125	3	25	
75-34-3	1,1-Dichloroethane	216	195	200	**90**	**93**	68-118	3	25	
1634-04-4	Methyl tert-Butyl Ether	214	194	200	**91**	**93**	60-123	2	25	
108-05-4	Vinyl Acetate	1,060	1050	1070	**99**	**101**	73-135	2	25	
78-93-3	2-Butanone (MEK)	208	212	221	**102**	**106**	70-129	4	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.

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-DLCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ 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
156-59-2	cis-1,2-Dichloroethene	211	198	204	**94**	**97**	69-121	3	25	
141-78-6	Ethyl Acetate	436	453	461	**104**	**106**	66-140	2	25	
110-54-3	n-Hexane	216	200	206	**93**	**95**	61-124	2	25	
67-66-3	Chloroform	217	193	196	**89**	**90**	69-113	1	25	
109-99-9	Tetrahydrofuran (THF)	216	196	203	**91**	**94**	66-121	3	25	
107-06-2	1,2-Dichloroethane	215	191	194	**89**	**90**	62-120	1	25	
71-55-6	1,1,1-Trichloroethane	215	187	192	**87**	**89**	65-116	2	25	
71-43-2	Benzene	211	188	195	**89**	**92**	66-111	3	25	
56-23-5	Carbon Tetrachloride	212	186	191	**88**	**90**	64-122	2	25	
110-82-7	Cyclohexane	416	383	393	**92**	**94**	69-115	2	25	
78-87-5	1,2-Dichloropropane	216	200	205	**93**	**95**	69-121	2	25	
75-27-4	Bromodichloromethane	215	200	204	**93**	**95**	69-123	2	25	
79-01-6	Trichloroethene	213	186	189	**87**	**89**	69-112	2	25	
123-91-1	1,4-Dioxane	214	211	218	**99**	**102**	74-123	3	25	
80-62-6	Methyl Methacrylate	431	398	407	**92**	**94**	75-125	2	25	
142-82-5	n-Heptane	215	187	192	**87**	**89**	68-118	2	25	
10061-01-5	cis-1,3-Dichloropropene	214	202	207	**94**	**97**	74-129	3	25	
108-10-1	4-Methyl-2-pentanone	209	215	223	**103**	**107**	66-138	4	25	
10061-02-6	trans-1,3-Dichloropropene	213	207	214	**97**	**100**	75-130	3	25	
79-00-5	1,1,2-Trichloroethane	215	194	198	**90**	**92**	73-117	2	25	
108-88-3	Toluene	212	185	187	**87**	**88**	66-114	1	25	
591-78-6	2-Hexanone	214	217	222	**101**	**104**	58-146	3	25	
124-48-1	Dibromochloromethane	213	207	209	**97**	**98**	67-130	1	25	
106-93-4	1,2-Dibromoethane	216	205	206	**95**	**95**	70-127	0	25	
123-86-4	n-Butyl Acetate	219	224	227	**102**	**104**	62-140	2	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 CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Client: **PES Environmental**
Client Sample ID: **Duplicate Lab Control Sample** ALS Project ID: P1805998
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181120-DLCS

Test Code: EPA TO-15 Modified Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16 Date Received: NA
Analyst: Lusine Hakobyan Date Analyzed: 11/20/18
Sample Type: 1.0 L Bottle-Vac™ 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
111-65-9	n-Octane	217	193	197	**89**	**91**	65-121	2	25	
127-18-4	Tetrachloroethene	213	183	183	**86**	**86**	62-119	0	25	
108-90-7	Chlorobenzene	215	192	196	**89**	**91**	66-115	2	25	
100-41-4	Ethylbenzene	212	193	195	**91**	**92**	69-117	1	25	
179601-23-1	m,p-Xylenes	426	414	418	**97**	**98**	67-117	1	25	
75-25-2	Bromoform	213	208	209	**98**	**98**	67-135	0	25	
100-42-5	Styrene	212	202	204	**95**	**96**	70-128	1	25	
95-47-6	o-Xylene	214	208	209	**97**	**98**	67-118	1	25	
111-84-2	n-Nonane	215	216	219	**100**	**102**	61-127	2	25	
79-34-5	1,1,2,2-Tetrachloroethane	214	219	221	**102**	**103**	70-125	1	25	
98-82-8	Cumene	214	203	204	**95**	**95**	68-116	0	25	
80-56-8	alpha-Pinene	211	204	207	**97**	**98**	69-122	1	25	
103-65-1	n-Propylbenzene	218	215	216	**99**	**99**	70-118	0	25	
622-96-8	4-Ethyltoluene	214	224	223	**105**	**104**	69-124	1	25	
108-67-8	1,3,5-Trimethylbenzene	214	203	204	**95**	**95**	65-117	0	25	
95-63-6	1,2,4-Trimethylbenzene	215	223	224	**104**	**104**	67-124	0	25	
100-44-7	Benzyl Chloride	217	207	210	**95**	**97**	75-142	2	25	
541-73-1	1,3-Dichlorobenzene	216	206	206	**95**	**95**	70-124	0	25	
106-46-7	1,4-Dichlorobenzene	216	197	197	**91**	**91**	63-124	0	25	
95-50-1	1,2-Dichlorobenzene	216	218	217	**101**	**100**	66-125	1	25	
5989-27-5	d-Limonene	211	240	242	**114**	**115**	64-135	0.9	25	
96-12-8	1,2-Dibromo-3-chloropropane	209	215	216	**103**	**103**	73-136	0	25	
120-82-1	1,2,4-Trichlorobenzene	214	195	197	**91**	**92**	70-141	1	25	
91-20-3	Naphthalene	203	190	192	**94**	**95**	71-146	1	25	
87-68-3	Hexachlorobutadiene	209	191	193	**91**	**92**	63-126	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 GCMS-16

Method Path : I:\MS16\METHODS\
Method File : R16101918.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Sat Oct 20 10:34:51 2018
Response Via : Initial Calibration

LH 10/20/18

Calibration Files
0.1 =10191816.D 0.2 =10191817.D 0.5 =10191818.D 1.0 =10191819.D 5.0 =10191820.D 25 =10191
100 =10191823.D

		Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
1)	IR	Bromochloromethane...	----------ISTD----------									
2)	T	Propene	1.201	1.058	1.133	1.147	1.082	1.083	1.203	1.399	1.163	9.42
3)	T	Dichlorodifluo...	2.763	2.575	2.705	2.579	2.615	2.607	2.582	2.479	2.613	3.31
4)	T	Chloromethane	1.925	1.817	1.839	1.624	1.741	1.720	1.582	1.058	1.663	16.17
5)	T	1,2-Dichloro-1...	1.623	1.511	1.596	1.567	1.552	1.552	1.536	1.491	1.553	2.75
6)	T	Vinyl Chloride	1.779	1.722	1.869	1.822	1.836	1.842	1.831	1.811	1.814	2.50
7)	T	1,3-Butadiene	1.118	1.078	1.084	1.099	1.157	1.230	1.275	1.346	1.174	8.48
8)	T	Bromomethane	1.057	1.018	1.115	1.083	1.100	1.130	1.132	1.110	1.093	3.59
9)	T	Chloroethane	0.780	0.747	0.757	0.779	0.782	0.792	0.796	0.799	0.779	2.36
10)	T	Ethanol	0.747	0.658	0.639	0.614	0.609	0.765	0.794	0.799	0.703	11.56
11)	T	Acetonitrile	2.203	1.879	1.834	1.694	1.626	1.817	1.845	1.822	1.840	9.22
12)	T	Acrolein	0.555	0.531	0.624	0.602	0.621	0.666	0.683	0.686	0.621	9.20
13)	T	Acetone	0.893	0.812	0.840	0.804	0.761	0.850	0.888	0.863	0.839	5.33
14)	T	Trichlorofluor...	2.274	2.190	2.363	2.272	2.268	2.278	2.265	2.195	2.263	2.39
15)	T	2-Propanol (Is...	2.896	2.688	2.855	2.613	2.625	2.868	2.699	2.278	2.690	7.45
16)	T	Acrylonitrile	0.970	1.086	1.248	1.235	1.300	1.436	1.457	1.456	1.273	14.05
17)	T	1,1-Dichloroet...	1.145	1.127	1.140	1.114	1.142	1.183	1.186	1.180	1.152	2.37
18)	T	2-Methyl-2-Pro...	2.985	2.838	2.989	2.861	2.968	3.054	2.981	1.985	2.833	12.35
19)	T	Methylene Chlo...	1.224	1.127	1.176	1.125	1.153	1.186	1.191	1.192	1.172	2.94
20)	T	3-Chloro-1-pro...	1.876	1.353	1.377	1.332	1.359	1.454	1.459	1.447	1.457	12.11
21)	T	Trichlorotrifl...	1.232	1.132	1.234	1.205	1.205	1.227	1.217	1.184	1.204	2.81
22)	T	Carbon Disulfide	4.561	4.046	4.216	4.055	4.054	4.235	4.199	4.098	4.183	4.10
23)	T	trans-1,2-Dich...	1.509	1.410	1.583	1.564	1.604	1.666	1.657	1.623	1.577	5.36
24)	T	1,1-Dichloroet...	2.043	1.857	1.994	1.933	1.964	1.999	1.978	1.922	1.961	2.90
25)	T	Methyl tert-Bu...	3.456	3.390	3.563	3.456	3.454	3.488	3.484	3.456	3.468	1.39
26)	T	Vinyl Acetate			0.245	0.240	0.276	0.335	0.351	0.317	0.294	16.13
27)	T	2-Butanone (MEK)	0.581	0.596	0.711	0.729	0.759	0.835	0.853	0.873	0.742	15.04
28)	T	cis-1,2-Dichlo...	1.463	1.442	1.571	1.546	1.576	1.622	1.611	1.573	1.550	4.21
29)	T	Diisopropyl Ether	1.138	1.073	0.994	0.952	0.952	1.036	1.104	1.045	1.037	6.55
30)	T	Ethyl Acetate	0.326	0.326	0.370	0.381	0.398	0.446	0.478	0.456	0.398	14.60
31)	T	n-Hexane	1.896	1.743	1.811	1.761	1.724	1.798	1.917	1.849	1.812	3.89
32)	T	Chloroform	2.115	2.022	2.187	2.084	2.124	2.161	2.127	2.042	2.108	2.66
33)	S	1,2-Dichloroet...	1.518	1.508	1.540	1.526	1.508	1.495	1.483	1.451	1.504	1.83
34)	T	Tetrahydrofura...	0.780	0.695	0.740	0.713	0.725	0.768	0.773	0.786	0.748	4.56
35)	T	Ethyl tert-But...	1.466	1.340	1.428	1.390	1.429	1.483	1.521	1.551	1.451	4.74
36)	T	1,2-Dichloroet...	1.666	1.558	1.655	1.621	1.645	1.683	1.653	1.567	1.631	2.82
37)	IR	1,4-Difluorobenzen...	----------ISTD----------									
38)	T	1,1,1-Trichlor...	0.487	0.449	0.467	0.457	0.468	0.484	0.479	0.468	0.470	2.81
39)	T	Isopropyl Acetate	0.156	0.159	0.170	0.163	0.172	0.188	0.202	0.201	0.176	10.35
40)	T	1-Butanol				0.185	0.194	0.284	0.302	0.298	0.253	23.00
41)	T	Benzene	1.245	1.103	1.113	1.065	1.096	1.166	1.204	1.202	1.149	5.57
42)	T	Carbon Tetrach...	0.430	0.409	0.420	0.415	0.435	0.462	0.460	0.453	0.435	4.73
43)	T	Cyclohexane	0.454	0.417	0.432	0.419	0.431	0.463	0.480	0.467	0.445	5.33
44)	T	tert-Amyl Meth...	0.809	0.732	0.773	0.751	0.777	0.822	0.832	0.837	0.792	4.95
45)	T	1,2-Dichloropr...	0.251	0.246	0.253	0.251	0.251	0.261	0.262	0.266	0.255	2.77
46)	T	Bromodichlorom...	0.407	0.366	0.393	0.376	0.402	0.426	0.429	0.418	0.402	5.65
47)	T	Trichloroethene	0.336	0.314	0.327	0.321	0.331	0.353	0.359	0.361	0.338	5.28
48)	T	1,4-Dioxane	0.188	0.183	0.194	0.197	0.203	0.251	0.257	0.268	0.217	16.03
49)	T	2,2,4-Trimethy...	1.143	1.054	1.063	1.017	1.039	1.072	1.075	1.070	1.067	3.43
50)	T	Methyl Methacr...	0.099	0.099	0.112	0.111	0.120	0.133	0.139	0.140	0.119	14.06
51)	T	n-Heptane	0.277	0.258	0.259	0.253	0.255	0.261	0.271	0.282	0.264	4.07
52)	T	cis-1,3-Dichlo...	0.430	0.386	0.418	0.416	0.448	0.494	0.505	0.511	0.451	10.44
53)	T	4-Methyl-2-pen...	0.196	0.203	0.216	0.219	0.236	0.257	0.262	0.268	0.232	12.01
54)	T	trans-1,3-Dich...	0.343	0.329	0.357	0.361	0.408	0.459	0.467	0.466	0.399	14.69

55)	T	1,1,2-Trichlor...	0.261	0.256	0.273	0.268	0.278	0.292	0.293	0.295	0.277	5.51
56)	IR	Chlorobenzene-d5 (...	----------ISTD----------									
57)	S	Toluene-d8 (SS2)	2.003	2.015	2.000	1.997	1.991	1.982	1.967	1.969	1.991	0.84
58)	T	Toluene	3.054	2.809	2.769	2.669	2.643	2.745	2.763	2.660	2.764	4.76
59)	T	2-Hexanone	1.530	1.004	1.229	1.186	1.235	1.344	1.328	1.276	1.266	11.82
60)	T	Dibromochlorom...	0.745	0.726	0.751	0.753	0.820	0.885	0.896	0.884	0.807	8.96
61)	T	1,2-Dibromoethane	0.709	0.666	0.713	0.705	0.754	0.802	0.793	0.782	0.740	6.66
62)	T	n-Butyl Acetate	1.443	1.250	1.266	1.299	1.397	1.480	1.449	1.397	1.373	6.48
63)	T	n-Octane	0.750	0.497	0.488	0.471	0.473	0.499	0.512	0.520	0.526	17.49
64)	T	Tetrachloroethene	0.879	0.804	0.837	0.808	0.837	0.885	0.883	0.871	0.851	3.91
65)	T	Chlorobenzene	1.926	1.803	1.804	1.763	1.825	1.952	1.975	1.927	1.872	4.35
66)	T	Ethylbenzene	3.404	2.982	3.024	2.966	3.093	3.313	3.323	3.077	3.148	5.47
67)	T	m- & p-Xylenes	2.344	2.202	2.288	2.239	2.345	2.580	2.576	2.230	2.350	6.36
68)	T	Bromoform	0.614	0.594	0.643	0.657	0.742	0.841	0.840	0.816	0.718	14.46
69)	T	Styrene	1.821	1.684	1.754	1.768	1.921	2.147	2.162	2.038	1.912	9.69
70)	T	o-Xylene	2.485	2.233	2.292	2.243	2.386	2.587	2.577	2.283	2.386	6.14
71)	T	n-Nonane	1.163	1.089	1.095	1.059	1.084	1.135	1.123	1.023	1.096	4.02
72)	T	1,1,2,2-Tetrac...	1.108	1.020	1.083	1.075	1.149	1.270	1.273	1.160	1.142	7.96
73)	S	Bromofluoroben...	0.894	0.902	0.901	0.903	0.921	0.923	0.896	0.898	0.905	1.23
74)	T	Cumene	3.219	3.066	3.045	2.937	3.114	3.359	3.348	2.963	3.131	5.19
75)	T	alpha-Pinene	1.621	1.458	1.541	1.507	1.613	1.757	1.808	1.688	1.624	7.50
76)	T	n-Propylbenzene	3.782	3.328	3.459	3.402	3.616	3.939	3.856	3.278	3.582	7.05
77)	T	3-Ethyltoluene	3.284	3.064	2.895	2.863	3.069	3.619	3.521	2.936	3.156	9.14
78)	T	4-Ethyltoluene	2.771	2.471	2.829	2.785	2.969	3.070	3.090	2.794	2.847	6.99
79)	T	1,3,5-Trimethy...	2.818	2.513	2.513	2.416	2.571	2.835	2.808	2.487	2.620	6.53
80)	T	alpha-Methylst...	1.311	1.204	1.312	1.309	1.438	1.624	1.639	1.495	1.416	11.27
81)	T	2-Ethyltoluene	3.465	2.840	2.922	2.865	3.058	3.339	3.285	2.841	3.077	8.19
82)	T	1,2,4-Trimethy...	2.752	2.339	2.452	2.411	2.646	3.018	2.820	2.126	2.571	11.31
83)	T	n-Decane	0.076	0.044	0.047	0.052	0.052	0.059	0.059	0.055	0.055	17.41
84)	T	Benzyl Chloride				1.696	2.040	2.617	2.652	2.326	2.266	17.81
85)	T	1,3-Dichlorobe...	1.605	1.404	1.508	1.480	1.603	1.796	1.780	1.568	1.593	8.65
86)	T	1,4-Dichlorobe...	1.746	1.463	1.504	1.495	1.589	1.760	1.762	1.604	1.615	7.77
87)	T	sec-Butylbenzene	3.333	3.125	3.266	3.234	3.459	3.723	3.629	3.047	3.352	7.06
88)	T	4-Isopropyltol...	3.338	2.998	3.112	3.079	3.355	3.770	3.411	2.485	3.193	11.76
89)	T	1,2,3-Trimethy...	2.734	2.417	2.448	2.434	2.665	3.013	2.808	2.097	2.577	11.07
90)	T	1,2-Dichlorobe...	1.512	1.358	1.413	1.414	1.541	1.763	1.688	1.327	1.502	10.42
91)	T	d-Limonene	0.871	0.798	0.882	0.880	0.978	1.128	1.093	0.841	0.934	12.89
92)	T	1,2-Dibromo-3-...	0.495	0.450	0.486	0.514	0.571	0.659	0.660	0.646	0.560	15.26
93)	T	n-Undecane	1.283	1.125	1.180	1.116	1.242	1.335	1.359	1.237	1.235	7.32
94)	T	1,2,4-Trichlor...	1.257	1.067	1.074	1.103	1.154	1.326	1.361	1.289	1.204	9.81
95)	T	Naphthalene	4.049	3.354	3.439	3.406	3.548	4.119	4.118	3.528	3.695	9.15
96)	T	n-Dodecane	1.245	1.082	1.139	1.124	1.222	1.139	1.196	1.155	1.163	4.68
97)	T	Hexachlorobuta...	0.788	0.717	0.769	0.754	0.802	0.888	0.902	0.863	0.810	8.25
98)	T	Cyclohexanone	0.839	0.724	0.705	0.686	0.712	0.945	0.935	0.920	0.808	14.04
99)	T	tert-Butylbenzene	2.599	2.357	2.441	2.407	2.604	2.926	2.704	2.060	2.512	10.31
100)	T	n-Butylbenzene	2.656	2.408	2.548	2.519	2.758	2.984	2.910	2.489	2.659	7.81

(#) = Out of Range

R16101918.M Sat Oct 20 11:02:54 2018

Evaluate Continuing Calibration Report

Data File : I:\MS16\DATA\2018 11\19\11201801.D Vial: 2
Acq On : 20 Nov 2018 2:57 Operator: LH
Sample : CCV R16112018 25ng Inst : GCMS-16
Misc : S31-09141801/S31-11081802 (12/7)

Quant Time: Nov 20 07:22:17 2018
Quant Method : I:\MS16\METHODS\R16101918.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Sat Oct 20 10:23:27 2018
Response via : Initial Calibration
DataAcq Meth:TO15.M

RS 11/20/18

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	109	-0.02
2	T	Propene	1.163	1.270	-9.2	127	0.00
3	T	Dichlorodifluoromethane (CF	2.613	2.515	3.8	105	0.00
4	T	Chloromethane	1.663	1.916	-15.2	121	0.00
5	T	1,2-Dichloro-1,1,2,2-tetraf	1.553	1.413	9.0	99	0.00
6	T	Vinyl Chloride	1.814	1.983	-9.3	117	0.00
7	T	1,3-Butadiene	1.174	1.324	-12.8	117	0.00
8	T	Bromomethane	1.093	1.121	-2.6	108	0.00
9	T	Chloroethane	0.779	0.821	-5.4	113	0.00
10	T	Ethanol	0.703	0.869	-23.6	123	-0.07
11	T	Acetonitrile	1.840	2.013	-9.4	120	-0.04
12	T	Acrolein	0.621	0.679	-9.3	111	-0.02
13	T	Acetone	0.839	0.878	-4.6	112	-0.04
14	T	Trichlorofluoromethane	2.263	2.123	6.2	101	0.00
15	T	2-Propanol (Isopropanol)	2.690	2.819	-4.8	107	-0.04
16	T	Acrylonitrile	1.273	1.506	-18.3	114	-0.03
17	T	1,1-Dichloroethene	1.152	1.114	3.3	102	-0.01
18	T	2-Methyl-2-Propanol (tert-B	2.833	2.751	2.9	98	-0.04
19	T	Methylene Chloride	1.172	1.153	1.6	106	-0.02
20	T	3-Chloro-1-propene (Allyl C	1.457	1.475	-1.2	110	-0.02
21	T	Trichlorotrifluoroethane	1.204	1.078	10.5	95	-0.01
22	T	Carbon Disulfide	4.183	4.123	1.4	106	0.00
23	T	trans-1,2-Dichloroethene	1.577	1.616	-2.5	105	-0.02
24	T	1,1-Dichloroethane	1.961	1.930	1.6	105	-0.02
25	T	Methyl tert-Butyl Ether	3.468	3.340	3.7	104	0.00
26	T	Vinyl Acetate	0.294	0.304	-3.4	98	-0.03
27	T	2-Butanone (MEK)	0.742	0.821	-10.6	107	-0.02
28	T	cis-1,2-Dichloroethene	1.550	1.575	-1.6	105	-0.01
29	T	Diisopropyl Ether	1.037	0.966	6.8	101	-0.01
30	T	Ethyl Acetate	0.398	0.443	-11.3	108	-0.02
31	T	n-Hexane	1.812	1.773	2.2	107	0.00
32	T	Chloroform	2.108	2.020	4.2	101	-0.02
33	S	1,2-Dichloroethane-d4(SS1)	1.504	1.508	-0.3	109	-0.01
34	T	Tetrahydrofuran (THF)	0.748	0.738	1.3	104	0.00
35	T	Ethyl tert-Butyl Ether	1.451	1.381	4.8	101	0.00
36	T	1,2-Dichloroethane	1.631	1.535	5.9	99	-0.01
37	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	108	-0.01
38	T	1,1,1-Trichloroethane	0.470	0.436	7.2	97	0.00
39	T	Isopropyl Acetate	0.176	0.184	-4.5	106	-0.01
40	T	1-Butanol	0.253	0.288	-13.8	109	-0.03
41	T	Benzene	1.149	1.104	3.9	102	-0.01
42	T	Carbon Tetrachloride	0.435	0.411	5.5	96	0.00
43	T	Cyclohexane	0.445	0.434	2.5	101	0.00
44	T	tert-Amyl Methyl Ether	0.792	0.782	1.3	103	0.00
45	T	1,2-Dichloropropane	0.255	0.251	1.6	104	0.00
46	T	Bromodichloromethane	0.402	0.391	2.7	99	0.00
47	T	Trichloroethene	0.338	0.309	8.6	95	-0.01
48	T	1,4-Dioxane	0.217	0.228	-5.1	98	-0.01
49	T	2,2,4-Trimethylpentane (Iso	1.067	1.060	0.7	107	-0.01
50	T	Methyl Methacrylate	0.119	0.116	2.5	94	-0.02
51	T	n-Heptane	0.264	0.242	8.3	100	-0.01
52	T	cis-1,3-Dichloropropene	0.451	0.458	-1.6	100	-0.01
53	T	4-Methyl-2-pentanone	0.232	0.243	-4.7	102	-0.01
54	T	trans-1,3-Dichloropropene	0.399	0.420	-5.3	99	-0.01
55	T	1,1,2-Trichloroethane	0.277	0.262	5.4	97	0.00

Evaluate Continuing Calibration Report

Data File : I:\MS16\DATA\2018 11\19\11201801.D Vial: 2
Acq On : 20 Nov 2018 2:57 Operator: LH
Sample : CCV R16112018 25ng Inst : GCMS-16
Misc : S31-09141801/S31-11081802 (12/7)

Quant Time: Nov 20 07:22:17 2018
Quant Method : I:\MS16\METHODS\R16101918.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Sat Oct 20 10:23:27 2018
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	104	0.00
57	S	Toluene-d8 (SS2)	1.991	1.950	2.1	103	0.00
58	T	Toluene	2.764	2.558	7.5	97	-0.01
59	T	2-Hexanone	1.266	1.294	-2.2	100	-0.01
60	T	Dibromochloromethane	0.807	0.814	-0.9	96	0.00
61	T	1,2-Dibromoethane	0.740	0.743	-0.4	97	0.00
62	T	n-Butyl Acetate	1.373	1.402	-2.1	99	0.00
63	T	n-Octane	0.526	0.495	5.9	104	-0.01
64	T	Tetrachloroethene	0.851	0.760	10.7	90	0.00
65	T	Chlorobenzene	1.872	1.785	4.6	95	-0.01
66	T	Ethylbenzene	3.148	3.094	1.7	97	0.00
67	T	m- & p-Xylenes	2.350	2.393	-1.8	97	-0.01
68	T	Bromoform	0.718	0.746	-3.9	93	0.00
69	T	Styrene	1.912	1.935	-1.2	94	0.00
70	T	o-Xylene	2.386	2.411	-1.0	97	-0.01
71	T	n-Nonane	1.096	1.158	-5.7	106	0.00
72	T	1,1,2,2-Tetrachloroethane	1.142	1.244	-8.9	102	0.00
73	S	Bromofluorobenzene (SS3)	0.905	0.810	10.5	92	0.00
74	T	Cumene	3.131	3.108	0.7	97	0.00
75	T	alpha-Pinene	1.624	1.660	-2.2	99	0.00
76	T	n-Propylbenzene	3.582	3.685	-2.9	98	0.00
77	T	3-Ethyltoluene	3.156	3.124	1.0	90	0.00
78	T	4-Ethyltoluene	2.847	2.973	-4.4	101	0.00
79	T	1,3,5-Trimethylbenzene	2.620	2.597	0.9	96	0.00
80	T	alpha-Methylstyrene	1.416	1.418	-0.1	91	0.00
81	T	2-Ethyltoluene	3.077	3.064	0.4	96	0.00
82	T	1,2,4-Trimethylbenzene	2.571	2.751	-7.0	95	-0.01
83	T	n-Decane	0.055	0.059	-7.3	106	0.00
84	T	Benzyl Chloride	2.266	2.366	-4.4	94	0.00
85	T	1,3-Dichlorobenzene	1.593	1.582	0.7	92	-0.01
86	T	1,4-Dichlorobenzene	1.615	1.547	4.2	92	0.00
87	T	sec-Butylbenzene	3.352	3.410	-1.7	96	0.00
88	T	4-Isopropyltoluene (p-Cymen	3.193	3.325	-4.1	92	0.00
89	T	1,2,3-Trimethylbenzene	2.577	2.757	-7.0	95	-0.01
90	T	1,2-Dichlorobenzene	1.502	1.544	-2.8	91	-0.01
91	T	d-Limonene	0.934	1.110	-18.8	103	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.560	0.589	-5.2	93	0.00
93	T	n-Undecane	1.235	1.345	-8.9	105	0.00
94	T	1,2,4-Trichlorobenzene	1.204	1.158	3.8	91	0.00
95	T	Naphthalene	3.695	3.594	2.7	91	0.00
96	T	n-Dodecane	1.163	1.146	1.5	105	0.00
97	T	Hexachlorobutadiene	0.810	0.750	7.4	88	0.00
98	T	Cyclohexanone	0.808	0.870	-7.7	96	-0.01
99	T	tert-Butylbenzene	2.512	2.605	-3.7	93	0.00
100	T	n-Butylbenzene	2.659	2.792	-5.0	98	0.00

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

MEMORANDUM

TO: Project File **DATE:** November 27, 2018

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: EIM Data Validation Level EPA2A - October 31, 2018 Air Sample

LAB: ALS Environmental P1805998

Two (2) soil vapor extraction samples were collected on October 31, 2018 as part of as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. One soil vapor extraction sample was placed on hold. The remaining sample was 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 number P1805998.

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 sample was collected and analyzed as requested. No concerns, issues, or anomalies were identified in the laboratory report.

Sample Collection and Preservation

The laboratory supplied a Bottle-Vac™ canister (1Liter) 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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

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

Laboratory Control Samples

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were analyzed for the VOCs by TO-15 along with each analytical batch. The LCS/LCSD recovery and relative percent differences (RPDs) for all control compounds met laboratory control limit 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.

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LABORATORY REPORT

December 17, 2018

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

RE: MVSC / 1358.001.01.007

Dear Matt:

Enclosed are the results of the sample submitted to our laboratory on November 26, 2018. For your reference, this analysis has been assigned our service request number P1806520.

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 2:37 pm, 12/17/18

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: MVSC / 1358.001.01.007

Service Request No: P1806520

CASE NARRATIVE

The sample was received intact under chain of custody on November 26, 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 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.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

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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	1347317
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: P1806520
Project ID: MVSC / 1358.001.01.007

Date Received: 11/26/2018
Time Received: 09:00

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-15 - VOC Cans
SYS-112118	P1806520-001	Air	11/21/2018	10:30	AC01934	-2.64	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: P1806520

Company Name & Address (Reporting Information): PES ENVIRONMENTAL INC, 1215 4th Ave STE 1350, SEATTLE, WA. 98161

Project Name: NNSC

Project Number: 1358.001.01.007

Project Manager: Matt Dahl

P.O. # / Billing Information: 1358.001.01.007

Phone: 206-529-3980 Fax: 206-529-3985

Email Address for Result Reporting: MDahl@pesenv.com

Sampler (Print & Sign): Karsten Sprinkstead

ALS Contact:

Analysis Method: TO-15

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		Comments e.g. Actual Preservative or specific instructions
SYS-112118		11-21-18	1030	AC01934		-29	-5	6L	X		

Report Tier Levels - please select

Tier I - Results (Default in not specified) ____
Tier II (Results + QC Summaries ____
Tier III (Results + QC & Calibration Summaries) X
Tier IV (Date 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:
	11-21-18	1100		11/28 AG	0900
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 11/26/18	Time:

Cooler / Blank Temperature ____°C

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ALS Environmental
Sample Acceptance Check Form

Client: PES Environmental Work order: P1806520

Project: MVSC / 1358.001.01.007

Sample(s) received on: 11/26/18 Date opened: 11/26/18 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
P1806520-001.01	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: **SYS-112118** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1806520-001

Test Code: EPA TO-15 Date Collected: 11/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/26/18
Analyst: Simon Cao Date Analyzed: 12/14/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01934

Initial Pressure (psig): -2.64 Final Pressure (psig): 3.72

Container Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.80	ND	0.46	
75-71-8	Dichlorodifluoromethane (CFC 12)	**4.1**	0.80	**0.83**	0.16	
74-87-3	Chloromethane	ND	0.77	ND	0.37	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.78	ND	0.11	
75-01-4	Vinyl Chloride	ND	0.81	ND	0.32	
106-99-0	1,3-Butadiene	ND	0.80	ND	0.36	
74-83-9	Bromomethane	ND	0.77	ND	0.20	
75-00-3	Chloroethane	ND	0.78	ND	0.30	
64-17-5	Ethanol	ND	7.8	ND	4.1	
75-05-8	Acetonitrile	ND	0.80	ND	0.47	
107-02-8	Acrolein	ND	1.5	ND	0.67	
67-64-1	Acetone	ND	8.3	ND	3.5	
75-69-4	Trichlorofluoromethane (CFC 11)	**3.2**	0.81	**0.56**	0.14	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	3.2	ND	1.3	
107-13-1	Acrylonitrile	ND	0.80	ND	0.37	
75-35-4	1,1-Dichloroethene	ND	0.83	ND	0.21	
75-09-2	Methylene Chloride	ND	0.83	ND	0.24	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.81	ND	0.26	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.81	ND	0.11	
75-15-0	Carbon Disulfide	ND	1.7	ND	0.54	
156-60-5	trans-1,2-Dichloroethene	ND	0.81	ND	0.20	
75-34-3	1,1-Dichloroethane	ND	0.80	ND	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	0.83	ND	0.23	
108-05-4	Vinyl Acetate	ND	8.1	ND	2.3	
78-93-3	2-Butanone (MEK)	ND	1.5	ND	0.52	

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.

Client: **PES Environmental**
Client Sample ID: **SYS-112118** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1806520-001

Test Code: EPA TO-15 Date Collected: 11/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/26/18
Analyst: Simon Cao Date Analyzed: 12/14/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01934

Initial Pressure (psig): -2.64 Final Pressure (psig): 3.72

Container Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	**3.4**	0.81	**0.86**	0.20	
141-78-6	Ethyl Acetate	ND	1.7	ND	0.47	
110-54-3	n-Hexane	ND	0.83	ND	0.23	
67-66-3	Chloroform	**4.5**	0.83	**0.93**	0.17	
109-99-9	Tetrahydrofuran (THF)	ND	0.81	ND	0.28	
107-06-2	1,2-Dichloroethane	ND	0.81	ND	0.20	
71-55-6	1,1,1-Trichloroethane	ND	0.83	ND	0.15	
71-43-2	Benzene	ND	0.80	ND	0.25	
56-23-5	Carbon Tetrachloride	ND	0.80	ND	0.13	
110-82-7	Cyclohexane	ND	1.5	ND	0.44	
78-87-5	1,2-Dichloropropane	ND	0.83	ND	0.18	
75-27-4	Bromodichloromethane	ND	0.81	ND	0.12	
79-01-6	Trichloroethene	**0.93**	0.81	**0.17**	0.15	
123-91-1	1,4-Dioxane	ND	0.81	ND	0.23	
80-62-6	Methyl Methacrylate	ND	1.7	ND	0.41	
142-82-5	n-Heptane	ND	0.83	ND	0.20	
10061-01-5	cis-1,3-Dichloropropene	ND	0.86	ND	0.19	
108-10-1	4-Methyl-2-pentanone	ND	0.81	ND	0.20	
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	ND	0.18	
79-00-5	1,1,2-Trichloroethane	ND	0.83	ND	0.15	
108-88-3	Toluene	ND	0.81	ND	0.22	
591-78-6	2-Hexanone	ND	0.83	ND	0.20	
124-48-1	Dibromochloromethane	ND	0.83	ND	0.097	
106-93-4	1,2-Dibromoethane	ND	0.83	ND	0.11	
123-86-4	n-Butyl Acetate	ND	0.83	ND	0.17	

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: **SYS-112118** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P1806520-001

Test Code: EPA TO-15 Date Collected: 11/21/18
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 11/26/18
Analyst: Simon Cao Date Analyzed: 12/14/18
Sample Type: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01934

Initial Pressure (psig): -2.64 Final Pressure (psig): 3.72

Container Dilution Factor: 1.53

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.83	ND	0.18	
127-18-4	Tetrachloroethene	**200**	8.1	**29**	1.2	**D**
108-90-7	Chlorobenzene	ND	0.81	ND	0.18	
100-41-4	Ethylbenzene	**8.4**	0.80	**1.9**	0.18	
179601-23-1	m,p-Xylenes	**24**	1.7	**5.6**	0.39	
75-25-2	Bromoform	ND	0.81	ND	0.078	
100-42-5	Styrene	ND	0.81	ND	0.19	
95-47-6	o-Xylene	**5.2**	0.81	**1.2**	0.19	
111-84-2	n-Nonane	ND	0.83	ND	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.81	ND	0.12	
98-82-8	Cumene	ND	0.81	ND	0.17	
80-56-8	alpha-Pinene	ND	0.80	ND	0.14	
103-65-1	n-Propylbenzene	ND	0.83	ND	0.17	
622-96-8	4-Ethyltoluene	ND	0.81	ND	0.17	
108-67-8	1,3,5-Trimethylbenzene	ND	0.81	ND	0.17	
95-63-6	1,2,4-Trimethylbenzene	ND	0.81	ND	0.17	
100-44-7	Benzyl Chloride	ND	1.7	ND	0.33	
541-73-1	1,3-Dichlorobenzene	ND	0.83	ND	0.14	
106-46-7	1,4-Dichlorobenzene	ND	0.83	ND	0.14	
95-50-1	1,2-Dichlorobenzene	ND	0.83	ND	0.14	
5989-27-5	d-Limonene	ND	0.78	ND	0.14	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	ND	0.082	
120-82-1	1,2,4-Trichlorobenzene	ND	0.81	ND	0.11	
91-20-3	Naphthalene	ND	0.78	ND	0.15	
87-68-3	Hexachlorobutadiene	ND	0.81	ND	0.076	

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** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-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: 12/13/18
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
115-07-1	Propene	ND	0.52	ND	0.30	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.52	ND	0.11	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.51	ND	0.073	
75-01-4	Vinyl Chloride	ND	0.53	ND	0.21	
106-99-0	1,3-Butadiene	ND	0.52	ND	0.24	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.51	ND	0.19	
64-17-5	Ethanol	ND	5.1	ND	2.7	
75-05-8	Acetonitrile	ND	0.52	ND	0.31	
107-02-8	Acrolein	ND	1.0	ND	0.44	
67-64-1	Acetone	ND	5.4	ND	2.3	
75-69-4	Trichlorofluoromethane (CFC 11)	ND	0.53	ND	0.094	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	2.1	ND	0.85	
107-13-1	Acrylonitrile	ND	0.52	ND	0.24	
75-35-4	1,1-Dichloroethene	ND	0.54	ND	0.14	
75-09-2	Methylene Chloride	ND	0.54	ND	0.16	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.53	ND	0.17	
76-13-1	Trichlorotrifluoroethane (CFC 113)	ND	0.53	ND	0.069	
75-15-0	Carbon Disulfide	ND	1.1	ND	0.35	
156-60-5	trans-1,2-Dichloroethene	ND	0.53	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.52	ND	0.13	
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
108-05-4	Vinyl Acetate	ND	5.3	ND	1.5	
78-93-3	2-Butanone (MEK)	ND	1.0	ND	0.34	

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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1806520

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-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: 12/13/18

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
156-59-2	cis-1,2-Dichloroethene	ND	0.53	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.1	ND	0.31	
110-54-3	n-Hexane	ND	0.54	ND	0.15	
67-66-3	Chloroform	ND	0.54	ND	0.11	
109-99-9	Tetrahydrofuran (THF)	ND	0.53	ND	0.18	
107-06-2	1,2-Dichloroethane	ND	0.53	ND	0.13	
71-55-6	1,1,1-Trichloroethane	ND	0.54	ND	0.099	
71-43-2	Benzene	ND	0.52	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.52	ND	0.083	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.54	ND	0.12	
75-27-4	Bromodichloromethane	ND	0.53	ND	0.079	
79-01-6	Trichloroethene	ND	0.53	ND	0.099	
123-91-1	1,4-Dioxane	ND	0.53	ND	0.15	
80-62-6	Methyl Methacrylate	ND	1.1	ND	0.27	
142-82-5	n-Heptane	ND	0.54	ND	0.13	
10061-01-5	cis-1,3-Dichloropropene	ND	0.56	ND	0.12	
108-10-1	4-Methyl-2-pentanone	ND	0.53	ND	0.13	
10061-02-6	trans-1,3-Dichloropropene	ND	0.53	ND	0.12	
79-00-5	1,1,2-Trichloroethane	ND	0.54	ND	0.099	
108-88-3	Toluene	ND	0.53	ND	0.14	
591-78-6	2-Hexanone	ND	0.54	ND	0.13	
124-48-1	Dibromochloromethane	ND	0.54	ND	0.063	
106-93-4	1,2-Dibromoethane	ND	0.54	ND	0.070	
123-86-4	n-Butyl Acetate	ND	0.54	ND	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.

Client: **PES Environmental**

Client Sample ID: **Method Blank** ALS Project ID: P1806520

Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-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: 12/13/18

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**
111-65-9	n-Octane	ND	0.54	ND	0.12	
127-18-4	Tetrachloroethene	ND	0.53	ND	0.078	
108-90-7	Chlorobenzene	ND	0.53	ND	0.12	
100-41-4	Ethylbenzene	ND	0.52	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
75-25-2	Bromoform	ND	0.53	ND	0.051	
100-42-5	Styrene	ND	0.53	ND	0.12	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
111-84-2	n-Nonane	ND	0.54	ND	0.10	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.53	ND	0.077	
98-82-8	Cumene	ND	0.53	ND	0.11	
80-56-8	alpha-Pinene	ND	0.52	ND	0.093	
103-65-1	n-Propylbenzene	ND	0.54	ND	0.11	
622-96-8	4-Ethyltoluene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.53	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
100-44-7	Benzyl Chloride	ND	1.1	ND	0.21	
541-73-1	1,3-Dichlorobenzene	ND	0.54	ND	0.090	
106-46-7	1,4-Dichlorobenzene	ND	0.54	ND	0.090	
95-50-1	1,2-Dichlorobenzene	ND	0.54	ND	0.090	
5989-27-5	d-Limonene	ND	0.51	ND	0.092	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.52	ND	0.054	
120-82-1	1,2,4-Trichlorobenzene	ND	0.53	ND	0.071	
91-20-3	Naphthalene	ND	0.51	ND	0.097	
87-68-3	Hexachlorobutadiene	ND	0.53	ND	0.050	

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: **MVSC / 1358.001.01.007** ALS Project ID: P1806520

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date(s) Collected: 11/21/18
Analyst: Simon Cao Date(s) Received: 11/26/18
Sample Type: 6.0 L Summa Canister(s) Date(s) Analyzed: 12/13 - 12/14/18
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	P181213-MB	**96**	**103**	**100**	70-130	
Lab Control Sample	P181213-LCS	**98**	**100**	**102**	70-130	
SYS-112118	P1806520-001	**92**	**102**	**100**	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: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/13/18
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
115-07-1	Propene	211	**198**	**94**	53-112	
75-71-8	Dichlorodifluoromethane (CFC 12)	210	**205**	**98**	62-103	
74-87-3	Chloromethane	211	**214**	**101**	51-121	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	211	**208**	**99**	56-111	
75-01-4	Vinyl Chloride	214	**207**	**97**	57-117	
106-99-0	1,3-Butadiene	210	**217**	**103**	53-134	
74-83-9	Bromomethane	212	**209**	**99**	65-110	
75-00-3	Chloroethane	214	**211**	**99**	64-111	
64-17-5	Ethanol	1,020	**997**	**98**	57-124	
75-05-8	Acetonitrile	206	**208**	**101**	57-126	
107-02-8	Acrolein	205	**203**	**99**	62-121	
67-64-1	Acetone	1,060	**1010**	**95**	60-113	
75-69-4	Trichlorofluoromethane (CFC 11)	211	**208**	**99**	63-104	
67-63-0	2-Propanol (Isopropyl Alcohol)	413	**446**	**108**	60-124	
107-13-1	Acrylonitrile	207	**222**	**107**	66-125	
75-35-4	1,1-Dichloroethene	218	**220**	**101**	68-107	
75-09-2	Methylene Chloride	217	**214**	**99**	66-105	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	**228**	**106**	63-127	
76-13-1	Trichlorotrifluoroethane (CFC 113)	216	**212**	**98**	59-109	
75-15-0	Carbon Disulfide	218	**214**	**98**	67-109	
156-60-5	trans-1,2-Dichloroethene	214	**210**	**98**	70-115	
75-34-3	1,1-Dichloroethane	216	**209**	**97**	66-106	
1634-04-4	Methyl tert-Butyl Ether	214	**216**	**101**	67-109	
108-05-4	Vinyl Acetate	1,060	**1290**	**122**	68-136	
78-93-3	2-Butanone (MEK)	208	**211**	**101**	71-116	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/13/18
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
156-59-2	cis-1,2-Dichloroethene	211	**210**	**100**	67-110	
141-78-6	Ethyl Acetate	436	**459**	**105**	64-127	
110-54-3	n-Hexane	216	**202**	**94**	60-115	
67-66-3	Chloroform	217	**213**	**98**	66-105	
109-99-9	Tetrahydrofuran (THF)	216	**212**	**98**	65-110	
107-06-2	1,2-Dichloroethane	215	**207**	**96**	60-110	
71-55-6	1,1,1-Trichloroethane	215	**211**	**98**	64-108	
71-43-2	Benzene	211	**196**	**93**	67-106	
56-23-5	Carbon Tetrachloride	212	**205**	**97**	64-112	
110-82-7	Cyclohexane	416	**415**	**100**	67-110	
78-87-5	1,2-Dichloropropane	216	**215**	**100**	66-112	
75-27-4	Bromodichloromethane	215	**216**	**100**	67-113	
79-01-6	Trichloroethene	213	**214**	**100**	66-108	
123-91-1	1,4-Dioxane	214	**226**	**106**	70-116	
80-62-6	Methyl Methacrylate	431	**472**	**110**	73-118	
142-82-5	n-Heptane	215	**222**	**103**	66-110	
10061-01-5	cis-1,3-Dichloropropene	214	**222**	**104**	75-120	
108-10-1	4-Methyl-2-pentanone	209	**230**	**110**	65-124	
10061-02-6	trans-1,3-Dichloropropene	213	**231**	**108**	77-123	
79-00-5	1,1,2-Trichloroethane	215	**220**	**102**	68-112	
108-88-3	Toluene	212	**210**	**99**	62-111	
591-78-6	2-Hexanone	214	**236**	**110**	59-128	
124-48-1	Dibromochloromethane	213	**226**	**106**	67-123	
106-93-4	1,2-Dibromoethane	216	**228**	**106**	66-122	
123-86-4	n-Butyl Acetate	219	**242**	**111**	64-128	

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 SUMMARY

Client: **PES Environmental**
Client Sample ID: **Lab Control Sample** ALS Project ID: P1806520
Client Project ID: **MVSC / 1358.001.01.007** ALS Sample ID: P181213-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Simon Cao Date Analyzed: 12/13/18
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
111-65-9	n-Octane	217	**220**	**101**	65-114	
127-18-4	Tetrachloroethene	213	**218**	**102**	55-120	
108-90-7	Chlorobenzene	215	**216**	**100**	61-114	
100-41-4	Ethylbenzene	212	**210**	**99**	64-113	
179601-23-1	m,p-Xylenes	426	**428**	**100**	64-114	
75-25-2	Bromoform	213	**225**	**106**	65-132	
100-42-5	Styrene	212	**229**	**108**	67-124	
95-47-6	o-Xylene	214	**215**	**100**	65-114	
111-84-2	n-Nonane	215	**222**	**103**	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	214	**226**	**106**	66-119	
98-82-8	Cumene	214	**217**	**101**	61-116	
80-56-8	alpha-Pinene	211	**223**	**106**	65-120	
103-65-1	n-Propylbenzene	218	**224**	**103**	63-117	
622-96-8	4-Ethyltoluene	214	**229**	**107**	63-124	
108-67-8	1,3,5-Trimethylbenzene	214	**217**	**101**	60-117	
95-63-6	1,2,4-Trimethylbenzene	215	**226**	**105**	61-122	
100-44-7	Benzyl Chloride	217	**245**	**113**	77-142	
541-73-1	1,3-Dichlorobenzene	216	**233**	**108**	61-125	
106-46-7	1,4-Dichlorobenzene	216	**233**	**108**	59-123	
95-50-1	1,2-Dichlorobenzene	216	**235**	**109**	61-126	
5989-27-5	d-Limonene	211	**235**	**111**	66-124	
96-12-8	1,2-Dibromo-3-chloropropane	209	**244**	**117**	67-138	
120-82-1	1,2,4-Trichlorobenzene	214	**260**	**121**	62-141	
91-20-3	Naphthalene	203	**264**	**130**	62-145	
87-68-3	Hexachlorobutadiene	209	**229**	**110**	49-131	

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:** January 10, 2019

FROM: Jessie Compeau

SUBJECT: Laboratory Data Validation Review

PROJECT: Manhattan Village Shopping Center - Soil Vapor Extraction System Performance Data Review

PROJECT #: 1358.001.01.007

TASK: EIM Data Validation Level EPA2A – November 21, 2018 Air Sample

LAB: ALS Environmental P1806520A

One (1) soil vapor extraction sample was collected on November 21, 2018 as part of SVE system O&M at the Manhattan Village Shopping Center in Normandy Park, Washington. The sample was 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 number P1806520A.

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

- The report was revised on January 11, 2018 by ALS per PES's request to include laboratory control sample duplicate (LCSD) results.

Sample Collection and Preservation

The laboratory supplied an Ambient Can canister (6-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 sample collected in a Summa canister. No data was qualified based upon holding times.

Initial and Continuing Calibration

Initial and continuing calibration data for this project are retained by the laboratory and available for review if necessary. 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 replicate was not performed. Refer to the Laboratory Control Sample section for additional information.

Surrogate Recoveries

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

Laboratory Control Samples

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was analyzed for the VOCs by TO-15 along with each analytical batch. 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. The MRL for tetrachloroethene 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.

ATTACHMENT C
SVE CAPTURE ZONE EVALUATION DATA

Attachment C
SVE Well Capture Zone Evaluation
Harris and MVSC Properties
Normandy Park, Washington

PROBLEM:

1) Calculate normalized vacuum at moniotring points and plot on semi-log chart for capture zone (CZ) evaluation. Field testing on 1/5/2018

GIVEN:

A) ROI test vacuum and flow data

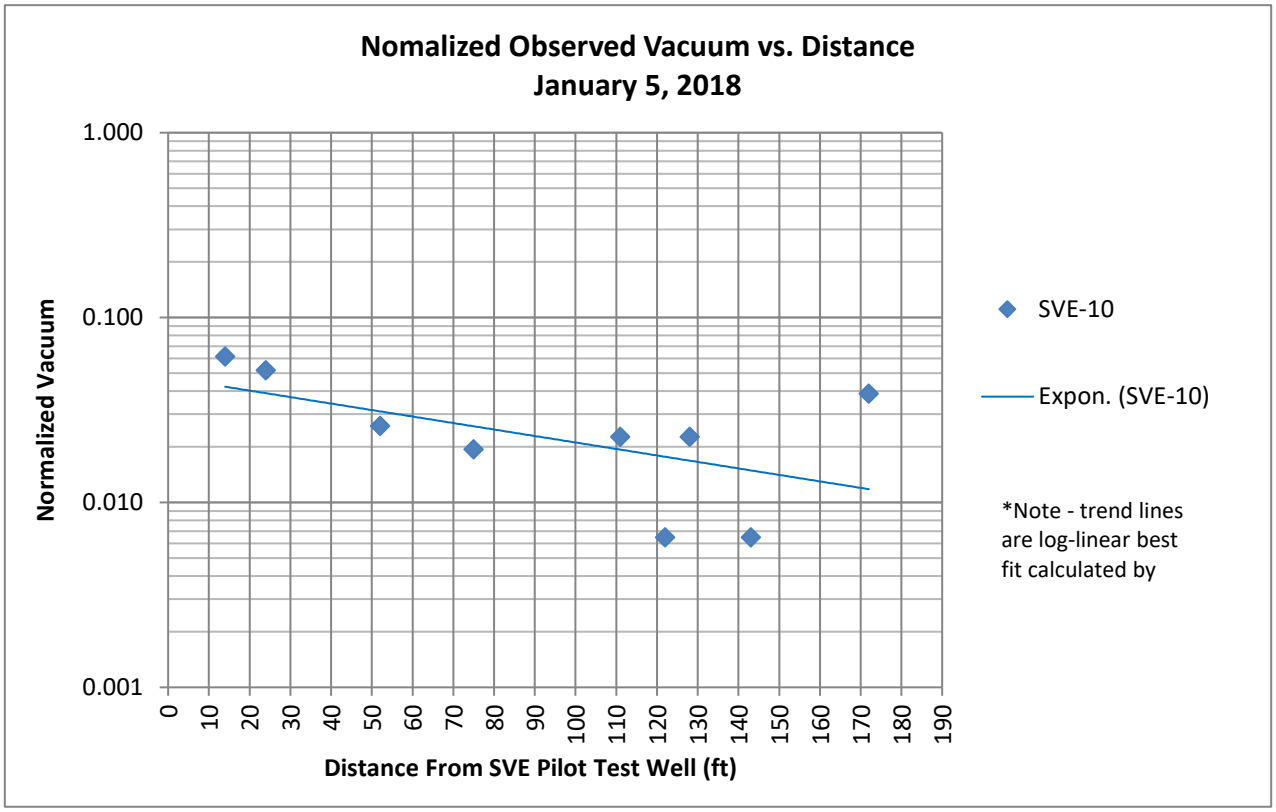
SVE-10 Screen interval 10 - 30 ft bgs

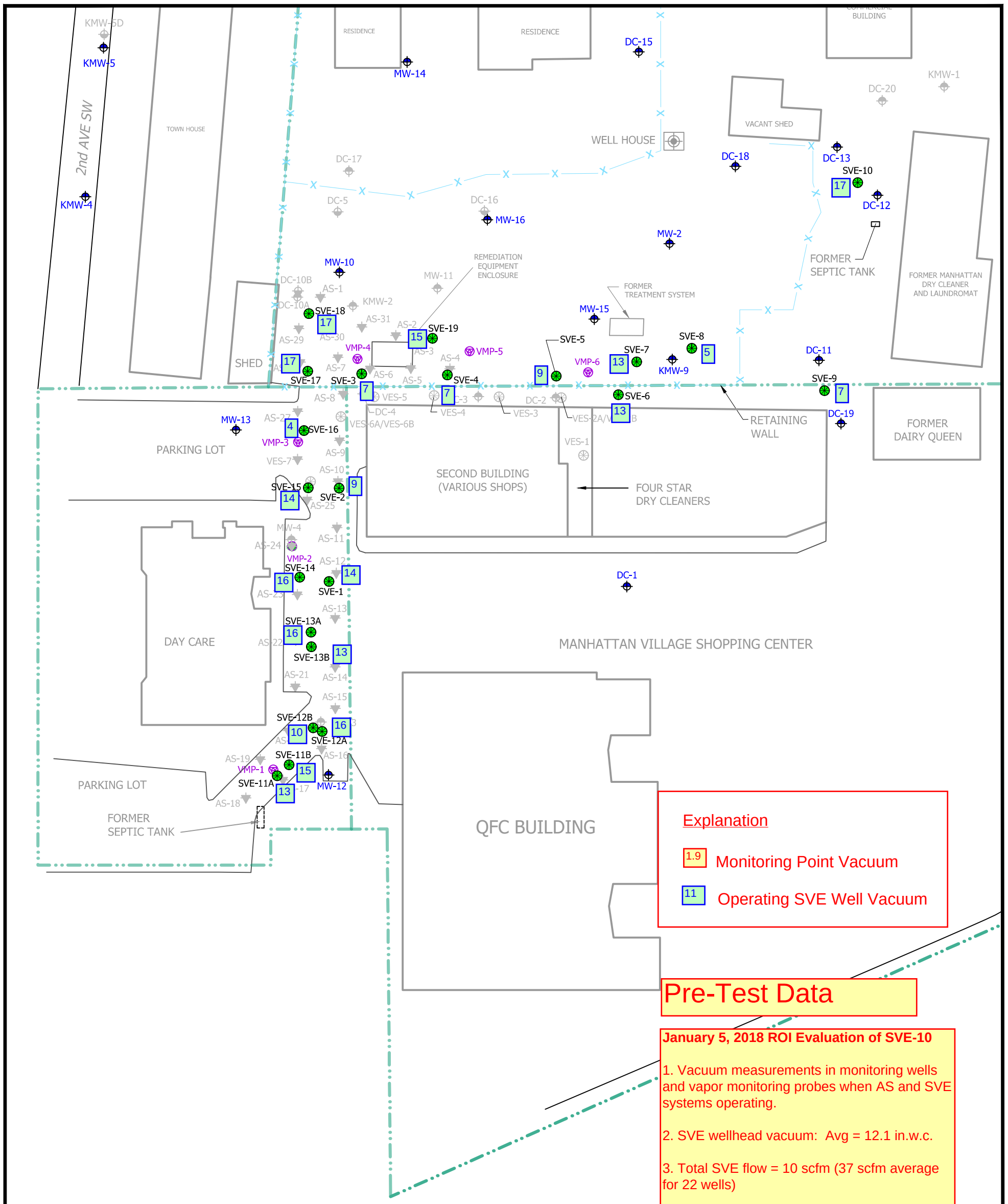
Pilot Test Well ID	Distance from SVE-10 (ft)	Vacuum		Pilot Test Well ID	Distance from SVE-10 (ft)	Vacuum	
		Const. Rate (in.w.c.)	Normalized			Const. Rate (in.w.c.)	Normalized
SVE-10	0.1	15.5	1.0	DC-12	14	0.95	0.061
SVE-7	172	0.6	0.039	DC-13	24	0.8	0.052
SVE-8	143	0.1	0.006	DC-18	75	0.3	0.019
SVE-9	128	0.35	0.023	DC-20	52	0.4	0.026
DC-11	111	0.35	0.023	MW-2	122	0.1	0.006

* Note - Constant rate vacuum is test vacuum minus baseline vacuum measurement

CALCULATION:

1) Plot normalized vacuum vs distance.





Note:

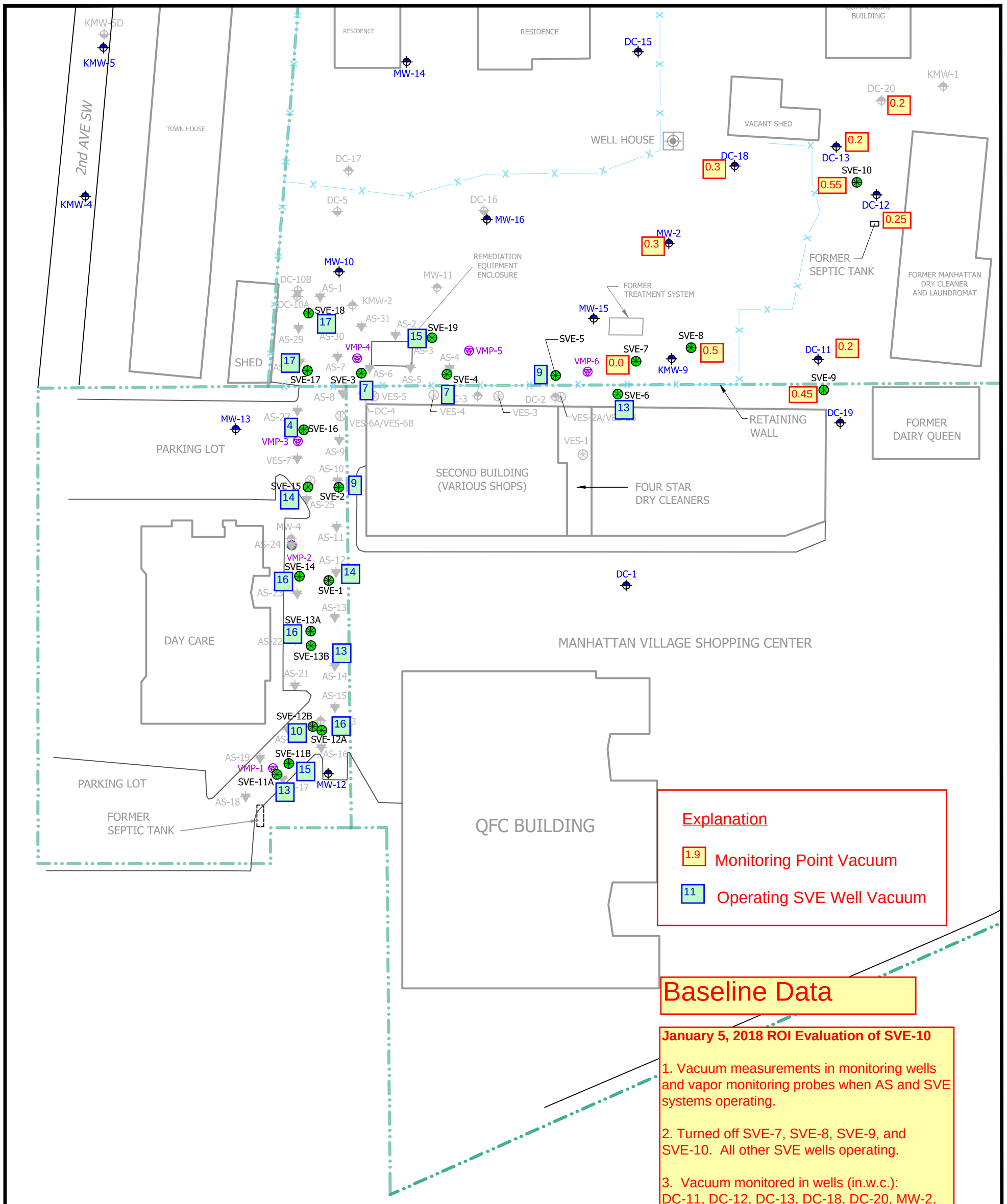
1. SCS operated a 9 well interim SVE system between October 1999 and July 2000. The former SVE system and wells have been decommissioned.

PES Environmental, Inc.
Engineering & Environmental Services

Remediation Well Locations
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
3A

1358.001.01.003	135800101003_17Q3Q4_3a	DRAFT	12/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

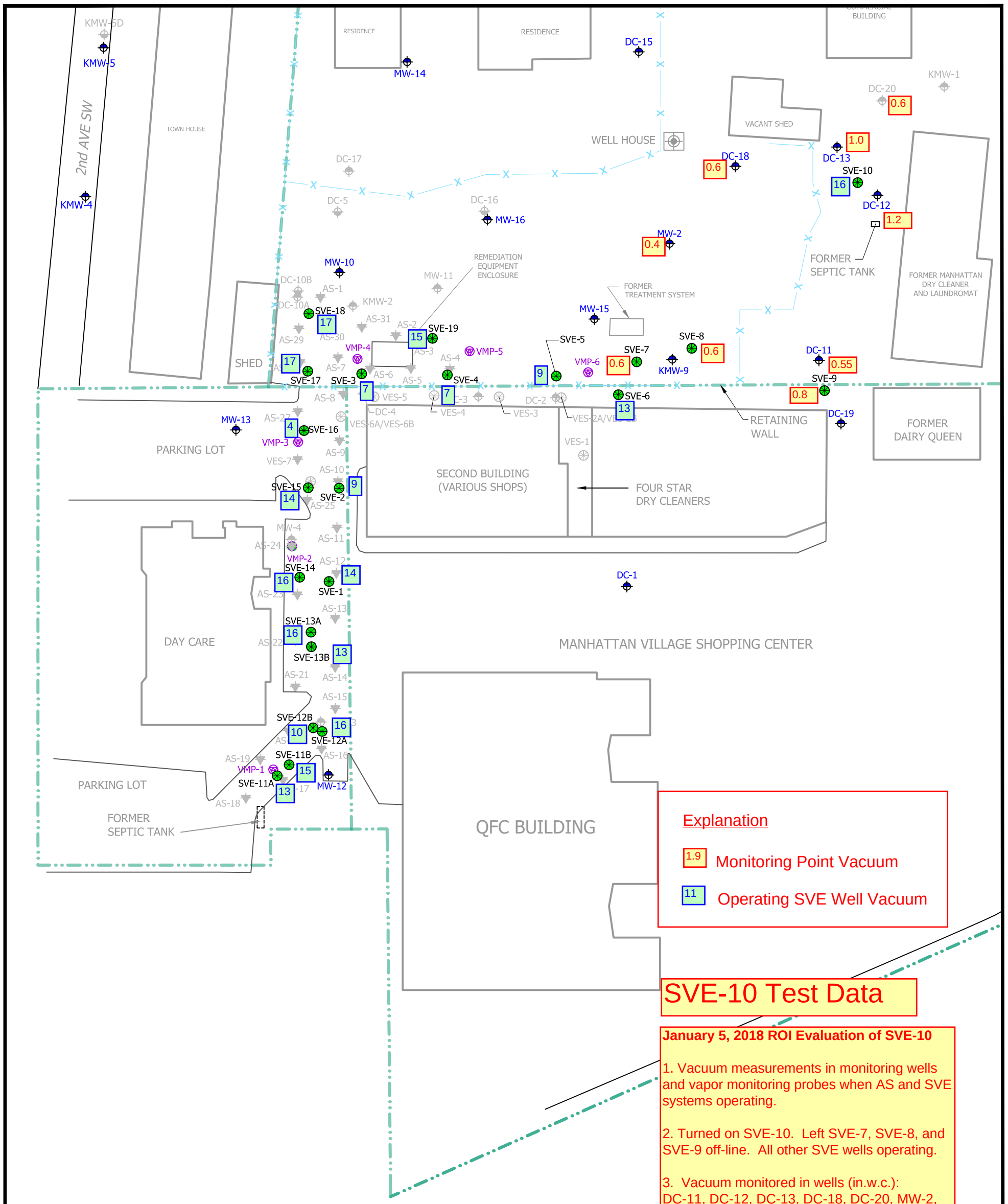


PES Environmental, Inc.
Engineering & Environmental Services

Remediation Well Locations
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
3A

1358.001.01.003	135800101003_17Q3Q4_3a	DRAFT	12/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE



Note:

1. SCS operated a 9 well interim SVE system between October 1999 and July 2000. The former SVE system and wells have been decommissioned.

PES Environmental, Inc.
Engineering & Environmental Services

Remediation Well Locations
Manhattan Village/Harris Properties
17817, 17825, and 17835 1st Avenue South
Normandy Park, Washington

FIGURE
3A

1358.001.01.003	135800101003_17Q3Q4_3a	DRAFT	12/17
JOB NUMBER	DRAWING NUMBER	REVIEWED BY	DATE

ATTACHMENT D
WELL COMPLETION DETAILS AND HISTORICAL GROUNDWATER DATA SUMMARIES

- Table D1 – Well Completion Details
- Table D2 – Historical Summary of Groundwater Elevations (1999-2018)
- Table D3 – Historical Summary of Groundwater Analytical Results (1999-2018)
- Table D4 – Historical Summary of Soil Analytical Results (1998 – 2018)

Table D1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
Shallow Monitoring Wells																	
MW-1		12/9/99	HSA	--	--	309.97	--	--	SCS, 1999 (converted)	Flush	44	2	34-44	--	0.020	est. 32-44	0-est. 32
MW-2		12/9/99	HSA	165,149.8	1,268,724.6	308.34	309.13	309.12	PES, 08/2015	Flush	43	2	33-43	32.22-42.22	0.020	est. 31-43	0-est. 31
MW-3		4/8/08	HSA	164,857.2	1,268,511.5	311.41	311.76	311.74	PES, 08/2015	Flush	47	2	36-46	35.67-45.67	0.010	34-46	0-34
MW-4		4/8/08	HSA	164,968.5	1,268,493.6	310.47	311.03	311.02	PES, 08/2015	Flush	44	2	34-44	33.45-43.45	0.010	32-44	0-32
MW-5		4/8/08	HSA	165,331.6	1,268,938.6	310.38	310.84	--	PES, 02/2013	Flush	46	2	36-46	35.6-45.6	0.010	34-46	0-34
MW-6		4/9/08	HSA	165,615.5	1,268,908.5	304.14	304.71	304.68	PES, 02/2013; PES, 08/2015	Flush	45	2	35-45	34.46-44.46	0.010	33-45	0-35
MW-7		4/9/08	HSA	165,652.2	1,268,684.8	302.64	303.18	303.17	PES, 02/2013; PES, 08/2015	Flush	45	2	35-45	34.47-44.47	0.010	33-45	0-35
MW-8		8/18/08	HSA	165,681.2	1,268,349.8	280.68	281.05	280.97	PES, 02/2013; PES, 08/2015	Flush	26	2	13-23	12.71-22.71	0.010	11-23	0-11
MW-9		8/18/08	HSA	166,019.8	1,268,663.9	284.97	285.35	285.37	PES, 02/2013; PES, 08/2015	Flush	55	2	32-42	31.6-41.6	0.010	30-42	0-30
MW-10		2/3/11	HSA	165,132.3	1,268,522.8	306.71	307.20	307.19	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.52-41.52	0.010	30-42	0-30
MW-11		2/3/11	HSA	165,122.2	1,268,582.9	307.62	308.13	308.06	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.56-41.56	0.010	30-42	0-30
MW-12		3/28/12	HSA	164,825.0	1,268,516.1	312.80	313.12	313.10	PES, 02/2013; PES, 08/2015	Flush	46.5	2	36-46	35.7-45.7	0.010	34-46.5	0-34
MW-13		3/29/12	HSA	165,036.5	1,268,459.8	308.75	309.16	309.17	PES, 02/2013; PES, 08/2015	Flush	46.5	2	35-45	34.58-44.58	0.010	33-45	0-33
MW-14		3/27/12	HSA	165,261.1	1,268,564.6	303.82	304.24	--	PES, 02/2013	Flush	38	2	28-38	27.6-37.6	0.010	26-38	0-26
MW-15		3/28/12	HSA	165,103.9	1,268,678.7	312.44	312.81	310.30	PES, 02/2013	AG	46.5	2	35-45	37.14-47.14	0.010	33-45.5	0-33
MW-16	BHV646	5/16/13	HSA	165,164.5	1,268,613.3	310.37	311.21	307.92	PES, 05/2013	AG	43	2	27.2-42.2	29.45-44.65	0.020	25-43	0-25
MW-17	BLI196	3/1/19	HSA	165,371.0	1,268,609.7	303.00	303.32	303.30	PES, 03/2019	Flush	39.5	2	27.94-37.94	27.64-37.64	0.010	26-39.5	0-26
MW-18	BLI195	2/28/19	HSA	165,386.9	1,268,688.3	305.26	305.56	305.40	PES, 03/2019	Flush	41.5	2	29.95-39.95	29.80-39.80	0.010	27.5-41.5	0-27.5
DC-1		10/12/98	HSA	164,940.2	1,268,698.6	312.82	313.34	--	PES, 02/2013	Flush	47	2	40-45	39.5-44.5	0.020	37-47	0-37
DC-2		10/13/98	HSA	165,055.6	1,268,655.1	312.92	313.61	313.70	PES, 02/2013; PES, 08/2015	Flush	50	2	42-47	41.22-46.22	0.020	40-50	0-40
DC-3		10/13/98	HSA	165,056.4	1,268,607.7	313.11	313.68	313.79	PES, 02/2013; PES, 08/2015	Flush	48	2	43-48	42.32-47.32	0.020	41-48	0-41
DC-4		10/13/98	HSA	165,058.1	1,268,537.4	312.35	312.96	312.99	PES, 02/2013; PES, 08/2015	Flush	49	2	44-49	43.36-48.36	0.020	41-49	0-41
DC-6		1/22/99	HSA	--	--	308.46	--	--	SCS, 1999 (converted)	Flush	45	2	40-45	--	0.020	37-45	0-37
DC-7		1/18/99	HSA	165,318.1	1,268,514.4	302.61	303.30	303.26	PES, 02/2013; PES, 08/2015	Flush	40	2	35-40	34.35-39.35	0.020	33-40	0-33
DC-8		1/18/99	HSA	165,328.8	1,268,685.4	306.23	306.70	306.59	PES, 02/2013; PES, 08/2015	Flush	42	2	37-42	36.64-41.64	0.020	34-42	0-34
DC-9A		4/6/99	HSA	165,124.7	1,268,587.3	308.02	--	--	ERM, 08/2008	Flush	38	2	33-38	32.6-37.6	0.020	31-38	0-31
DC-10A		4/5/99	HSA	165,117.2	1,268,497.2	307.73	307.83	307.72	PES, 02/2013; PES, 08/2015	Flush	37	2	32-37	32.01-37.01	0.020	30-37	0-30
DC-11		4/19/07	HSA	165,078.5	1,268,816.1	311.25	311.66	--	PES, 02/2013	Flush	42	2	32-42	31.6-41.6	0.010	30-42	0-30
DC-12		4/18/07	HSA	165,179.4	1,268,851.9	311.25	311.58	--	PES, 02/2013	Flush	42	2	32-42	31.7-41.7	0.010	30-42	0-30
DC-13		4/19/07	HSA	165,208.9	1,268,827.2	310.20	310.52	--	PES, 02/2013	Flush	42	2	32-42	31.7-41.7	0.010	30-42	0-30
DC-14		4/17/07	HSA	165,355.0	1,268,812.6	308.94	309.49	--	PES, 02/2013	Flush	45	2	35-45	34.4-44.4	0.010	33-45	0-33
DC-15		4/16/07	HSA	165,267.1	1,268,705.9	307.89	308.20	--	PES, 02/2013	Flush	42	2	31-41	30.7-40.7	0.010	29-41	0-29
DC-17		4/16/07	HSA	165,194.2	1,268,528.6	305.16	305.58	305.35	PES, 05/2013	Flush	40	2	30-40	29.81-39.81	0.010	28-40	0-28
DC-18		4/18/07	HSA	165,197.1	1,268,765.0	309.51	309.95	309.93	PES, 02/2013; PES, 08/2015	Flush	42	2	32-42	31.58-41.58	0.010	30-42	0-30
DC-19		6/1/07	HSA	165,039.3	1,268,829.6	313.62	313.82	--	PES, 02/2013	Flush	47	2	37-47	36.8-46.8	0.010	35-47	0-35
DC-20		5/28/08	HSA	165,237.2	1,268,854.8	310.92	311.13	--	PES, 02/2013	Flush	44	2	34-44	33.8-43.8	0.020	32-44	0-32
KMW-1		7/25/05	HSA	165,245.9	1,268,892.6	311.59	311.82	--	PES, 02/2013; PES, 08/2015	Flush	52	2	37-52	36.8-51.8	0.010	34-52	0-34
KMW-2		5/1/06	HSA	165,111.7	1,268,531.0	307.04	307.27	307.13	PES, 02/2013; PES, 08/2015	Flush	50	6	30-40	29.91-39.91	0.010	8-40	0-8
KMW-3		5/1/06	HSA	165,357.4	1,268,462.5	296.92	297.52	--	Farallon, 05/2007	Flush	40	2	25-35	24.6-34.6	0.010	8-35	0-8
KMW-4		3/28/07	HSA	165,175.7	1,268,369.8	299.57	299.84	299.78	Farallon, 05/2007; PES, 08/2015	Flush	34	2	24-34	23.79-33.79	0.020	22-34	0-22
KMW-5		3/28/07	HSA	165,267.7	1,268,380.4	297.22	297.58	297.56	Farallon, 05/2007; PES, 08/2015	Flush	34	2	24-34	23.66-33.66	0.020	22-34	0-22
KMW-6		3/27/07	HSA	165,391.1	1,268,399.1	294.81	295.06	295.08	Farallon, 05/2007; PES, 08/2015	Flush	42.5	2	26-41	25.73-40.73	0.020	22-41	0-22
KMW-7		3/25/07	HSA	165,389.7	1,268,563.6	301.43	301.66	301.65	Farallon, 05/2007; PES, 08/2015	Flush	44	2	29-44	28.78-43.78	0.020	27-44	0-27
KMW-8		3/26/07	HSA	165,386.2	1,268,800.7	308.15	308.51	308.46	Farallon, 05/2007; PES, 08/2015	Flush	44	2	29-44	28.69-43.69	0.020	27-44	0-29
KMW-9		3/27/07	HSA	165,079.0	1,268,726.3	310.33	310.83	310.83	PES, 02/2013; PES, 08/2015	Flush	44	2	34-44	33.5-43.5	0.020	32-44	0-32

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Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
Deep Monitoring Wells																	
DC-5		1/22/99	HSA	165,166.5	1,268,526.9	306.03	306.28	306.24	PES, 02/2013; PES, 08/2015	Flush	58.5	2	41-46	40.79-45.79	0.020	39-47	0-39
DC-9B		4/5/99	HSA	165,122.8	1,268,589.4	308.16	--	--	ERM, 08/2008	Flush	60	2	53-58	--	0.020	50.5-58	0-50.5
DC-10B		4/6/99	HSA	165,120.4	1,268,497.5	307.80	308.29	307.89	PES, 02/2013; PES, 08/2015	Flush	56	2	45-50	44.91-49.91	0.020	43-50	0-43
DC-16		4/18/07	HSA	165,169.7	1,268,611.5	307.12	307.79	--	Farallon, 05/2007; PES, 02/2013	Flush	61.5	2	50-60	49.3-59.3	0.010	50-60	0-50
KMW-5D		3/28/07	HSA	165,276.5	1,268,382.0	297.04	297.35	297.32	Farallon, 05/2007; PES, 08/2015	Flush	46	2	41-46	40.72-45.72	0.020	41-46	0-41
Former SCS Soil Vapor Extraction Wells (1999)																	
VES-1 (B1)		1999	--	--	--	--	--	--	PES, 02/2013; PES, 08/2015	Flush	11.5	2	3-11	--	0.020	2.5-11.5	1.5-2.5
VES-2A		1999	--	--	--	--	--	--	PES, 02/2013; PES, 08/2015	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-2B		1999	--	--	--	--	--	--	PES, 02/2013	Flush	36	2	11.5-35.5	--	0.020	7.5-36	1.5-2.5/6.5-7.5
VES-3 (BH-15)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-4 (BH-16)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-5 (BH-17)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.010	2.5-6.5	1.5-2.5
VES-6A (BH-1)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
VES-6B (BH-1)		1999	--	--	--	--	--	--	PES, 02/2013	Flush	36	2	11.5-35.5	--	0.020	7.5-36	1.5-2.5/6.5-7.5
VES-7		1999	--	--	--	--	--	--	PES, 02/2013	Flush	6.5	2	3-6	--	0.020	2.5-6.5	1.5-2.5
Soil Vapor Extraction Wells																	
SVE-1		6/29/09	HSA	164,943.5	1,268,516.2	311.85	312.02	--	PES, 02/2013; PES, 08/2015	Flush	35.5	2	10-35	9.7-34.7	0.020	8-35.5	0-8
SVE-2		6/29/09	HSA	165,000.3	1,268,522.6	312.41	312.58	--	PES, 02/2013; PES, 08/2015	Flush	35.5	2	10-35	9.6-34.6	0.020	8-35.5	0-8
SVE-3		6/30/09	HSA	165,070.2	1,268,536.4	308.28	--	307.84	PES, 02/2013	Flush	30.5	2	10-30	10.44-30.44	0.020	8-30.5	0-8
SVE-4		6/30/09	HSA	165,069.1	1,268,589.2	308.90	--	308.31	PES, 02/2013	Flush	30.5	2	10-30	10.59-30.59	0.020	8-30.5	0-8
SVE-5		6/30/09	HSA	165,068.8	1,268,655.3	309.91	--	309.31	PES, 02/2013	Flush	30.5	2	10-30	10.6-30.6	0.020	8-30.5	0-8
SVE-6		6/26/09	AKVAC	165,057.5	1,268,693.4	313.03	313.57	--	PES, 02/2013	Flush	10	2	5-10	4.6-9.6	0.010	4-10	0-4
SVE-7		6/30/09	HSA	165,077.5	1,268,704.6	310.71	--	309.95	PES, 02/2013	Flush	30.5	2	10-30	10.76-30.76	0.020	8-30.5	0-8
SVE-8		6/30/09	HSA	165,085.8	1,268,738.3	311.48	--	310.56	PES, 02/2013	Flush	30.5	2	10-30	10.92-30.92	0.020	8-30.5	0-8
SVE-9		6/29/09	HSA	165,060.0	1,268,819.5	313.31	--	312.13	PES, 02/2013	Flush	30.5	2	10-30	11.18-31.18	0.020	8-30.5	0-8
SVE-10		6/30/09	HSA	165,187.1	1,268,839.8	311.06	311.28	--	PES, 02/2013	Flush	30.5	2	10-30	9.8-29.8	0.020	8-30.5	0-8
SVE-11A	BIE307	11/18/13	HSA	164,824.5	1,268,484.7	--	311.21	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-11B	BIE301	11/18/13	HSA	164,831.2	1,268,492.0	--	311.43	--	PES, 08/2015	Flush	57	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-12A	BIE303	11/19/13	HSA	164,851.6	1,268,512.2	--	312.06	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-12B	BIE304	11/20/13	HSA	164,853.8	1,268,506.7	--	311.52	--	PES, 08/2015	Flush	57	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-13A	BIE306	11/22/13	HSA	164,912.3	1,268,505.4	--	310.95	--	PES, 08/2015	Flush	20	4	5-19.98	4.6-19.58	0.020	3-20	0-3
SVE-13B	BIE305	11/21/13	HSA	164,903.3	1,268,505.6	--	310.99	--	PES, 08/2015	Flush	57.5	4	20-35	19.6-34.6	0.020	18-36	0-18
SVE-14	BID732	10/13/14	HSA	164,945.9	1,268,498.5	--	311.06	--	PES, 08/2015	Flush	36	4	19.63-34.63	19.23-34.23	0.020	18.3-36	3-18.3
SVE-15	BID736	10/15/14	HSA	165,000.5	1,268,503.7	--	311.30	--	PES, 08/2015	Flush	36	4	20.61-34.96	20.21-34.56	0.020	19.3-36	3.5-19.3
SVE-16	BID737	10/15/14	HSA	165,035.5	1,268,501.1	--	310.83	--	PES, 08/2015	Flush	36	4	20.49-34.79	20.09-34.39	0.020	18-36	3.5-18
SVE-17	BID709	9/24/14	HSA	165,071.8	1,268,503.4	--	308.39	--	PES, 08/2015	Flush	31	4	19.91-29.91	19.51-29.51	0.020	18-31	3.3-18
SVE-18	BID708	9/23/14	HSA	165,107.0	1,268,504.1	--	307.34	--	PES, 08/2015	Flush	31	4	19.79-29.79	19.39-29.39	0.020	17.9-31	16-17.9
SVE-19	BID715	9/29/14	HSA	165,091.9	1,268,579.7	--	308.53	--	PES, 08/2015	Flush	31	4	19.99-29.99	19.59-29.59	0.020	18-31	3.5-18

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Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
Vapor Monitoring Probes																	
VMP-1 (B-5)		3/26/08	DP	164,828.0	1,268,482.4	310.91	311.01	--	PES, 02/2013; PES, 08/2015	Flush	30	0.75	10-15	9.7-14.7	0.010	7-30	0-7
VMP-2 (B-7)		3/25/08	DP	164,964.6	1,268,493.8	310.97	311.04	--	PES, 02/2013; PES, 08/2015	Flush	30	0.75	10-15	9.8-14.8	0.010	7-30	0-7
VMP-3 (B-9)		3/25/08	DP	165,028.4	1,268,497.6	310.58	310.71	--	PES, 02/2013	Flush	30	0.75	10-15	9.9-14.9	0.010	7-30	0-7
VMP-4 (B-11)		3/27/08	DP	165,079.0	1,268,533.8	307.67	308.00	--	PES, 02/2013	Flush	30	0.75	10-15	9.7-14.7	0.010	7-30	0-7
VMP-5 (B-12)		3/27/08	DP	165,083.7	1,268,602.8	308.22	308.48	--	PES, 02/2013	Flush	25	0.75	10-15	9.7-14.7	0.010	7-25	0-7
VMP-6 (B-13)		3/27/08	DP	165,071.2	1,268,674.9	308.95	309.18	--	PES, 02/2013	Flush	26	0.75	10-15	9.8-14.8	0.010	7-26	0-7
Recirculation Well																	
TW-1		5/2/06	HSA	165,114.8	1,268,571.3	--	--	--	PES, 02/2013	AG	50	6	25-35/45-50	--	0.010	22-35/40-50	0-22/35-40
Pilot Test Injection Well																	
IW-1		--	--	--	--	--	--	--	--	AG	38	--	--	--	--	--	--
Air Sparging Wells																	
AS-1	BHV647	5/17/13	HSA	165,116.9	1,268,511.0	--	307.23	307.34	PES, 05/2013; PES, 08/2015	Flush	48	1	43.8-45.8	43.4-45.4	0.010	43.5-48	0-43.5
AS-2	BID714	9/29/14	HSA	165,093.2	1,268,557.0	--	308.30	--	PES, 08/2015	Flush	53	2	48.08-51.13	47.68-50.73	0.020	48-53	3.0-48
AS-3	BID718	10/1/14	HSA	165,091.7	1,268,574.0	--	308.44	--	PES, 08/2015	Flush	51	2	48.14-50.14	47.74-49.74	0.020	46-51	3.6-46
AS-4	BID717	9/30/14	HSA	165,073.3	1,268,590.4	--	308.25	--	PES, 08/2015	Flush	51	2	48.82-50.80	48.42-50.4	0.020	47.3-51	3.3-47.3
AS-5	BID716	9/30/14	HSA	165,073.7	1,268,566.0	--	307.97	--	PES, 08/2015	Flush	52	2	48.77-50.79	48.37-50.39	0.020	47.5-52	3.5-47.5
AS-6	BID713	9/26/14	HSA	165,073.2	1,268,541.5	--	307.89	--	PES, 08/2015	Flush	52	2	48.91-50.92	48.51-50.52	0.020	47.6-52	3.5-47.6
AS-7	BID710	9/24/14	HSA	165,080.3	1,268,521.9	--	308.01	--	PES, 08/2015	Flush	50.5	2	46.93-48.91	46.53-48.51	0.020	46-50.5	3.5-43
AS-8	BID740	10/17/14	HSA	165,058.0	1,268,525.1	--	312.52	--	PES, 08/2015	Flush	54	2	52.10-54.14	51.7-53.74	0.020	51-54.31	3.5-51
AS-9	BID739	10/16/14	HSA	165,029.5	1,268,522.9	--	312.52	--	PES, 08/2015	Flush	54	2	51.09-53.11	50.69-52.71	0.020	50-54	4-50
AS-10	BID733	10/14/14	HSA	165,004.5	1,268,521.9	--	312.52	--	PES, 08/2015	Flush	56	2	52.78-54.80	52.38-54.4	0.020	52-56	3.9-52
AS-11	BID731	10/13/14	HSA	164,976.2	1,268,521.3	--	312.57	--	PES, 08/2015	Flush	54.5	2	52.27-54.27	51.87-53.87	0.020	50.51-54.5	3-50.5
AS-12	BID729	10/10/14	HSA	164,948.4	1,268,520.9	--	312.34	--	PES, 08/2015	Flush	54.24	2	52.06-54.07	51.66-53.67	0.020	50.7-54.24	3.5-50.7
AS-13	BID728	10/9/14	HSA	164,920.9	1,268,520.2	--	311.72	--	PES, 08/2015	Flush	54	2	51.64-53.67	51.24-53.27	0.020	50.7-54	3.5-50.7
AS-14	BID726	10/8/14	HSA	164,891.0	1,268,520.2	--	311.93	--	PES, 08/2015	Flush	54.09	2	51.88-53.92	51.48-53.52	0.020	50.9-54.09	3.3-50.09
AS-15	BID723	10/6/14	HSA	164,865.7	1,268,520.3	--	312.35	--	PES, 08/2015	Flush	54	2	50.89-52.87	50.49-52.47	0.020	50-54	3.5-50
AS-16	BID724	10/7/14	HSA	164,841.0	1,268,511.9	--	312.37	--	PES, 08/2015	Flush	54	2	51.89-53.97	51.49-53.57	0.020	51-54.04	3.3-51
AS-17	BID721	10/3/14	HSA	164,821.9	1,268,488.3	--	311.44	--	PES, 08/2015	Flush	54.02	2	51.87-53.85	51.47-53.45	0.020	50.5-54.02	3.3-50.5
AS-18	BID719	10/2/14	HSA	164,810.9	1,268,465.6	--	310.51	--	PES, 08/2015	Flush	54.5	2	50.37-52.35	49.97-51.95	0.020	49.5-54.5	3.6-49.5
AS-19	BID720	10/3/14	HSA	164,834.5	1,268,474.4	--	310.67	--	PES, 08/2015	Flush	54.08	2	51.94-53.91	51.54-53.51	0.020	50.7-54.08	3.0-54.08
AS-20	BID722	10/6/14	HSA	164,852.1	1,268,491.4	--	311.00	--	PES, 08/2015	Flush	54	2	50.96-52.94	50.56-52.54	0.020	49.6-54	3.5-49.6
AS-21	BID725	10/7/14	HSA	164,879.0	1,268,495.8	--	310.98	--	PES, 08/2015	Flush	55	2	51.92-53.92	51.52-53.52	0.020	50.7-55	3.5-50.7
AS-22	BID727	10/8/14	HSA	164,907.4	1,268,496.1	--	310.72	--	PES, 08/2015	Flush	55	2	52.38-54.40	51.98-54	0.020	51.5-55	3.5-51.5
AS-23	BID730	10/10/14	HSA	164,935.3	1,268,497.1	--	310.88	--	PES, 08/2015	Flush	55	2	52.72-54.76	52.32-54.36	0.020	52-55	3.7-55
AS-24	BID734	10/14/14	HSA	164,963.7	1,268,494.9	--	311.08	--	PES, 08/2015	Flush	55	2	52.68-54.74	52.28-54.34	0.020	52-55	3.5-52
AS-25	BID735	10/15/14	HSA	164,993.3	1,268,503.1	--	311.33	--	PES, 08/2015	Flush	56	2	53.35-55.36	52.95-54.96	0.020	51.9-56	3.5-51.9
AS-26	BID738	10/16/14	HSA	165,018.0	1,268,497.2	--	310.75	--	PES, 08/2015	Flush	55.5	2	53.10-54.14	52.7-53.74	0.020	52-55.5	4-52
AS-27	BID741	10/17/14	HSA	165,047.3	1,268,497.3	--	310.99	--	PES, 08/2015	Flush	55.5	2	53.10-55.14	52.7-54.74	0.020	52-55.5	4-52
AS-28	BID706	9/22/14	HSA	165,077.4	1,268,498.9	--	308.11	--	PES, 08/2015	Flush	50.5	2	47.94-49.88	47.54-49.48	0.020	47.5-50.5	3.5-47.5
AS-29	BID707	9/23/14	HSA	165,098.0	1,268,498.4	--	307.74	--	PES, 08/2015	Flush	51	2	48.10-50.08	47.7-49.68	0.020	47-51	3.3-47
AS-30	BID711	9/25/14	HSA	165,100.2	1,268,516.2	--	307.36	--	PES, 08/2015	Flush	52	2	48.24-50.24	47.84-49.84	0.020	46.8-52	3.8-46.8
AS-31	BID712	9/26/14	HSA	165,098.2	1,268,535.6	--	308.10	--	PES, 08/2015	Flush	52.5	2	48.86-50.89	48.46-50.49	0.020	47.6-52.5	3.5-47.6

Table D1
Well Completion and Boring Details
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Well	Ecology Well Tag Number	Date Installed	Drilling Method	Location (feet NAD 83/91) Northing	Location (feet NAD 83/91) Easting	Elevation (feet NAVD 88) Monitoring Point	Elevation (feet NAVD 88) Surface Casing Rim	Elevation (feet NAVD 88) Ground Surface	Survey Notes	29.80-39.80 Monument Type	Boring Depth (feet)	Well Diameter (inches)	Screen Depth (ft bgs) Below Ground	Screen Depth (ft bgs) Below Top of Casing	Slot Size (inch)	Filter Pack (ft bgs)	Seal (ft bgs)
Supplemental Investigation Borings																	
SB-10	--	4/16/18	DP	164,837.8	1,268,523.0	--	--	313.30	PES, 05/2018	--	11	2.25	--	--	--	--	--
SB-11	--	4/16/18	DP	164,831.3	1,268,470.8	--	--	310.59	PES, 05/2018	--	15	2.25	--	--	--	--	--
SB-12	--	4/16/18	DP	164,812.7	1,268,480.9	--	--	311.18	PES, 05/2018	--	11	2.25	--	--	--	--	--
SB-13	--	4/16/18	DP	165,056.3	1,268,696.8	--	--	313.34	PES, 05/2018	--	29	2.25	--	--	--	--	--
SB-13A	--	4/25/18	DP	165,055.2	1,268,697.2	--	--	313.38	PES, 05/2018	--	33	2.25	--	--	--	--	--
SB-13B	--	4/25/18	DP	165,067.3	1,268,697.4	--	--	309.32	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-14	--	4/16/18	DP	165,056.3	1,268,717.0	--	--	313.60	PES, 05/2018	--	31.5	2.25	--	--	--	--	--
SB-14A	--	4/25/18	DP	165,056.2	1,268,717.8	--	--	313.60	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-15	--	4/17/18	DP	165,078.3	1,268,721.7	--	--	310.28	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-16	--	4/17/18	DP	165,172.1	1,268,822.2	--	--	310.61	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-17	--	4/18/18	DP	165,175.7	1,268,798.0	--	--	310.03	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-18	--	4/18/18	DP	165,201.4	1,268,799.7	--	--	309.93	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-19	--	4/19/18	DP	165,132.6	1,268,649.4	--	--	308.76	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-20	--	4/19/18	DP	165,154.5	1,268,680.2	--	--	309.00	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-21	--	4/19/18	DP	165,187.4	1,268,742.4	--	--	309.65	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-22	--	4/20/18	DP	165,173.0	1,268,709.8	--	--	309.07	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-23	--	4/20/18	DP	165,109.3	1,268,725.1	--	--	309.76	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-24	--	4/23/18	DP	165,113.2	1,268,695.3	--	--	310.24	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-25	--	4/23/18	DP	165,107.6	1,268,755.1	--	--	310.27	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-26	--	4/24/18	DP	165,177.8	1,268,857.4	--	--	312.30	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-27	--	4/24/18	DP	165,166.7	1,268,856.4	--	--	311.62	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-28	--	4/24/18	DP	165,209.6	1,268,850.2	--	--	310.94	PES, 05/2018	--	40	2.25	--	--	--	--	--
SB-29	--	4/24/18	DP	165,116.8	1,268,669.9	--	--	309.39	PES, 05/2018	--	40	2.25	36-40	--	0.004	--	--
SB-30	--	4/25/18	DP	165,196.5	1,268,529.1	--	--	304.82	PES, 05/2018	--	40	2.25	--	--	--	--	--

Notes:

1. Northing and easting in feet relative to the Washington State Plane System North Zone (NAD 83/91)
2. Elevations in feet relative to the North American Vertical Datum (NAVD 88)
3. Monitoring point = top of the PVC well casing
4. All depths shown in feet below ground surface (ft bgs)
5. All wells completed with Schedule 40 PVC with the exception of AS-1 (Schdedule 80 PVC)
6. Drilling methods include hollow stem auger (HSA), direct push (DP), and vacuum truck with air knife (AKVAC)
7. '-- = not documented or unknown
8. Surface elevations for the direct push borings represents ground surface adjacent to the boring
9. Screened intervals are documented on boring logs and are typically based on a field measurements relative to ground surface at the time of drilling. Screened intervals relative to top of casing are estimated using well field construction measurements, surveyed top of casing elevations, surveyed ground surface elevations, and in some cases surveyed monument rim elevations. If ground or rim elevations are not surveyed, then top of casing is assumed to be 0.4 ft depth.
10. Monitoring wells MW-1, DC-6, DC-9A, DC-9B are missing or destroyed. The 1999 SCS VES wells have been decommissioned.
11. Temporary well screens consisting of Geoprobe SP22 stainless steel slotted tooling were deployed in direct push borings SB-19 through SB-25 and SB-29.

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-1	12/10/1999	309.97	37.44	272.53
MW-1	2/9/2005	309.97	39.52	270.45
MW-1	4/11/2006	309.97	37.78	272.19
MW-1	10/26/2006	309.97	39.22	270.75
MW-1	4/24/2007	309.97	36.61	273.36
MW-1	8/21/2008	309.97	37.32	272.65
MW-2	12/10/1999	307.69	35.60	272.09
MW-2	11/5/2010	307.69	37.03	270.66
MW-2	2/11/2011	307.69	35.81	271.88
MW-2	5/30/2011	307.69	34.40	273.29
MW-2	7/19/2011	307.69	34.71	272.98
MW-2	10/17/2011	307.69	35.80	271.89
MW-2	4/2/2012	307.69	36.11	271.58
MW-2	5/28/2013	308.56	35.73	272.83
MW-2	4/14/2014	308.56	36.17	272.39
MW-2	10/21/2014	308.34	36.48	271.86
MW-2	12/11/2015	308.34	36.89	271.45
MW-2	12/13/2016	308.34	36.09	272.25
MW-2	3/13/2017	308.34	34.93	273.41
MW-2	7/17/2017	308.34	33.97	274.37
MW-2	10/20/2017	308.34	35.45	272.89
MW-2	1/24/2018	308.34	35.61	272.73
MW-2	4/17/2018	308.34	34.93	273.41
MW-2	7/18/2018	308.34	35.12	273.22
MW-2	10/15/2018	308.34	36.26	272.08

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-3	8/21/2008	311.49	39.77	271.72
MW-3	11/5/2010	311.49	39.43	272.06
MW-3	2/11/2011	311.49	38.10	273.39
MW-3	5/30/2011	311.49	36.66	274.83
MW-3	7/19/2011	311.49	37.03	274.46
MW-3	10/17/2011	311.49	38.18	273.31
MW-3	4/2/2012	311.49	38.39	273.10
MW-3	5/28/2013	311.62	38.09	273.53
MW-3	10/21/2014	311.41	38.91	272.50
MW-3	12/9/2015	311.41	39.28	272.13
MW-3	12/13/2016	311.41	38.44	272.97
MW-3	3/13/2017	311.41	37.09	274.32
MW-3	7/17/2017	311.41	36.21	275.20
MW-3	10/20/2017	311.41	37.61	273.80
MW-3	1/24/2018	311.41	37.73	273.68
MW-3	4/17/2018	311.41	37.24	274.17
MW-3	7/18/2018	311.41	37.52	273.89
MW-3	10/15/2018	311.41	38.68	272.73
MW-4	11/5/2010	310.54	38.74	271.80
MW-4	2/11/2011	310.54	37.41	273.13
MW-4	5/30/2011	310.54	35.99	274.55
MW-4	7/19/2011	310.54	36.37	274.17
MW-4	10/17/2011	310.54	37.50	273.04
MW-4	4/2/2012	310.54	37.67	272.87
MW-4	5/28/2013	310.68	37.40	273.28
MW-4	10/21/2014	310.47	38.13	272.34
MW-4	12/9/2015	310.47	38.60	271.87
MW-4	12/13/2016	310.47	37.36	273.11
MW-4	3/13/2017	310.47	36.42	274.05
MW-4	7/17/2017	310.47	35.59	274.88
MW-4	10/20/2017	310.47	37.17	273.30
MW-4	1/24/2018	310.47	37.04	273.43
MW-4	4/17/2018	310.47	36.59	273.88
MW-4	7/18/2018	310.47	36.86	273.61
MW-4	10/15/2018	310.47	38.01	272.46

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-5	8/21/2008	310.28	39.96	270.32
MW-5	11/5/2010	310.28	39.73	270.55
MW-5	2/11/2011	310.28	38.60	271.68
MW-5	5/30/2011	310.28	37.24	273.04
MW-5	7/19/2011	310.28	37.51	272.77
MW-5	10/17/2011	310.28	38.54	271.74
MW-5	4/2/2012	310.28	38.90	271.38
MW-5	10/21/2014	310.38	39.17	271.21
MW-5	12/9/2015	310.38	39.69	270.69
MW-5	12/13/2016	310.38	38.80	271.58
MW-5	3/13/2017	310.38	37.80	272.58
MW-5	7/17/2017	310.38	36.80	273.58
MW-5	10/20/2017	310.38	38.17	272.21
MW-5	1/24/2018	310.38	38.60	271.78
MW-5	4/17/2018	310.38	37.71	272.67
MW-5	7/18/2018	310.38	37.89	272.49
MW-5	10/15/2018	310.38	38.92	271.46
MW-6	8/21/2008	304.27	37.46	266.81
MW-6	11/5/2010	304.27	37.25	267.02
MW-6	2/11/2011	304.27	36.30	267.97
MW-6	5/30/2011	304.27	35.50	268.77
MW-6	7/19/2011	304.27	35.38	268.89
MW-6	10/17/2011	304.27	36.24	268.03
MW-6	4/2/2012	304.27	36.53	267.74
MW-6	10/21/2014	304.14	37.79	266.35
MW-6	12/9/2015	304.14	37.22	266.92
MW-6	12/13/2016	304.14	36.49	267.65
MW-6	3/13/2017	304.14	35.68	268.46
MW-6	7/17/2017	304.14	34.79	269.35
MW-6	10/20/2017	304.14	38.24	265.90
MW-6	1/24/2018	304.14	36.08	268.06
MW-6	4/17/2018	304.14	35.61	268.53
MW-6	7/18/2018	304.14	35.71	268.43
MW-6	10/15/2018	304.14	36.58	267.56

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-7	8/21/2008	302.76	39.00	263.76
MW-7	11/5/2010	302.76	38.74	264.02
MW-7	2/11/2011	302.76	37.61	265.15
MW-7	5/30/2011	302.76	36.09	266.67
MW-7	7/19/2011	302.76	36.43	266.33
MW-7	10/17/2011	302.76	37.43	265.33
MW-7	4/2/2012	302.76	37.52	265.24
MW-7	5/28/2013	302.76	37.48	265.28
MW-7	10/30/2014	302.64	35.80	266.84
MW-7	12/9/2015	302.64	38.75	263.89
MW-7	12/13/2016	302.64	37.79	264.85
MW-7	3/13/2017	302.64	36.79	265.85
MW-7	7/17/2017	302.64	35.75	266.89
MW-7	10/20/2017	302.64	37.16	265.48
MW-7	1/24/2018	302.64	37.33	265.31
MW-7	4/17/2018	302.64	36.79	265.85
MW-7	7/18/2018	302.64	37.00	265.64
MW-7	10/23/2018	302.64	38.15	264.49
MW-8	8/21/2008	280.08	12.78	267.30
MW-8	2/11/2011	280.08	11.11	268.97
MW-8	5/30/2011	280.08	10.20	269.88
MW-8	7/19/2011	280.08	10.66	269.42
MW-8	10/17/2011	280.08	11.52	268.56
MW-8	4/2/2012	280.08	11.09	268.99
MW-8	10/21/2014	280.68	12.12	268.56
MW-8	12/9/2015	280.68	11.81	268.87
MW-8	12/13/2016	280.68	11.40	269.28
MW-8	3/13/2017	280.68	10.30	270.38
MW-8	7/17/2017	280.68	10.26	270.42
MW-8	10/20/2017	280.68	10.25	270.43
MW-8	1/24/2018	280.68	10.80	269.88
MW-8	4/17/2018	280.68	10.50	270.18
MW-8	7/18/2018	280.68	11.22	269.46
MW-8	10/16/2018	280.68	12.09	268.59

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-9	8/21/2008	285.11	32.24	252.87
MW-9	11/5/2010	285.11	31.98	253.13
MW-9	2/11/2011	285.11	30.93	254.18
MW-9	5/30/2011	285.11	29.76	255.35
MW-9	7/19/2011	285.11	30.12	254.99
MW-9	10/17/2011	285.11	31.04	254.07
MW-9	4/2/2012	285.11	31.05	254.06
MW-9	10/21/2014	284.97	31.68	253.29
MW-9	12/9/2015	284.97	32.06	252.91
MW-9	12/13/2016	284.97	31.24	253.73
MW-9	3/13/2017	284.97	30.20	254.77
MW-9	7/17/2017	284.97	29.59	255.38
MW-9	10/20/2017	284.97	30.75	254.22
MW-9	1/24/2018	284.97	30.84	254.13
MW-9	4/17/2018	284.97	30.43	254.54
MW-9	7/18/2018	284.97	30.60	254.37
MW-9	10/16/2018	284.97	31.40	253.57
MW-10	2/11/2011	306.70	34.04	272.66
MW-10	5/30/2011	306.70	32.69	274.01
MW-10	7/19/2011	306.70	33.05	273.65
MW-10	10/17/2011	306.70	34.13	272.57
MW-10	4/2/2012	306.70	34.31	272.39
MW-10	5/28/2013	306.91	34.03	272.88
MW-10	10/21/2014	306.71	34.81	271.90
MW-10	12/9/2015	306.71	35.22	271.49
MW-10	12/13/2016	306.71	34.41	272.30
MW-10	3/13/2017	306.71	33.15	273.56
MW-10	7/17/2017	306.71	32.34	274.37
MW-10	10/20/2017	306.71	33.82	272.89
MW-10	1/24/2018	306.71	33.82	272.89
MW-10	4/17/2018	306.71	33.30	273.41
MW-10	7/18/2018	306.71	33.55	273.16
MW-10	10/15/2018	306.71	34.66	272.05

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-11	2/11/2011	307.63	35.01	272.62
MW-11	5/30/2011	307.63	33.63	274.00
MW-11	7/19/2011	307.63	33.97	273.66
MW-11	10/17/2011	307.63	35.05	272.58
MW-11	4/2/2012	307.63	35.29	272.34
MW-11	5/28/2013	307.85	34.98	272.87
MW-11	10/21/2014	307.62	35.78	271.84
MW-11	12/9/2015	307.62	36.16	271.46
MW-11	12/13/2016	307.62	35.33	272.29
MW-11	3/13/2017	307.62	34.11	273.51
MW-11	7/17/2017	307.62	33.25	274.37
MW-11	10/20/2017	307.62	34.74	272.88
MW-11	1/24/2018	307.62	34.77	272.85
MW-11	4/17/2018	307.62	34.21	273.41
MW-11	7/18/2018	307.62	34.45	273.17
MW-11	10/19/2018	307.62	35.61	272.01
MW-12	4/2/2012	312.92	39.69	273.23
MW-12	5/28/2013	312.95	39.40	273.55
MW-12	10/21/2014	312.80	40.20	272.60
MW-12	12/9/2015	312.80	40.59	272.21
MW-12	12/13/2016	312.80	39.70	273.10
MW-12	3/13/2017	312.80	38.39	274.41
MW-12	7/17/2017	312.80	37.47	275.33
MW-12	10/20/2017	312.80	39.01	273.79
MW-12	1/24/2018	312.80	39.01	273.79
MW-12	4/17/2018	312.80	38.49	274.31
MW-12	7/18/2018	312.80	38.75	274.05
MW-12	10/15/2018	312.80	39.94	272.86

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-13	4/2/2012	308.88	36.04	272.84
MW-13	5/28/2013	308.90	35.82	273.08
MW-13	10/21/2014	308.75	36.66	272.09
MW-13	12/9/2015	308.75	37.00	271.75
MW-13	12/13/2016	308.75	36.13	272.62
MW-13	3/13/2017	308.75	34.78	273.97
MW-13	7/17/2017	308.75	33.99	274.76
MW-13	10/20/2017	308.75	35.45	273.30
MW-13	1/24/2018	308.75	35.45	273.30
MW-13	4/17/2018	308.75	34.98	273.77
MW-13	7/18/2018	308.75	35.24	273.51
MW-13	10/15/2018	308.75	36.40	272.35
MW-14	4/2/2012	303.78	31.84	271.94
MW-14	5/28/2013	303.82	31.57	272.25
MW-14	10/21/2014	303.82	32.34	271.48
MW-14	12/11/2015	303.82	32.65	271.17
MW-14	12/13/2016	303.82	31.90	271.92
MW-14	3/13/2017	303.82	30.73	273.09
MW-14	7/17/2017	303.82	29.94	273.88
MW-14	10/20/2017	303.82	31.36	272.46
MW-14	1/24/2018	303.82	31.33	272.49
MW-14	4/17/2018	303.82	30.84	272.98
MW-14	10/15/2018	303.82	32.14	271.68
MW-15	4/2/2012	312.40	39.92	272.48
MW-15	5/28/2013	312.44	39.55	272.89
MW-15	4/14/2014	312.44	39.97	272.47
MW-15	10/21/2014	312.44	40.31	272.13
MW-15	12/9/2015	312.44	40.77	271.67
MW-15	12/13/2016	312.44	39.90	272.54
MW-15	3/13/2017	312.44	38.72	273.72
MW-15	7/17/2017	312.44	37.77	274.67
MW-15	10/20/2017	312.44	39.25	273.19
MW-15	1/24/2018	312.44	39.31	273.13
MW-15	4/17/2018	312.44	38.75	273.69
MW-15	7/18/2018	312.44	38.99	273.45
MW-15	10/15/2018	312.44	40.08	272.36

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
MW-16	5/28/2013	310.37	37.78	272.59
MW-16	10/21/2014	310.37	38.52	271.85
MW-16	12/9/2015	310.37	38.96	271.41
MW-16	12/13/2016	310.37	38.12	272.25
MW-16	3/13/2017	310.37	36.92	273.45
MW-16	7/17/2017	310.37	36.04	274.33
MW-16	10/20/2017	310.37	37.50	272.87
MW-16	1/24/2018	310.37	37.53	272.84
MW-16	4/17/2018	310.37	36.99	273.38
MW-16	7/18/2018	310.37	37.20	273.17
MW-16	10/15/2018	310.37	38.31	272.06

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-1	2/3/1999	312.46	38.31	274.15
DC-1	4/16/1999	312.46	36.08	276.38
DC-1	12/8/1999	312.46	39.13	273.33
DC-1	4/26/2000	312.46	38.30	274.16
DC-1	8/3/2000	312.46	39.01	273.45
DC-1	11/14/2000	312.46	40.29	272.17
DC-1	3/6/2001	312.46	41.11	271.35
DC-1	6/20/2001	312.46	41.46	271.00
DC-1	9/17/2001	312.46	41.78	270.68
DC-1	12/20/2001	312.46	41.43	271.03
DC-1	3/13/2002	312.46	39.75	272.71
DC-1	9/17/2002	312.46	39.75	272.71
DC-1	12/10/2002	312.46	40.69	271.77
DC-1	3/31/2003	312.46	40.33	272.13
DC-1	9/3/2003	312.46	40.69	271.77
DC-1	3/16/2004	312.46	39.77	272.69
DC-1	9/7/2004	312.46	40.57	271.89
DC-1	2/9/2005	312.46	41.31	271.15
DC-1	4/24/2007	312.46	38.29	274.17
DC-1	8/21/2008	312.72	40.93	271.79
DC-1	11/5/2010	312.72	40.64	272.08
DC-1	2/11/2011	312.72	39.37	273.35
DC-1	5/30/2011	312.72	37.91	274.81
DC-1	7/19/2011	312.72	38.21	274.51
DC-1	10/17/2011	312.72	39.37	273.35
DC-1	4/2/2012	312.72	39.72	273.00
DC-1	5/28/2013	312.82	39.30	273.52
DC-1	10/21/2014	312.82	40.05	272.77
DC-1	12/9/2015	312.82	40.51	272.31
DC-1	12/13/2016	312.82	39.63	273.19
DC-1	3/13/2017	312.82	38.46	274.36
DC-1	7/17/2017	312.82	37.40	275.42
DC-1	10/20/2017	312.82	39.26	273.56
DC-1	1/24/2018	312.82	39.02	273.80
DC-1	4/17/2018	312.82	38.43	274.39
DC-1	10/15/2018	312.82	39.80	273.02

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-2	2/3/1999	312.80	39.04	273.76
DC-2	4/16/1999	312.80	36.90	275.90
DC-2	12/8/1999	312.80	39.88	272.92
DC-2	4/26/2000	312.80	39.11	273.69
DC-2	8/3/2000	312.80	39.85	272.95
DC-2	11/14/2000	312.80	41.04	271.76
DC-2	3/6/2001	312.80	41.82	270.98
DC-2	6/20/2001	312.80	42.18	270.62
DC-2	9/17/2001	312.80	42.50	270.30
DC-2	12/20/2001	312.80	42.12	270.68
DC-2	3/13/2002	312.80	40.45	272.35
DC-2	6/13/2002	312.80	39.64	273.16
DC-2	9/17/2002	312.80	40.50	272.30
DC-2	12/10/2002	312.80	41.42	271.38
DC-2	3/31/2003	312.80	41.03	271.77
DC-2	9/3/2003	312.80	41.41	271.39
DC-2	3/16/2004	312.80	40.51	272.29
DC-2	9/7/2004	312.80	41.30	271.50
DC-2	2/9/2005	312.80	41.99	270.81
DC-2	4/24/2007	312.80	39.03	273.77
DC-2	8/21/2008	313.04	41.65	271.39
DC-2	11/5/2010	313.04	41.34	271.70
DC-2	2/11/2011	313.04	40.08	272.96
DC-2	5/30/2011	313.04	38.67	274.37
DC-2	7/19/2011	313.04	38.98	274.06
DC-2	10/17/2011	313.04	40.08	272.96
DC-2	4/2/2012	313.04	40.41	272.63
DC-2	10/21/2014	312.92	40.78	272.14
DC-2	12/9/2015	312.92	41.22	271.70
DC-2	12/13/2016	312.92	40.36	272.56
DC-2	3/13/2017	312.92	39.19	273.73
DC-2	7/17/2017	312.92	38.20	274.72
DC-2	10/20/2017	312.92	39.71	273.21
DC-2	1/24/2018	312.92	39.76	273.16
DC-2	4/17/2018	312.92	39.20	273.72
DC-2	7/18/2018	312.92	39.42	273.50
DC-2	10/15/2018	312.92	40.53	272.39

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-3	10/21/1998	312.98	39.68	273.30
DC-3	2/3/1999	312.98	39.22	273.76
DC-3	4/16/1999	312.98	37.13	275.85
DC-3	12/8/1999	312.98	40.10	272.88
DC-3	4/26/2000	312.98	39.33	273.65
DC-3	8/3/2000	312.98	40.08	272.90
DC-3	11/14/2000	312.98	41.27	271.71
DC-3	3/6/2001	312.98	42.05	270.93
DC-3	6/20/2001	312.98	42.37	270.61
DC-3	9/17/2001	312.98	42.73	270.25
DC-3	12/20/2001	312.98	42.30	270.68
DC-3	3/13/2002	312.98	40.66	272.32
DC-3	6/13/2002	312.98	39.87	273.11
DC-3	9/17/2002	312.98	40.75	272.23
DC-3	12/10/2002	312.98	41.65	271.33
DC-3	3/31/2003	312.98	41.25	271.73
DC-3	9/3/2003	312.98	41.65	271.33
DC-3	3/16/2004	312.98	40.71	272.27
DC-3	9/7/2004	312.98	41.54	271.44
DC-3	2/9/2005	312.98	42.21	270.77
DC-3	4/24/2007	312.98	39.26	273.72
DC-3	8/21/2008	313.23	41.89	271.34
DC-3	11/5/2010	313.23	41.58	271.65
DC-3	2/11/2011	313.23	40.30	272.93
DC-3	5/30/2011	313.23	38.89	274.34
DC-3	7/19/2011	313.23	39.22	274.01
DC-3	10/17/2011	313.23	40.34	272.89
DC-3	4/2/2012	313.23	40.62	272.61
DC-3	10/21/2014	313.11	41.07	272.04
DC-3	12/9/2015	313.11	41.47	271.64
DC-3	12/13/2016	313.11	40.59	272.52
DC-3	3/13/2017	313.11	39.39	273.72
DC-3	7/17/2017	313.11	38.44	274.67
DC-3	10/20/2017	313.11	39.94	273.17
DC-3	1/24/2018	313.11	39.98	273.13
DC-3	4/17/2018	313.11	39.47	273.64
DC-3	7/18/2018	313.11	39.67	273.44
DC-3	10/15/2018	313.11	40.80	272.31

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-4	10/21/1998	312.20	39.96	272.24
DC-4	2/3/1999	312.20	38.37	273.83
DC-4	4/16/1999	312.20	36.34	275.86
DC-4	12/8/1999	312.20	39.32	272.88
DC-4	4/26/2000	312.20	38.55	273.65
DC-4	8/3/2000	312.20	39.33	272.87
DC-4	11/14/2000	312.20	40.52	271.68
DC-4	3/6/2001	312.20	41.29	270.91
DC-4	6/20/2001	312.20	41.60	270.60
DC-4	9/17/2001	312.20	41.89	270.31
DC-4	12/20/2001	312.20	41.49	270.71
DC-4	3/13/2002	312.20	39.86	272.34
DC-4	6/13/2002	312.20	39.11	273.09
DC-4	9/17/2002	312.20	40.00	272.20
DC-4	12/10/2002	312.20	40.92	271.28
DC-4	3/31/2003	312.20	40.44	271.76
DC-4	9/3/2003	312.20	40.88	271.32
DC-4	3/16/2004	312.20	39.94	272.26
DC-4	9/7/2004	312.20	40.81	271.39
DC-4	2/9/2005	312.20	41.42	270.78
DC-4	4/24/2007	312.20	38.50	273.70
DC-4	8/21/2008	312.12	41.13	270.99
DC-4	11/5/2010	312.12	40.81	271.31
DC-4	2/11/2011	312.12	39.51	272.61
DC-4	5/30/2011	312.12	38.13	273.99
DC-4	7/19/2011	312.12	38.48	273.64
DC-4	10/17/2011	312.12	39.57	272.55
DC-4	4/2/2012	312.12	38.82	273.30
DC-4	5/28/2013	312.56	39.50	273.06
DC-4	10/21/2014	312.35	40.34	272.01
DC-4	12/9/2015	312.35	40.34	272.01
DC-4	12/13/2016	312.35	39.84	272.51
DC-4	3/13/2017	312.35	38.59	273.76
DC-4	7/17/2017	312.35	37.70	274.65
DC-4	10/20/2017	312.35	39.50	272.85
DC-4	1/24/2018	312.35	39.21	273.14
DC-4	4/18/2018	312.35	38.61	273.74
DC-4	7/18/2018	312.35	38.95	273.40
DC-4	10/15/2018	312.35	40.16	272.19

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-5	2/3/1999	305.86	32.48	273.38
DC-5	4/16/1999	305.86	30.46	275.40
DC-5	4/11/2006	305.86	33.74	272.12
DC-5	4/24/2007	306.10	32.56	273.54
DC-5	8/21/2008	306.10	35.15	270.95
DC-5	11/5/2010	306.10	34.86	271.24
DC-5	2/11/2011	306.10	33.59	272.51
DC-5	5/30/2011	306.10	32.23	273.87
DC-5	7/19/2011	306.10	32.58	273.52
DC-5	10/17/2011	306.10	33.65	272.45
DC-5	4/2/2012	306.10	33.86	272.24
DC-5	5/28/2013	306.25	33.60	272.65
DC-5	10/15/2018	306.25	34.15	272.10
DC-6	2/3/1999	308.46	35.03	273.43
DC-6	4/16/1999	308.46	32.92	275.54

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-7	2/3/1999	302.50	29.89	272.61
DC-7	4/16/1999	302.50	28.05	274.45
DC-7	12/8/1999	302.50	30.76	271.74
DC-7	4/26/2000	302.50	30.12	272.38
DC-7	8/3/2000	302.50	30.84	271.66
DC-7	11/14/2000	302.50	31.90	270.60
DC-7	3/6/2001	302.50	32.60	269.90
DC-7	6/20/2001	302.50	32.91	269.59
DC-7	9/17/2001	302.50	33.25	269.25
DC-7	12/20/2001	302.50	32.75	269.75
DC-7	3/13/2002	302.50	31.22	271.28
DC-7	6/13/2002	302.50	30.57	271.93
DC-7	9/17/2002	302.50	31.44	271.06
DC-7	12/10/2002	302.50	32.27	270.23
DC-7	3/31/2003	302.50	31.78	270.72
DC-7	9/3/2003	302.50	32.26	270.24
DC-7	2/9/2005	302.50	32.67	269.83
DC-7	4/11/2006	302.50	31.05	271.45
DC-7	10/26/2006	302.50	32.58	269.92
DC-7	4/24/2007	302.50	29.96	272.54
DC-7	8/21/2008	302.78	32.48	270.30
DC-7	11/5/2010	302.78	32.15	270.63
DC-7	2/11/2011	302.78	30.91	271.87
DC-7	5/30/2011	302.78	29.68	273.10
DC-7	7/19/2011	302.78	30.03	272.75
DC-7	10/17/2011	302.78	31.04	271.74
DC-7	4/2/2012	302.78	31.12	271.66
DC-7	5/28/2013	302.88	30.94	271.94
DC-7	10/21/2014	302.61	31.71	270.90
DC-7	12/16/2015	302.61	31.79	270.82
DC-7	12/13/2016	302.61	31.19	271.42
DC-7	3/13/2017	302.61	30.03	272.58
DC-7	7/17/2017	302.61	29.37	273.24
DC-7	10/20/2017	302.61	30.51	272.10
DC-7	1/24/2018	302.61	30.69	271.92
DC-7	4/17/2018	302.61	30.19	272.42
DC-7	7/18/2018	302.61	30.48	272.13
DC-7	10/15/2018	302.61	31.52	271.09

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-8	2/3/1999	306.09	33.45	272.64
DC-8	4/16/1999	306.09	31.43	274.66
DC-8	12/8/1999	306.09	34.27	271.82
DC-8	4/26/2000	306.09	33.55	272.54
DC-8	8/3/2000	306.09	34.26	271.83
DC-8	11/14/2000	306.09	35.37	270.72
DC-8	3/6/2001	306.09	36.11	269.98
DC-8	6/20/2001	306.09	36.45	269.64
DC-8	9/17/2001	306.09	36.75	269.34
DC-8	12/20/2001	306.09	36.40	269.69
DC-8	3/13/2002	306.09	34.82	271.27
DC-8	6/13/2002	306.09	34.05	272.04
DC-8	9/17/2002	306.09	34.85	271.24
DC-8	12/10/2002	306.09	35.74	270.35
DC-8	3/31/2003	306.09	35.71	270.38
DC-8	9/3/2003	306.09	35.73	270.36
DC-8	2/9/2005	306.09	36.26	269.83
DC-8	4/11/2006	306.09	34.60	271.49
DC-8	10/26/2006	306.09	36.00	270.09
DC-8	4/24/2007	306.11	33.47	272.64
DC-8	11/5/2010	306.38	35.69	270.69
DC-8	2/11/2011	306.38	34.49	271.89
DC-8	5/30/2011	306.38	33.15	273.23
DC-8	7/19/2011	306.38	33.46	272.92
DC-8	10/17/2011	306.38	34.51	271.87
DC-8	4/2/2012	306.38	34.77	271.61
DC-8	5/28/2013	306.46	34.45	272.01
DC-8	10/21/2014	306.46	35.17	271.29
DC-8	12/9/2015	306.23	35.58	270.65
DC-8	12/13/2016	306.23	34.71	271.52
DC-8	3/13/2017	306.23	33.65	272.58
DC-8	7/17/2017	306.23	32.75	273.48
DC-8	10/20/2017	306.23	34.14	272.09
DC-8	1/24/2018	306.23	34.21	272.02
DC-8	4/17/2018	306.23	33.64	272.59
DC-8	7/18/2018	306.23	33.92	272.31
DC-8	10/15/2018	306.23	34.94	271.29

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-9A	4/16/1999	307.76	32.19	275.57
DC-9A	12/8/1999	307.76	35.03	272.73
DC-9A	4/26/2000	307.76	34.35	273.41
DC-9A	8/3/2000	307.76	35.11	272.65
DC-9A	11/14/2000	307.76	36.30	271.46
DC-9A	4/11/2006	307.76	35.45	272.31
DC-9A	8/8/2006	307.76	36.25	271.51
DC-9A	11/2/2006	307.76	36.90	270.86
DC-9A	4/24/2007	307.75	34.30	273.45
DC-9A	8/21/2008	308.02	36.92	271.10
DC-9B	4/16/1999	307.91	32.34	275.57
DC-9B	3/6/2001	307.91	37.22	270.69
DC-9B	6/20/2001	307.91	37.52	270.39
DC-9B	9/17/2001	307.91	37.87	270.04
DC-9B	12/20/2001	307.91	37.45	270.46
DC-9B	4/11/2006	307.91	35.65	272.26
DC-9B	8/8/2006	307.91	36.40	271.51
DC-9B	10/26/2006	307.91	37.15	270.76
DC-9B	4/24/2007	307.94	34.45	273.49
DC-9B	8/21/2008	308.16	37.05	271.11

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-10A	4/16/1999	307.59	31.85	275.74
DC-10A	12/8/1999	307.59	34.82	272.77
DC-10A	4/26/2000	307.59	34.05	273.54
DC-10A	8/3/2000	307.59	34.86	272.73
DC-10A	11/14/2000	307.59	36.05	271.54
DC-10A	2/11/2011	307.72	34.99	272.73
DC-10A	5/30/2011	307.72	33.65	274.07
DC-10A	7/19/2011	307.72	34.07	273.65
DC-10A	10/17/2011	307.72	35.12	272.60
DC-10A	4/2/2012	307.72	35.23	272.49
DC-10A	5/28/2013	307.93	35.04	272.89
DC-10A	10/21/2014	307.73	35.83	271.90
DC-10A	12/9/2015	307.73	36.19	271.54
DC-10A	12/13/2016	307.73	35.35	272.38
DC-10A	3/13/2017	307.73	34.09	273.64
DC-10A	7/17/2017	307.73	33.29	274.44
DC-10A	10/20/2017	307.73	34.79	272.94
DC-10A	1/24/2018	307.73	34.72	273.01
DC-10A	4/17/2018	307.73	34.23	273.50
DC-10A	4/17/2018	307.73	34.23	273.50
DC-10A	7/18/2018	307.73	34.50	273.23
DC-10A	10/15/2018	307.73	36.12	271.61
DC-10B	4/16/1999	307.66	31.92	275.74
DC-10B	3/6/2001	307.66	36.89	270.77
DC-10B	6/20/2001	307.66	37.46	270.20
DC-10B	9/17/2001	307.66	37.55	270.11
DC-10B	12/20/2001	307.66	37.03	270.63
DC-10B	2/9/2005	307.66	36.98	270.68
DC-10B	4/11/2006	307.66	35.24	272.42
DC-10B	4/24/2007	307.66	34.08	273.58
DC-10B	8/21/2008	307.89	36.74	271.15
DC-10B	11/5/2010	307.89	36.40	271.49
DC-10B	2/11/2011	307.89	35.06	272.83
DC-10B	5/30/2011	307.89	33.72	274.17
DC-10B	7/19/2011	307.89	34.09	273.80
DC-10B	10/17/2011	307.89	35.15	272.74
DC-10B	4/2/2012	307.89	35.34	272.55
DC-10B	12/13/2016	307.89	35.45	272.44
DC-10B	10/15/2018	307.89	35.70	272.19

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-11	4/24/2007	311.02	37.29	273.73
DC-11	11/5/2010	311.02	39.59	271.43
DC-11	2/11/2011	311.02	38.36	272.66
DC-11	5/30/2011	311.02	36.91	274.11
DC-11	4/2/2012	311.02	38.67	272.35
DC-11	4/14/2014	311.25	38.73	272.52
DC-11	10/21/2014	311.25	39.00	272.25
DC-11	12/9/2015	311.25	39.48	271.77
DC-11	12/13/2016	311.25	38.56	272.69
DC-11	3/13/2017	311.25	37.49	273.76
DC-11	7/17/2017	311.25	36.43	274.82
DC-11	10/20/2017	311.25	37.66	273.59
DC-11	1/24/2018	311.25	38.00	273.25
DC-11	4/17/2018	311.25	37.40	273.85
DC-11	7/18/2018	311.25	37.63	273.62
DC-11	10/15/2018	311.25	38.74	272.51
DC-12	4/24/2007	310.90	37.54	273.36
DC-12	8/21/2008	310.90	40.05	270.85
DC-12	11/5/2010	310.90	39.79	271.11
DC-12	2/11/2011	310.90	38.60	272.30
DC-12	5/30/2011	310.90	37.17	273.73
DC-12	7/19/2011	310.90	37.45	273.45
DC-12	10/17/2011	310.90	38.54	272.36
DC-12	4/2/2012	310.90	38.91	271.99
DC-12	5/28/2013	311.25	38.50	272.75
DC-12	4/14/2014	311.25	38.93	272.32
DC-12	10/27/2014	311.25	39.23	272.02
DC-12	12/9/2015	311.25	39.70	271.55
DC-12	12/13/2016	311.25	38.80	272.45
DC-12	3/13/2017	311.25	37.72	273.53
DC-12	7/17/2017	311.25	36.71	274.54
DC-12	10/20/2017	311.25	38.20	273.05
DC-12	1/24/2018	311.25	38.24	273.01
DC-12	4/17/2018	311.25	37.67	273.58
DC-12	7/19/2018	311.25	37.90	273.35
DC-12	10/15/2018	311.25	38.94	272.31

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-13	4/24/2007	310.85	36.64	274.21
DC-13	8/21/2008	310.85	39.13	271.72
DC-13	11/5/2010	310.85	38.88	271.97
DC-13	2/11/2011	310.85	37.68	273.17
DC-13	5/30/2011	310.85	36.28	274.57
DC-13	7/19/2011	310.85	36.57	274.28
DC-13	10/17/2011	310.85	37.65	273.20
DC-13	4/2/2012	310.85	38.01	272.84
DC-13	5/28/2013	310.20	37.61	272.59
DC-13	4/14/2014	310.20	38.02	272.18
DC-13	10/27/2014	310.20	38.37	271.83
DC-13	12/9/2015	310.20	38.37	271.83
DC-13	12/13/2016	310.20	37.89	272.31
DC-13	3/13/2017	310.20	36.82	273.38
DC-13	7/17/2017	310.20	37.82	272.38
DC-13	10/20/2017	310.20	37.26	272.94
DC-13	1/24/2018	310.20	37.33	272.87
DC-13	4/17/2018	310.20	36.77	273.43
DC-13	7/18/2018	310.20	36.97	273.23
DC-13	10/15/2018	310.20	38.06	272.14
DC-14	4/24/2007	308.60	36.15	272.45
DC-14	8/21/2008	308.60	38.59	270.01
DC-14	11/5/2010	308.60	38.34	270.26
DC-14	2/11/2011	308.60	37.18	271.42
DC-14	5/30/2011	308.60	35.83	272.77
DC-14	7/19/2011	308.60	36.12	272.48
DC-14	10/17/2011	308.60	37.14	271.46
DC-14	4/2/2012	308.60	37.49	271.11
DC-14	5/28/2013	308.94	37.10	271.84
DC-14	10/21/2014	308.94	37.77	271.17
DC-14	12/9/2015	308.94	38.23	270.71
DC-14	12/13/2016	308.94	37.40	271.54
DC-14	3/13/2017	308.94	36.38	272.56
DC-14	7/17/2017	308.94	35.40	273.54
DC-14	10/20/2017	308.94	36.78	272.16
DC-14	1/24/2018	308.94	36.84	272.10
DC-14	4/17/2018	308.94	36.31	272.63
DC-14	7/18/2018	308.94	36.51	272.43
DC-14	10/15/2018	308.94	Well Missing	--

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-15	4/24/2007	307.54	34.64	272.90
DC-15	11/5/2010	307.54	36.93	270.61
DC-15	2/11/2011	307.54	35.68	271.86
DC-15	5/30/2011	307.54	34.32	273.22
DC-15	7/19/2011	307.54	34.62	272.92
DC-15	10/17/2011	307.54	35.68	271.86
DC-15	4/2/2012	307.54	35.94	271.60
DC-15	5/28/2013	307.89	35.61	272.28
DC-15	4/14/2014	307.89	36.02	271.87
DC-15	10/21/2014	307.89	36.35	271.54
DC-15	12/9/2015	307.89	36.79	271.10
DC-15	12/13/2016	307.89	35.91	271.98
DC-15	3/13/2017	307.89	34.82	273.07
DC-15	7/17/2017	307.89	33.91	273.98
DC-15	10/20/2017	307.89	34.31	273.58
DC-15	1/24/2018	307.89	35.40	272.49
DC-15	4/17/2018	307.89	34.81	273.08
DC-15	7/18/2018	307.89	35.08	272.81
DC-15	10/16/2018	307.89	36.12	271.77
DC-16	4/24/2007	307.12	33.81	273.31
DC-16	8/21/2008	307.12	36.41	270.71
DC-16	11/5/2010	307.12	36.10	271.02
DC-16	2/11/2011	307.12	34.85	272.27
DC-16	5/30/2011	307.12	33.48	273.64
DC-16	7/19/2011	307.12	33.83	273.29
DC-16	10/17/2011	307.12	34.91	272.21
DC-16	4/2/2012	307.12	35.14	271.98
DC-16	12/13/2016	307.12	35.15	271.97
DC-16	3/13/2017	307.12	34.80	272.32
DC-16	10/15/2018	307.12	35.37	271.75
DC-17	4/24/2007	304.89	31.65	273.24
DC-17	5/28/2013	305.16	32.65	272.51
DC-17	10/21/2014	305.16	33.44	271.72
DC-17	12/16/2015	305.16	33.58	271.58
DC-17	3/13/2017	305.16	31.80	273.36
DC-17	7/17/2017	305.16	--	--
DC-17	10/20/2017	305.16	32.51	272.65
DC-17	1/24/2018	305.16	32.42	272.74
DC-17	4/17/2018	305.16	31.94	273.22
DC-17	7/18/2018	305.16	32.18	272.98
DC-17	10/15/2018	305.16	33.24	271.92

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-18	4/24/2007	309.37	36.10	273.27
DC-18	5/28/2013	309.64	37.05	272.59
DC-18	10/21/2014	309.51	37.81	271.70
DC-18	12/9/2015	309.51	38.26	271.25
DC-18	12/13/2016	309.51	37.35	272.16
DC-18	3/13/2017	309.51	36.26	273.25
DC-18	7/17/2017	309.51	35.28	274.23
DC-18	10/20/2017	309.51	36.73	272.78
DC-18	1/24/2018	309.51	36.81	272.70
DC-18	4/17/2018	309.51	36.24	273.27
DC-18	7/18/2018	309.51	36.46	273.05
DC-18	10/15/2018	309.51	37.54	271.97
DC-19	8/21/2008	313.53	42.02	271.51
DC-19	11/5/2010	313.53	41.75	271.78
DC-19	2/11/2011	313.53	40.52	273.01
DC-19	5/30/2011	313.53	39.06	274.47
DC-19	7/19/2011	313.53	39.36	274.17
DC-19	10/17/2011	313.53	40.47	273.06
DC-19	4/2/2012	313.53	40.85	272.68
DC-19	5/28/2013	313.62	40.40	273.22
DC-19	12/9/2015	313.62	41.66	271.96
DC-19	12/13/2016	313.62	40.73	272.89
DC-19	3/13/2017	313.62	39.65	273.97
DC-19	7/17/2017	313.62	38.57	275.05
DC-19	10/20/2017	313.62	40.07	273.55
DC-19	1/24/2018	313.62	40.16	273.46
DC-19	4/17/2018	313.62	39.57	274.05
DC-19	7/18/2018	313.62	39.78	273.84
DC-19	10/15/2018	313.62	40.90	272.72

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
DC-20	6/2/2008	--	39.46	--
DC-20	5/28/2013	310.92	38.42	272.50
DC-20	4/14/2014	310.92	38.86	272.06
DC-20	10/21/2014	310.92	39.12	271.80
DC-20	12/15/2015	310.92	39.44	271.48
DC-20	12/13/2016	310.92	38.69	272.23
DC-20	3/13/2017	310.92	37.65	273.27
DC-20	7/17/2017	310.92	36.64	274.28
DC-20	10/20/2017	310.92	38.08	272.84
DC-20	1/24/2018	310.92	38.17	272.75
DC-20	4/17/2018	310.92	37.59	273.33
DC-20	10/15/2018	310.92	38.87	272.05
KMW-1	4/24/2007	311.21	38.15	273.06
KMW-1	8/21/2008	311.21	40.60	270.61
KMW-1	11/5/2010	311.21	40.37	270.84
KMW-1	2/11/2011	311.21	39.19	272.02
KMW-1	5/30/2011	311.21	37.79	273.42
KMW-1	7/19/2011	311.21	38.06	273.15
KMW-1	10/17/2011	311.21	39.13	272.08
KMW-1	4/2/2012	311.21	39.50	271.71
KMW-1	5/28/2013	311.59	39.08	272.51
KMW-1	10/21/2014	311.59	39.81	271.78
KMW-1	12/9/2015	311.59	40.29	271.30
KMW-1	12/13/2016	311.59	39.36	272.23
KMW-1	3/13/2017	311.59	38.34	273.25
KMW-1	7/17/2017	311.59	37.31	274.28
KMW-1	10/20/2017	311.59	38.85	272.74
KMW-1	1/24/2018	311.59	38.83	272.76
KMW-1	4/17/2018	311.59	38.27	273.32
KMW-1	7/18/2018	311.59	38.47	273.12
KMW-1	10/15/2018	311.59	39.55	272.04

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-2	4/24/2007	306.90	33.33	273.57
KMW-2	8/21/2008	306.90	35.96	270.94
KMW-2	11/5/2010	306.90	34.59	272.31
KMW-2	2/11/2011	306.90	34.32	272.58
KMW-2	5/30/2011	306.90	32.96	273.94
KMW-2	7/19/2011	306.90	33.30	273.60
KMW-2	10/17/2011	306.90	34.39	272.51
KMW-2	4/2/2012	306.90	34.59	272.31
KMW-2	5/28/2013	307.25	34.30	272.95
KMW-2	10/21/2014	307.04	35.14	271.90
KMW-2	12/9/2015	307.04	35.51	271.53
KMW-2	12/13/2016	307.04	34.70	272.34
KMW-2	3/13/2017	307.04	33.42	273.62
KMW-2	7/17/2017	307.04	32.60	274.44
KMW-2	10/20/2017	307.04	34.02	273.02
KMW-2	1/24/2018	307.04	34.11	272.93
KMW-2	4/17/2018	307.04	33.56	273.48
KMW-2	7/18/2018	307.04	33.80	273.24
KMW-2	10/15/2018	307.04	34.92	272.12
KMW-3	4/24/2007	296.92	24.51	272.41
KMW-3	8/21/2008	296.92	27.01	269.91
KMW-3	11/5/2010	296.92	26.37	270.55
KMW-3	5/30/2011	296.92	24.22	272.70
KMW-3	7/19/2011	296.92	24.61	272.31
KMW-3	10/17/2011	296.92	25.58	271.34
KMW-3	4/2/2012	296.92	25.59	271.33
KMW-3	10/21/2014	296.92	26.25	270.67
KMW-3	12/13/2016	296.92	25.69	271.23
KMW-3	3/13/2017	296.92	24.33	272.59
KMW-3	7/17/2017	296.92	23.99	272.93
KMW-3	10/20/2017	296.92	25.35	271.57
KMW-3	1/24/2018	296.92	25.16	271.76
KMW-3	4/17/2018	296.92	24.69	272.23
KMW-3	7/18/2018	296.92	25.04	271.88
KMW-3	10/15/2018	296.92	26.09	270.83

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-4	4/24/2007	299.45	25.95	273.50
KMW-4	8/21/2008	299.45	28.62	270.83
KMW-4	11/5/2010	299.45	28.22	271.23
KMW-4	2/11/2011	299.45	26.87	272.58
KMW-4	5/30/2011	299.45	25.59	273.86
KMW-4	7/19/2011	299.45	25.99	273.46
KMW-4	10/17/2011	299.45	27.07	272.38
KMW-4	4/2/2012	299.45	27.10	272.35
KMW-4	10/21/2014	299.57	27.80	271.77
KMW-4	12/9/2015	299.57	28.08	271.49
KMW-4	12/13/2016	299.57	27.24	272.33
KMW-4	3/13/2017	299.57	25.90	273.67
KMW-4	7/17/2017	299.57	25.25	274.32
KMW-4	10/20/2017	299.57	27.26	272.31
KMW-4	1/24/2018	299.57	26.58	272.99
KMW-4	4/17/2018	299.57	26.13	273.44
KMW-4	7/18/2018	299.57	26.50	273.07
KMW-4	10/15/2018	299.57	27.60	271.97
KMW-5	4/24/2007	297.10	24.32	272.78
KMW-5	8/21/2008	297.10	26.85	270.25
KMW-5	11/5/2010	297.10	26.49	270.61
KMW-5	2/11/2011	297.10	25.21	271.89
KMW-5	5/30/2011	297.10	24.00	273.10
KMW-5	7/19/2011	297.10	24.41	272.69
KMW-5	10/17/2011	297.10	25.41	271.69
KMW-5	4/2/2012	297.10	25.37	271.73
KMW-5	5/28/2013	297.22	25.30	271.92
KMW-5	10/21/2014	297.22	26.09	271.13
KMW-5	12/9/2015	297.22	26.30	270.92
KMW-5	12/13/2016	297.22	25.52	271.70
KMW-5	3/13/2017	297.22	24.30	272.92
KMW-5	7/17/2017	297.22	24.75	272.47
KMW-5	10/20/2017	297.22	24.82	272.40
KMW-5	1/24/2018	297.22	24.95	272.27
KMW-5	4/17/2018	297.22	24.50	272.72
KMW-5	7/18/2018	297.22	24.87	272.35
KMW-5	10/31/2018	297.22	26.09	271.13

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-5D	4/24/2007	296.94	24.19	272.75
KMW-5D	8/21/2008	296.94	26.72	270.22
KMW-5D	11/5/2010	296.94	26.35	270.59
KMW-5D	2/11/2011	296.94	25.10	271.84
KMW-5D	5/30/2011	296.94	23.89	273.05
KMW-5D	7/19/2011	296.94	24.28	272.66
KMW-5D	10/17/2011	296.94	25.28	271.66
KMW-5D	4/2/2012	296.94	25.19	271.75
KMW-5D	12/13/2016	296.94	25.40	271.54
KMW-5D	3/13/2017	296.94	25.19	271.75
KMW-5D	10/15/2018	296.94	25.79	271.15
KMW-6	4/24/2007	294.70	22.40	272.30
KMW-6	8/21/2008	294.70	24.90	269.80
KMW-6	11/5/2010	294.70	24.51	270.19
KMW-6	2/11/2011	294.70	23.26	271.44
KMW-6	5/30/2011	294.70	22.12	272.58
KMW-6	7/19/2011	294.70	22.52	272.18
KMW-6	10/17/2011	294.70	23.48	271.22
KMW-6	4/2/2012	294.70	23.39	271.31
KMW-6	10/21/2014	294.81	21.05	273.76
KMW-6	12/9/2015	294.81	24.31	270.50
KMW-6	12/13/2016	294.81	23.53	271.28
KMW-6	3/13/2017	294.81	22.34	272.47
KMW-6	7/17/2017	294.81	21.90	272.91
KMW-6	10/20/2017	294.81	23.31	271.50
KMW-6	1/24/2018	294.81	23.30	271.51
KMW-6	4/17/2018	294.81	22.54	272.27
KMW-6	7/18/2018	294.81	22.98	271.83
KMW-6	10/15/2018	294.81	23.98	270.83

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-7	4/24/2007	301.32	29.22	272.10
KMW-7	8/21/2008	301.32	31.65	269.67
KMW-7	11/5/2010	301.32	31.36	269.96
KMW-7	2/11/2011	301.32	30.14	271.18
KMW-7	5/30/2011	301.32	28.92	272.40
KMW-7	7/19/2011	301.32	29.27	272.05
KMW-7	10/17/2011	301.32	30.25	271.07
KMW-7	4/2/2012	301.32	30.35	270.97
KMW-7	10/21/2014	301.43	30.88	270.55
KMW-7	12/15/2015	301.43	31.03	270.40
KMW-7	12/13/2016	301.43	30.40	271.03
KMW-7	3/13/2017	301.43	28.98	272.45
KMW-7	7/17/2017	301.43	28.61	272.82
KMW-7	10/20/2017	301.43	30.19	271.24
KMW-7	1/24/2018	301.43	28.66	272.77
KMW-7	4/17/2018	301.43	29.28	272.15
KMW-7	7/18/2018	301.43	29.70	271.73
KMW-7	10/15/2018	301.43	30.87	270.56
KMW-8	4/24/2007	308.08	35.73	272.35
KMW-8	8/21/2008	308.08	38.14	269.94
KMW-8	11/5/2010	308.08	37.87	270.21
KMW-8	2/11/2011	308.08	36.72	271.36
KMW-8	5/30/2011	308.08	35.40	272.68
KMW-8	7/19/2011	308.08	35.68	272.40
KMW-8	10/17/2011	308.08	36.71	271.37
KMW-8	4/2/2012	308.08	37.02	271.06
KMW-8	10/21/2014	308.15	37.34	270.81
KMW-8	12/9/2015	308.15	37.76	270.39
KMW-8	12/13/2016	308.15	36.92	271.23
KMW-8	3/13/2017	308.15	35.94	272.21
KMW-8	7/17/2017	308.15	34.98	273.17
KMW-8	10/20/2017	308.15	36.35	271.80
KMW-8	1/24/2018	308.15	36.41	271.74
KMW-8	4/17/2018	308.15	35.87	272.28
KMW-8	7/18/2018	308.15	36.10	272.05
KMW-8	10/15/2018	308.15	37.12	271.03

Table D2
Historical Summary of Groundwater Elevations (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Location	Date	Well Casing Elevation (feet NAVD88)	Depth to Water (feet below well casing)	Water Level Elevation (feet NAVD88)
KMW-9	4/24/2007	310.18	36.49	273.69
KMW-9	11/5/2010	310.18	38.78	271.40
KMW-9	2/11/2011	310.18	37.51	272.67
KMW-9	5/30/2011	310.18	36.11	274.07
KMW-9	7/19/2011	310.18	36.49	273.69
KMW-9	10/17/2011	310.18	37.51	272.67
KMW-9	4/2/2012	310.18	37.84	272.34
KMW-9	4/14/2014	310.53	37.91	272.62
KMW-9	10/21/2014	310.33	38.24	272.09
KMW-9	12/9/2015	310.33	38.71	271.62
KMW-9	12/13/2016	310.33	37.79	272.54
KMW-9	3/13/2017	310.33	36.65	273.68
KMW-9	7/17/2017	310.33	35.66	274.67
KMW-9	10/20/2017	310.33	37.16	273.17
KMW-9	1/24/2018	310.33	37.22	273.11
KMW-9	4/17/2018	310.33	36.64	273.69
KMW-9	7/18/2018	310.33	36.87	273.46
KMW-9	10/15/2018	310.33	37.97	272.36

NOTES:

1. '-- = not measured or not applicable.
2. Well monument types: flush grade monuments and above ground (AG) monuments.
3. Depth to water is measured from top of well casing.
4. Elevations are reported relative to North American Vertical Datum of 1988 (NAVD 88).
5. Top of casing (TOC) elevations were surveyed by D.R. Strong Consulting Engineers, Inc. in February and May 213 and by Lanktree Land Surveying, Inc. in July 215.

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
Shallow Monitoring Wells			
MW-1	12/10/1999	**21.6**	
MW-1	7/25/2005	**15**	
MW-1	4/11/2006	**14**	
MW-1	10/26/2006	**11**	
MW-1	4/25/2007	**13**	
* Monitoring well cannot be located			
MW-2	12/10/1999	**16.7**	
MW-2	4/5/2012	**7.1**	
MW-2	5/30/2013	**2.4**	
MW-2	4/14/2014	**3.2**	
MW-2	10/24/2014	**1.4**	
MW-2	12/11/2015	1.00 U	
MW-2	3/13/2017	**6.02**	
MW-2	7/18/2017	**2.43**	
MW-2	10/26/2017	**1.55**	
MW-2	4/19/2018	**3.39**	
MW-2	7/17/2018	**1.78**	Chloroform (0.569)
MW-2	10/18/2018	**1.17**	Chloroform (0.843)
MW-3	4/14/2008	**2.31**	Chloroform (0.990)
MW-3	11/1/2010	**2.9**	
MW-3	5/31/2011	2.0 U	
MW-3	7/20/2011	2.0 U	
MW-3	10/18/2011	**6.1**	
MW-3	4/4/2012	**5.8**	
MW-3	5/29/2013	**4.0**	
MW-3	10/24/2014	**1.0**	
MW-3	12/10/2015	**1.34**	
MW-3	12/14/2016	1.00 U	
MW-3	3/13/2017	1.00 U	
MW-3	7/18/2017	**1.76**	
MW-3	10/25/2017	**4.21**	
MW-3	4/20/2018	**1.00**	
MW-3	10/16/2018	0.500 U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-4	4/14/2008	**33**		Chloroform (0.780), cis-1,2-DCE (0.320), TCE (0.490)
MW-4	3/9/2010	**7.8**		
MW-4	11/1/2010	**16**		
MW-4	5/31/2011	**10**		
MW-4	7/21/2011	**25**		
MW-4	10/19/2011	**21**		
MW-4	4/4/2012	**11**		
MW-4	5/29/2013	**8.1**		
MW-4	10/29/2014	**7.3**		
MW-4	12/14/2015	**4.89**		
MW-4	12/14/2016	1.00	U	
MW-4	3/14/2017	1.00	U	
MW-4	7/18/2017	**1.40**		
MW-4	10/25/2017	**3.23**		
MW-4	4/20/2018	0.500	U	
MW-4	10/16/2018	0.500	U	
MW-5	4/11/2008	**0.470**		
MW-5	4/2/2012	2.0	U	
MW-6	4/15/2008	2.0	U	
MW-6	4/2/2012	2.0	U	
MW-7	4/16/2008	**22.4**		
MW-7	4/2/2012	**14**		
MW-7	10/29/2014	**20**		
MW-7	12/15/2015	**7.42**		
MW-7	3/17/2017	**8.08**		
MW-7	7/19/2017	**7.20**		
MW-7	10/25/2017	**7.47**		
MW-7	1/26/2018	**7.73**		
MW-7	4/20/2018	**7.64**		
MW-7	7/19/2018	**6.60**		
MW-7	10/23/2018	**5.79**		
MW-8	8/21/2008	**0.20**	J	
MW-8	4/2/2012	2.0	U	
MW-9	8/21/2008	**0.10**	J	
MW-9	4/2/2012	2.0	U	
MW-9	10/24/2014	1.0	U	
MW-9	12/10/2015	1.00	U	
MW-9	3/13/2017	1.00	U	
MW-9	10/23/2017	0.500	U	
MW-9	4/18/2018	0.500	U	
MW-9	10/17/2018	0.500	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-10	2/8/2011	**10**		
MW-10	5/31/2011	2.0	U	
MW-10	7/20/2011	**4.1**		
MW-10	10/18/2011	**4.9**		
MW-10	4/6/2012	**6.7**		
MW-10	5/29/2013	**4.1**		
MW-10	10/24/2014	**1.7**		
MW-10	12/11/2015	1.00	U	TCE (3.22)
MW-10	12/14/2016	**1.13**		
MW-10	3/14/2017	**1.09**		
MW-10	7/18/2017	1.00	U	
MW-10	10/23/2017	0.500	U	
MW-10	4/18/2018	**0.716**		
MW-10	10/18/2018	0.500	U	
MW-11	2/8/2011	**47**		
MW-11	5/31/2011	2.0	U	Acetone (51)
MW-11	7/20/2011	2.0	U	Acetone (154)
MW-11	10/18/2011	2.0	U	Acetone (130)
MW-11	4/6/2012	**29**		
MW-11	5/31/2013	**22**		
MW-11	10/29/2014	**15**		
MW-11	12/14/2015	**11.9**		
MW-11	12/15/2016	**7.99**		
MW-11	3/16/2017	**4.66**		
MW-11	7/19/2017	**2.52**		
MW-11	10/26/2017	**2.15**		
MW-11	1/25/2018	**2.52**		
MW-11	4/19/2018	**2.97**		
MW-11	10/19/2018	**2.44**		
MW-12	4/4/2012	2.0	U	
MW-12	5/28/2013	1.0	U	
MW-12	10/23/2014	1.0	U	
MW-12	12/10/2015	1.00	U	
MW-12	12/14/2016	1.00	U	
MW-12	3/13/2017	1.00	U	
MW-12	7/18/2017	1.00	U	
MW-12	10/23/2017	0.500	U	
MW-12	4/18/2018	0.500	U	
MW-12	10/16/2018	0.500	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
MW-13	4/3/2012	2.0	U	
MW-13	5/30/2013	1.0	U	
MW-13	10/23/2014	1.0	U	
MW-13	12/10/2015	1.00	U	
MW-13	12/13/2016	1.00	U	
MW-13	3/14/2017	1.00	U	
MW-13	7/18/2017	1.00	U	
MW-13	10/23/2017	0.500	U	
MW-13	4/18/2018	0.500	U	
MW-13	10/16/2018	0.500	U	
MW-14	4/5/2012	2.0	U	
MW-14	5/29/2013	1.0	U	
MW-14	10/30/2014	1.0	U	
MW-14	12/11/2015	1.00	U	
MW-14	3/14/2017	1.00	U	
MW-14	10/24/2017	**0.910**		
MW-14	4/20/2018	**1.27**		
MW-14	10/23/2018	0.500	U	
MW-15	4/5/2012	2.0	U	
MW-15	5/28/2013	1.0	U	
MW-15	4/14/2014	1.0	U	
MW-15	10/23/2014	1.0	U	
MW-15	12/10/2015	1.00	U	
MW-15	3/14/2017	1.00	U	
MW-15	10/24/2017	**0.954**		
MW-15	4/19/2018	**1.13**		
MW-15	10/18/2018	0.500	U	
MW-16	5/31/2013	**2.5**		
MW-16	10/23/2014	**1.3**		
MW-16	12/11/2015	**1.20**		
MW-16	12/13/2016	**1.63**		
MW-16	3/16/2017	**1.13**		
MW-16	7/18/2017	1.00	U	
MW-16	10/24/2017	**1.26**		
MW-16	4/19/2018	**1.33**		
MW-16	10/18/2018	**0.912**		Chloroform (0.539)

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-1	10/21/1998	**0.60**		Toluene (0.8)
DC-1	2/3/1999	0.5	U	
DC-1	4/7/1999	0.5	U	Toluene (8.7)
DC-1	12/8/1999	1.0	U	
DC-1	4/26/2000	1.0	U	
DC-1	8/3/2000	1.0	U	
DC-1	11/14/2000	1.0	U	
DC-1	3/6/2001	1.0	U	
DC-1	6/20/2001	1.0	U	
DC-1	9/17/2001	1.0	U	
DC-1	12/20/2001	1.0	U	
DC-1	3/13/2002	1.0	U	
DC-1	9/17/2002	1.0	U	
DC-1	12/10/2002	1.0	U	
DC-1	3/31/2003	1.0	U	
DC-1	9/3/2003	1.0	U	
DC-1	3/16/2004	1.0	U	
DC-1	9/7/2004	1.0	U	
DC-1	4/25/2007	0.2	U	
DC-1	4/4/2012	2.0	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-2	10/21/1998	**2.4**		Chloroform (1.8), Toluene (0.6)
DC-2	2/3/1999	**0.7**		
DC-2	4/7/1999	0.5	U	Chloroform (1.4), Toluene (14)
DC-2	12/8/1999	0.5	U	
DC-2	4/26/2000	1.0	U	
DC-2	8/3/2000	1.0	U	
DC-2	11/14/2000	1.0	U	
DC-2	3/6/2001	1.0	U	
DC-2	6/20/2001	1.0	U	
DC-2	9/17/2001	1.0	U	
DC-2	12/20/2001	1.0	U	
DC-2	3/13/2002	**4.0**		
DC-2	6/13/2002	1.0	U	
DC-2	9/17/2002	1.0	U	
DC-2	12/10/2002	**0.50**		
DC-2	3/31/2003	**3.37**		
DC-2	9/3/2003	1.0	U	
DC-2	3/16/2004	**0.74**		
DC-2	9/7/2004	1.0	U	
DC-2	4/26/2007	**1.2**		
DC-2	4/14/2008	**0.340**		Chloroform (1.60)
DC-2	11/3/2010	2.0	U	
DC-2	5/31/2011	2.0	U	
DC-2	7/21/2011	2.0	U	
DC-2	10/18/2011	2.0	U	
DC-2	4/4/2012	2.0	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-3	10/28/1998	**54**		Chloroform (1.9), Toluene (0.6)
DC-3	2/4/1999	**25**		
DC-3	4/8/1999	**36**		Chloroform (1.2), Toluene (15)
DC-3	12/8/1999	**45**		
DC-3	4/26/2000	**56**		
DC-3	8/3/2000	**25**		
DC-3	11/14/2000	1.0	U	
DC-3	3/6/2001	**4.7**		
DC-3	6/20/2001	**2.8**		
DC-3	9/17/2001	1.0	U	
DC-3	12/20/2001	**9.2**		
DC-3	3/13/2002	**40.0**		
DC-3	6/13/2002	**42.3**		
DC-3	9/17/2002	**33.4**		
DC-3	12/10/2002	**5.40**		
DC-3	3/31/2003	**7.34**		
DC-3	9/3/2003	**2.08**		
DC-3	3/16/2004	1.0	U	
DC-3	9/7/2004	**3.43**		
DC-3	4/26/2007	**42.0**		
DC-3	4/14/2008	**27.8**		Chloroform (1.50)
DC-3	3/9/2010	2.0	U	
DC-3	11/3/2010	2.0	U	
DC-3	5/30/2011	**3.9**		
DC-3	7/20/2011	**12**		
DC-3	10/18/2011	**6.7**		
DC-3	4/4/2012	**2.9**		
DC-3	10/27/2014	**1.4**		
DC-3	12/11/2015	**1.49**		
DC-3	12/14/2016	1.00	U	
DC-3	3/14/2017	**2.11**		
DC-3	7/18/2017	1.00	U	
DC-3	10/24/2017	**0.786**		
DC-3	4/18/2018	**1.23**		
DC-3	10/17/2018	0.500	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-4	10/28/1998	**227**		Chloroform (0.9), Toluene (0.7)
DC-4	2/4/1999	**144**		
DC-4	4/8/1999	**110**		Toluene (2.6)
DC-4	12/8/1999	**71**		
DC-4	4/26/2000	**120**		
DC-4	8/3/2000	**42**		
DC-4	11/14/2000	**64**		
DC-4	3/6/2001	**52**		TCE (3.0)
DC-4	6/20/2001	**40**		
DC-4	9/17/2001	**23**		
DC-4	12/20/2001	**15**		
DC-4	3/13/2002	**55**		
DC-4	6/13/2002	**17.9**		
DC-4	9/17/2002	**28.8**		
DC-4	12/10/2002	**22.4**		
DC-4	3/31/2003	**12.5**		
DC-4	9/3/2003	**14.1**		
DC-4	3/16/2004	**19.8**		
DC-4	9/7/2004	**18.5**		
DC-4	4/26/2007	**19.0**		
DC-4	4/11/2008	**30.2**		Chloroform (1.2)
DC-4	3/9/2010	**9.2**		
DC-4	11/3/2010	**13**		
DC-4	5/31/2011	2.0	U	Acetone (46)
DC-4	7/20/2011	2.0	U	Acetone (77)
DC-4	10/18/2011	**22**		
DC-4	4/4/2012	**22**		
DC-4	5/30/2013	**11**		
DC-4	10/29/2014	**13**		
DC-4	12/14/2015	**5.49**		
DC-4	12/14/2016	1.00	U	
DC-4	3/14/2017	1.00	U	
DC-4	7/18/2017	1.00	U	
DC-4	10/24/2017	0.500	U	
DC-4	4/18/2018	0.500	U	
DC-4	10/17/2018	0.500	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-6	2/4/1999	**5.1**	
DC-6	4/8/1999	**3.7**	Chloroform(1.3), Toluene (2.3)
* Monitoring well cannot be located			
DC-7	2/4/1999	**74**	
DC-7	4/8/1999	**64**	Toluene (1.3)
DC-7	12/8/1999	**107**	
DC-7	4/26/2000	**130**	
DC-7	8/3/2000	**50**	
DC-7	11/14/2000	**130**	
DC-7	3/6/2001	**140**	
DC-7	6/20/2001	**96**	
DC-7	9/17/2001	**81**	
DC-7	12/20/2001	**47**	
DC-7	3/13/2002	**31**	
DC-7	6/13/2002	**41.5**	
DC-7	9/17/2002	**77.7**	
DC-7	12/10/2002	**91.8**	
DC-7	3/31/2003	**40.1**	
DC-7	9/3/2003	**57.4**	
DC-7	7/25/2005	**37.0**	
DC-7	4/11/2006	**23.0**	
DC-7	10/26/2006	**51.0**	
DC-7	4/24/2007	**27.0**	
DC-7	4/16/2008	**50.8**	
DC-7	11/3/2010	**34**	
DC-7	6/1/2011	**15**	
DC-7	7/21/2011	**38**	
DC-7	10/18/2011	**42**	
DC-7	4/5/2012	**18**	
DC-7	5/30/2013	**15**	
DC-7	10/30/2014	**23**	
DC-7	12/16/2015	**13.3**	
DC-7	3/17/2017	**10.4**	
DC-7	10/23/2017	**6.67 J**	
DC-7	1/26/2018	**12.1**	
DC-7	4/20/2018	**12.8**	
DC-7	7/20/2018	**12.3**	
DC-7	10/23/2018	**11.6**	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-8	2/4/1999	**56**	
DC-8	4/8/1999	**48**	Toluene (1.2)
DC-8	12/8/1999	**98**	
DC-8	4/26/2000	**87**	
DC-8	8/3/2000	**70**	
DC-8	11/14/2000	**130**	
DC-8	3/6/2001	**82**	
DC-8	6/20/2001	**80**	
DC-8	9/17/2001	**62**	
DC-8	12/20/2001	**50**	
DC-8	3/13/2002	**31**	
DC-8	6/13/2002	**26.6**	
DC-8	9/17/2002	**38.4**	
DC-8	12/10/2002	**53.1**	
DC-8	3/31/2003	**36.4**	
DC-8	9/3/2003	**34.7**	
DC-8	7/25/2005	**26.0**	
DC-8	4/11/2006	**14.0**	
DC-8	10/26/2006	**28.0**	
DC-8	4/24/2007	**24.0**	
DC-8	4/16/2008	**39.4**	
DC-8	11/3/2010	**25**	
DC-8	6/1/2011	**11**	
DC-8	7/21/2011	**25**	
DC-8	10/19/2011	**26**	
DC-8	4/5/2012	**18**	
DC-8	5/30/2013	**11**	
DC-8	10/30/2014	**18**	
DC-8	12/16/2015	**8.61**	
DC-8	3/16/2017	**9.69**	
DC-8	7/19/2017	**8.94**	
DC-8	10/23/2017	**14.8**	
DC-8	1/24/2018	**12.0**	
DC-8	4/18/2018	**13.0**	
DC-8	7/18/2018	**11.7**	
DC-8	10/18/2018	**12.1**	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-9A	4/8/1999	**135**	Toluene (3.2)
DC-9A	12/8/1999	**73**	
DC-9A	4/26/2000	**240**	
DC-9A	8/3/2000	**110**	
DC-9A	4/11/2006	**78**	
DC-9A	8/8/2006	**49**	
DC-9A	11/2/2006	2.9	
DC-9A	4/26/2007	**33**	
* Monitoring well cannot be located			
DC-10A	4/8/1999	**150**	Toluene (1.7)
DC-10A	12/8/1999	**73**	TCE (1.1)
DC-10A	4/26/2000	**210**	
DC-10A	4/5/2012	**41**	
DC-10A	5/31/2013	**19**	
DC-10A	10/30/2014	**17**	
DC-10A	12/15/2016	**10.8**	
DC-10A	3/17/2017	**8.62**	
DC-10A	7/19/2017	**4.69**	
DC-10A	10/26/2017	**4.72**	
DC-10A	1/25/2018	**3.62**	
DC-10A	4/20/2018	**4.67**	
DC-10A	7/17/2018	**2.68**	
DC-11	4/26/2007	**12**	
DC-11	3/9/2010	**4.6**	
DC-11	11/1/2010	**4.8**	
DC-11	4/4/2012	**3.1**	
DC-11	4/15/2014	**1.2**	
DC-11	10/27/2014	**1.4**	
DC-11	12/11/2015	**1.48**	
DC-11	3/15/2017	**1.97**	
DC-11	10/26/2017	**1.35**	
DC-11	4/19/2018	**1.21**	
DC-11	10/18/2018	**1.25**	
DC -12	4/25/2007	**16**	
DC-12	4/4/2012	**3.7**	
DC-12	5/30/2013	**2.3**	
DC-12	4/15/2014	**1.4**	
DC-12	10/27/2014	**1.8**	
DC-12	12/14/2015	**2.04**	
DC-12	3/15/2017	**2.02**	
DC-12	10/27/2017	**1.66**	
DC-12	4/20/2018	**1.50**	
DC-12	10/19/2018	**1.66**	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-13	4/25/2007	**15**	
DC-13	4/16/2008	**23**	
DC-13	3/1/2010	**10**	
DC-13	11/2/2010	**9.2**	
DC-13	4/5/2012	**6.4**	
DC-13	5/30/2013	**1.7**	
DC-13	4/14/2014	**3.2**	
DC-13	10/27/2014	**2.7**	
DC-13	12/14/2015	**2.78**	
DC-13	3/15/2017	**4.32**	
DC-13	10/27/2017	**2.79**	
DC-13	4/20/2018	**2.87**	
DC-13	10/19/2018	**2.74**	
DC-14	4/25/2007	**11**	
DC-14	4/3/2012	**11**	
DC-14	5/30/2013	**6.0**	
DC-14	10/29/2014	**19**	
DC-14	12/15/2015	**6.02**	
DC-14	3/16/2017	**6.20**	
DC-14	7/19/2017	**4.94**	
DC-14	10/26/2017	**5.40**	Chloroform (2.23)
DC-14	2/2/2018	**7.81**	
DC-14	4/19/2018	**5.14**	Chloroform (2.27)
DC-14	7/19/2018	**5.40**	Chloroform (1.25)
DC-15	4/24/2007	**11**	
DC-15	4/5/2012	**20**	
DC-15	4/15/2014	**10**	
DC-15	10/30/2014	**5.8**	
DC-15	12/16/2015	**5.93**	
DC-15	3/16/2017	**8.96**	
DC-15	10/23/2017	**7.42**	
DC-15	1/24/2018	**8.61**	
DC-15	4/18/2018	**9.88**	
DC-15	7/18/2018	**7.82**	
DC-15	10/18/2018	**7.65**	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)	Other VOCs detected (µg/l)
DC-17	4/25/2007	**47**	
DC-17	4/16/2008	**74.6**	
DC-17	5/31/2013	**21**	
DC-17	10/23/2014	**17**	
DC-17	12/16/2015	**15.1**	
DC-17	3/17/2017	**13.9**	
DC-17	10/23/2017	**8.06**	
DC-17	1/26/2018	**7.38**	
DC-17	4/20/2018	**10.1**	
DC-17	7/20/2018	**8.62**	
DC-17	10/19/2018	**8.24**	
DC-18	4/25/2007	**19**	
DC-18	4/5/2012	**7.2**	
DC-18	5/30/2013	**4.8**	
DC-18	10/28/2014	**3.0**	
DC-18	12/14/2015	**3.19**	
DC-18	3/16/2017	**3.24**	
DC-18	10/26/2017	**3.26**	Chloroform (3.00)
DC-18	4/20/2018	**3.31**	Chloroform (3.23)
DC-18	10/19/2018	**2.79**	Chloroform (2.36)
DC-19	6/4/2007	**0.79**	
DC-19	4/14/2008	**0.66**	
DC-19	4/4/2012	2.0 U	
DC-20	6/2/2008	**8.1**	
DC-20	5/30/2013	**1.7**	
DC-20	4/14/2014	**1.4**	
DC-20	10/28/2014	1.0 U	
DC-20	12/15/2015	**1.74**	1,2-Dichlororpropane (1.82)
DC-20	3/15/2017	**2.00**	
DC-20	10/27/2017	**0.991**	
DC-20	4/19/2018	**1.14**	
DC-20	10/19/2018	**0.885**	Benzene (0.54), sec-Butylbenzene (0.6 0)

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
KMW-1	4/11/2006	1.0	U	
KMW-1	10/26/2006	1.0	U	
KMW-1	4/25/2007	0.2	U	
KMW-1	4/14/2008	0.2	U	Chloroform (0.450)
KMW-1	4/3/2012	2.0	U	
KMW-2	6/12/2006	**130**		
KMW-2	8/8/2006	**130**		
KMW-2	10/26/2006	**190**		
KMW-2	4/24/2007	**63**		
KMW-2	4/16/2008	**96**		
KMW-2	3/8/2010	**81**		
KMW-2	11/3/2010	**74**		
KMW-2	6/1/2011	**12**		Acetone (140)
KMW-2	7/20/2011	**44**		
KMW-2	10/19/2011	**40**		
KMW-2	4/6/2012	**25**		
KMW-2	5/31/2013	**22**		
KMW-2	10/29/2014	**18**		
KMW-2	12/15/2015	**15**		
KMW-2	12/15/2016	**1.18**		
KMW-2	3/14/2017	1.00	U	
KMW-2	7/18/2017	1.00	U	
KMW-2	10/24/2017	0.500	U	
KMW-2	4/18/2018	0.500	U	
KMW-2	10/16/2018	0.500	U	
KMW-3	6/12/2006	**20**		
KMW-3	10/26/2006	**13**		
KMW-3	4/24/2007	**9.9**		
KMW-3	11/2/2010	**11**		
KMW-3	5/31/2011	**6.2**		
KMW-3	7/20/2011	**12**		
KMW-3	10/18/2011	**11**		
KMW-3	4/3/2012	**6.8**		
KMW-3	10/28/2014	1.0	U	
KMW-3	3/14/2017	**3.23**		
KMW-3	10/26/2017	**5.78**		
KMW-3	1/25/2018	**4.95**		
KMW-3	4/20/2018	**5.37**		
KMW-3	7/19/2018	**5.18**		
KMW-3	10/23/2018	**5.41**		

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
KMW-4	4/25/2007	**0.73**		
KMW-4	4/3/2012	2.0	U	
KMW-5	4/25/2007	**0.82**		
KMW-5	4/3/2012	2.0	U	
KMW-6	4/24/2007	**3.8**		
KMW-6	4/3/2012	2.0	U	
KMW-7	4/24/2007	**3.8**		
KMW-7	4/15/2008	**3.9**		
KMW-7	11/3/2010	2.0	U	
KMW-7	5/30/2011	**2.3**		
KMW-7	7/20/2011	2.0	U	
KMW-7	10/18/2011	2.0	U	
KMW-7	4/3/2012	**3.3**		
KMW-7	10/28/2014	**2.0**		p-isopropyltoluene (2.8)
KMW-7	12/15/2015	**2.17**		
KMW-7	3/16/2017	**1.17**		
KMW-7	10/25/2017	0.500	U	
KMW-7	4/19/2018	**1.59**		
KMW-7	10/23/2018	**0.711**		
KMW-8	4/24/2007	**11**		
KMW-8	4/15/2008	**17.4**		
KMW-8	4/3/2012	**10**		
KMW-8	10/28/2014	**5.9**		
KMW-8	12/15/2015	**3.98**		
KMW-8	3/16/2017	**6.71**		
KMW-8	7/19/2017	**5.00**		
KMW-8	10/26/2017	**4.99**		Chloroform (1.15)
KMW-8	1/25/2018	**5.89**		Chloroform (2.01)
KMW-8	4/19/2018	**5.74**		Chloroform (1.68)
KMW-8	7/19/2018	**5.17**		Chloroform (1.13)
KMW-8	10/23/2018	**5.26**		Chloroform (1.16)
KMW-9	4/26/2007	**9.3**		
KMW-9	3/8/2010	**4.4**		
KMW-9	11/4/2010	**2.8**		
KMW-9	4/5/2012	**4.0**		
KMW-9	4/15/2014	**1.0**		
KMW-9	10/27/2014	1.0	U	
KMW-9	12/10/2015	**1.47**		
KMW-9	3/15/2017	**2.07**		
KMW-9	10/26/2017	**0.770**		
KMW-9	4/18/2018	**1.02**		
KMW-9	10/18/2018	0.500	U	Chloroform (0.699)

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
Deep Monitoring Wells				
DC-5	2/4/1999	**2.4**		
DC-5	4/8/1999	**1.6**		Chloroform (2.6), Toluene (1.0)
DC-5	7/25/2005	**37**		
DC-5	4/11/2006	**1.3**		
DC-5	4/26/2007	**2.1**		
DC-5	11/3/2010	**2.1**		
DC-5	5/30/2011	2.0	U	
DC-5	7/19/2011	2.0	U	
DC-5	10/18/2011	2.0	U	
DC-5	4/6/2012	2.0	U	
DC-5	5/29/2013	1.0	U	
DC-9B	4/8/1999	**1.4**		Chloroform (1.4), Toluene (2.9)
DC-9B	3/6/2001	**2.0**		
DC-9B	6/20/2001	1.0	U	
DC-9B	9/17/2001	1.0	U	
DC-9B	12/20/2001	**6.4**		
DC-9B	7/25/2005	1.0	U	
DC-9B	4/11/2006	1.0	U	
DC-9B	8/8/2006	1.0	U	
DC-9B	10/26/2006	1.0	U	
DC-9B	4/26/2007	0.2	U	
DC-9B	4/15/2008	**0.60**		
* Monitoring well has been decommissioned				
DC-10B	4/8/1999	**1.8**		Chloroform (1.2), Toluene (1.9)
DC-10B	3/6/2001	**3.3**		TCE (1.7)
DC-10B	6/20/2001	**2.4**		
DC-10B	9/17/2001	1.0	U	
DC-10B	12/20/2001	1.0	U	
DC-10B	7/25/2005	1.0	U	
DC-10B	4/11/2006	1.0	U	
DC-10B	4/26/2007	**0.34**		
DC-10B	11/3/2010	**2.6**		
DC-10B	5/30/2011	2.0	U	Acetone (290)
DC-10B	7/19/2011	2.0	U	Acetone (54)
DC-10B	10/18/2011	2.0	U	Acetone (31)
DC-10B	4/6/2012	2.0	U	

Table D3

Historical Summary of Groundwater Analytical Results (1999 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Monitoring Well	Date	PCE (µg/l)		Other VOCs detected (µg/l)
DC-16	4/25/2007	**0.42**		
DC-16	11/5/2010	2.0	U	
DC-16	5/31/2011	2.0	U	
DC-16	7/19/2011	2.0	U	
DC-16	10/18/2011	2.0	U	
DC-16	4/6/2012	2.0	U	
KMW-5D	4/25/2007	0.2	U	
KMW-5D	4/3/2012	2.0	U	

NOTES:

1. Tetrachloroethene (PCE) concentrations in migrograms per liter (µg/l).
2. Groundwater samples analyzed using USEPA Method 8260B.
3. U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. J = the identification of the analyte is acceptable; the reported value is an estimate
5. Detected concentrations are shown in **bold.**
6. Concentrations exceeding the cleanup level are **bold and shaded**.
7. Other detected VOCs are below their respective cleanup level unless otherwise noted.
8. Shallow monitoring wells are screened at the top of the shallow aquifer, and deep monitoring wells are screened below and deeper within the shallow aquifer.
9. Review of historical results indicate that DC-17 was inadvertently sampled as DC-5 in 2010, 2011 and 2012. This table reports the 2010 - 2012 DC-17 data as DC-5.

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
B-01	2	03/12/98	**0.28**		
B-01	5	03/12/98	**35**		
B-02	2	03/12/98	**0.3**		
B-02	4	03/12/98	**1.2**		
B-03	2	03/12/98	**1.2**		
B-03	5	03/12/98	**1.3**		
B-04	2	03/12/98	**1.4**		
B-04	2	03/12/98	**0.88**		Duplicate
B-04	5	03/12/98	**0.99**		
S-01	11	04/14/98	**0.8**		
S-01	20	04/14/98	**0.6**		
S-01	30	04/14/98	ND U		
S-01	34	04/14/98	ND U		
DC-01	NA	12/17/98	ND U		Composite
DC-02	NA	12/17/98	**0.19**		Composite
DC-03	NA	12/17/98	ND U		Composite
DC-04	NA	12/17/98	**0.15**		Composite
DC-04	NA	12/17/98	**0.16**		Duplicate
DC-03	NA	12/17/98	**0.18**		Comp (sat)
DC-04	NA	12/17/98	ND U		Comp (sat)
BH-01	3.5	12/16/98	**0.88**	Ethylbenzene = 0.17 Xylenes = 0.63	
BH-01	3.5	12/16/98	**0.9**	Benzene = 0.15, Xylenes 0.66	Duplicate
BH-01	9	12/16/98	**0.19**		
BH-02	8	12/16/98	ND U		
BH-03	7	12/16/98	ND U		
BH-04	7	12/16/98	ND U		
BH-05	6	12/16/98	**2.2**		
BH-05	6	12/16/98	**2.2**		Duplicate
BH-05	11	12/16/98	ND U		
BH-06	7	12/16/98	ND U		
BH-06	10	12/16/98	ND U	cis-1,2-dichloroethene = 0.07	
BH-07	1	12/16/98	**0.1**	Benzene = 0.31 Toluene = 0.32 Xylenes = 0.38	
BH-08	8	12/16/98	ND U		
BH-09	8	12/16/98	ND U	Benzene = 0.66 Ethylbenzene = 1.1	
BH-10	8	12/16/98	ND U		
BH-11	1	12/16/98	ND U		
BH-12	8	12/16/98	ND U		
BH-13	7	12/16/98	**1.4**		
BH-13	11	12/16/98	ND U		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
BH-14	8	12/16/98	**10**		
BH-14	11	12/16/98	**0.22**		
BH-14	11	12/16/98	**0.16**		Duplicate
BH-14	20	12/16/98	ND U		
BH-15	6	12/17/98	**1.1**		
BH-15	11	12/17/98	ND U		
BH-16	7	12/17/98	**0.3**		
BH-16	11	12/17/98	ND U		
BH-17	11	12/17/98	ND U		
BH-18	7	12/17/98	ND U		
BH-18	11	12/17/98	ND U		
BH-19	8	12/17/98	ND U		
DC-05	56	01/22/99	ND U		
DC-06	40	01/22/99	ND U		
DC-07	35	01/22/99	ND U		
DC-08	35	01/22/99	ND U		
DC-9B	35	04/05/99	ND U		
DC-10B	50	04/05/99	ND U		
MW-01	2.5-4	12/09/99	ND U		
MW-02	32.5-34	12/09/99	ND U		
HA-01	4.5-5	12/22/99	0.05 U		
HA-01	10.10.5	12/22/99	**0.0685**		
HA-01	12.5-13	12/22/99	0.05 U		
T-01	4	07/26/00	ND U		S.Sewer Ex.
T-02	4	07/26/00	ND U		S.Sewer Ex.
T-03	3	07/26/00	ND U		S.Sewer Ex.
T-04	3	07/26/00	ND U		S.Sewer Ex.
SVS-04	0-4	02/11/05	**0.0058**		
SVS-05	0-4	02/11/05	0.0011 U		
KB-01	4-5	04/15/05	0.02 U		
KB-01	15-16	04/15/05	**0.02**		
KB-01	25-26	04/15/05	**0.084**		
KB-01	35-36	04/15/05	**0.18**		
KB-02	4-5	04/15/05	0.02 U		
KB-02	15-16	04/15/05	0.02 U		
KB-02	25-26	04/15/05	**0.098**		
KB-02	35-36	04/15/05	**0.16**		
KB-03	4-5	04/15/05	0.02 U		
KB-03	15-16	04/15/05	0.02 U		
KB-03	25-26	04/15/05	0.02 U		
KB-04	4-5	04/15/05	0.02 U		
KB-04	15-16	04/15/05	**0.049**		
KB-04	19-20	04/15/05	**0.1**		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KB-05	4-5	04/15/05	0.02 U		
KB-05	15-16	04/15/05	0.02 U		
KB-05	25-26	04/15/05	**0.035**		
KB-05	35-36	04/15/05	**0.055**		
ST-01	6	03/29/06	**0.07**		Overexcavated
North Septic Sidewall	9	04/05/06	0.005 U		Sidewall
East Septic Sidewall	9	04/05/06	**0.033**		Overexcavated
South Septic Sidewall	9	04/05/06	0.005 U		Sidewall
West Septic Sidewall	9	04/05/06	0.005 U		Sidewall
ST-02	6	04/05/06	**0.006**		Overexcavated
ST-03	7	04/05/06	**0.016**		Overexcavated
ST-04	7	04/05/06	**0.073**		Overexcavated
ST5 Clearance	9	04/05/06	0.005 U		Overexcavated
ST6 Clearance	9	04/05/06	**0.007**		Bottom
East Septic Sidewall 2	11	04/06/06	0.005 U		Sidewall
ST5 Clearance 2	12	04/05/06	0.005 U		Bottom
KMW-01	7	07/25/05	0.05 U		
KMW-01	22	07/25/05	0.05 U		
KMW-01	40	07/25/05	0.05 U		
KMW-02	10	05/01/06	0.05 U		
KMW-02	20	05/01/06	0.05 U		
KMW-02	30	05/01/06	0.05 U		
KMW-03	10	05/01/06	0.05 U		
KMW-03	20	05/01/06	0.05 U		
TW-01	5	05/01/06	0.05 U		
TW-01	10	05/01/06	0.05 U		
TW-01	20	05/01/06	0.05 U		
TW-01	30	05/01/06	0.05 U		
KMW-04	4-5.5	03/28/07	0.05 U		
KMW-04	9-10.5	03/28/07	0.05 U		
KMW-04	19-20.5	03/28/07	0.05 U		
KMW-04	29-30.5	03/28/07	0.05 U		
KMW-05	4-5.5	03/28/07	0.05 U		
KMW-05	9-10.5	03/28/07	0.05 U		
KMW-05	19-20.5	03/28/07	0.05 U		
KMW-05	29-30.5	03/28/07	0.05 U		
KMW-5D	4-5.5	03/28/07	0.05 U		
KMW-5D	9-10.5	03/28/07	0.05 U		
KMW-5D	24-25.5	03/28/07	0.05 U		
KMW-5D	46	03/28/07	0.05 U		
KMW-06	9-10.5	03/27/07	0.05 U		
KMW-06	19-20.5	03/27/07	0.05 U		
KMW-06	29-30.5	03/27/07	0.05 U		
KMW-06	41-42.5	03/27/07	0.05 U		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KMW-07	9-10.5	03/27/07	0.05 U		
KMW-07	19-20.5	03/27/07	0.05 U		
KMW-07	29-30.5	03/27/07	0.05 U		
KMW-08	9-10.5	03/27/07	0.05 U		
KMW-08	20-21.5	03/27/07	0.05 U		
KMW-08	29-30.5	03/27/07	0.05 U		
KMW-09	5	03/27/07	**0.0043**		
KMW-09	14-15.5	03/27/07	**0.2**		
KMW-09	19-20.5	03/27/07	**0.23**		
KMW-09	24-25.5	03/27/07	**1.8**		
KMW-09	29-30.5	03/27/07	**0.32**		
KMW-09	34-35.5	03/27/07	**0.29**		Split
KMW-09	35	03/27/07	**0.016**		Split
KMW-09	39-40.5	03/27/07	**0.053**		
KGP-01	4	07/06/07	**1.6**		Split
KGP-01	4	07/06/07	**13**	TCE = 0.15	Split
KGP-01	8	07/06/07	**59**		Split
KGP-01	8	07/06/07	**14**		Split
KGP-01	10.5	07/06/07	**2.1**		
KGP-01	16	07/06/07	**0.28**		Split
KGP-01	16	07/06/07	**0.08**		Split
KGP-01	20	07/06/07	**0.23**		
KGP-01	23	07/06/07	**0.15**		
KGP-01	32	07/06/07	**0.17**		
KGP-01	38	07/06/07	**0.051**		
KGP-02	4	07/06/07	**0.16**		Split
KGP-02	4	07/06/07	**0.087**		Split
KGP-02	8	07/06/07	**0.013**		Split
KGP-02	8	07/06/07	**0.0082**		Split
KGP-02	10.5	07/06/07	**0.064**		
KGP-02	16	07/06/07	**0.02**		Split
KGP-02	16	07/06/07	**0.022**		Split
KGP-02	20	07/06/07	**0.088**		
KGP-02	23	07/06/07	**0.033**		
KGP-02	30-31	07/06/07	**0.016**		
KGP-02	37	07/06/07	**0.015**		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
KGP-03	2-4	07/06/07	**0.001**		Split
KGP-03	2-4	07/06/07	**0.0017**		Split
KGP-03	8	07/06/07	**0.005**		Split
KGP-03	8	07/06/07	**0.0045**		Split
KGP-03	10.5	07/06/07	**0.007**		
KGP-03	13-16	07/06/07	**0.009**		Split
KGP-03	13-16	07/06/07	**0.0089**		Split
KGP-03	20	07/06/07	**0.009**		
KGP-03	23	07/06/07	**0.012**		
KGP-03	29-32	07/06/07	**0.011**		
KGP-03	38	07/06/07	**0.01**		
GP-01	8-12	03/30/07	0.0008 U		
GP-01	30-34	03/30/07	**0.0067**		
GP-02	4-8	04/02/07	0.0009 U		
GP-02	28-32	04/02/07	**0.0055**		
GP-03	8-12	03/30/07	0.00099 U		
GP-03	28-30	03/30/07	**0.011**		
GP-04	20-24	03/30/07	**0.0023**		
GP-05	4-8	04/03/07	**0.0028**		
GP-05	16-20	04/03/07	**0.024**		
GP-06	4-8	04/02/07	0.0011 U		
GP-06	27-30	04/02/07	**0.0033**		
GP-07	4-8	04/02/07	0.00095 U		
GP-07	30-34	04/02/07	**0.0016**		
GP-08	6	05/27/08	**0.0017**		
GP-08	10	05/27/08	**0.0026**		
GP-09	4	05/27/08	0.00086 U		
GP-09	10	05/27/08	**0.0019**		
GP-10	4	05/27/08	0.001 U		
GP-10	10	05/27/08	**0.0017**		
GP-11	6	05/27/08	**0.0014**		
GP-11	10	05/27/08	**0.0013**		
GP-12	6	05/27/08	**0.0011**		
GP-12	10	05/27/08	0.00092 U		
DC-11	15-16.5	04/19/07	**0.0013**		
DC-11	30-31.5	04/19/07	**0.0084**		
DC-12	15-16.5	04/18/07	**0.0024**		
DC-13	15-16.5	04/19/07	**0.00096**		
DC-13	35-36.5	04/19/07	**0.0081**		
DC-14	15-16.5	04/17/07	0.0011 U		
DC-15	15-16.5	04/16/07	0.0011 U		
DC-16	15-16.5	04/17/07	0.0011 U		
DC-17	15-16.5	04/16/07	0.001 U		
DC-17	35-36.5	04/16/07	**0.077**		
DC-18	15-16.5	04/18/07	0.001 U		

Table D4

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Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
DC-19	3.5-5	06/01/07	0.00077 U		
DC-19	7.5-9	06/01/07	0.00069 U		
DC-19	37.5-38	06/01/07	**0.0047**		
DC-20	10	05/28/08	**0.0026**		
DC-20	35	05/28/08	**0.0018**		
TP-01	4	05/12/08	**0.001**		Split
TP-01	4	05/12/08	0.02 U		Split
TP-01	6.5	05/12/08	0.0012 U		Split
TP-01	6.5	05/12/08	**0.02**		Split
TP-02-south	4	05/12/08	**0.0068**		Split
TP-02-south	4	05/12/08	**0.27**		Split
TP-02-north	4	05/12/08	**0.05**		
TP-03	3.5	05/12/08	**0.014**		Split
TP-03	3.5	05/12/08	**0.02**		Split
TP-05	2.5	05/12/08	**0.34**		
B-05	10	03/26/08	0.00287 U		
B-05	20	03/26/08	**0.0034**		
B-05	30	03/26/08	**0.00888**		
B-06	10	03/25/08	0.00302 U		
B-06	20	03/25/08	**0.00816**		
B-06	30	03/25/08	**0.00899**		
B-07	10	03/25/08	0.000151 U		
B-07	20	03/25/08	**0.00351**		
B-07	30	03/25/08	**0.00884**		
B-08	10	03/26/08	**0.00654**		
B-08	20	03/26/08	**0.00554**		
B-08	30	03/26/08	**0.00562**		
B-09	10	03/25/08	**0.00616**		
B-09	20	03/25/08	**0.0143**		
B-09	30	03/25/08	**0.0116**		
B-10	10	03/24/08	**0.671**		
B-10	20	03/24/08	**0.0508**		
B-10	30	03/24/08	**0.0154**		
B-11	10	03/27/08	**0.0324**		
B-11	20	03/27/08	**0.346**		
B-11	30	03/27/08	**0.279**		
B-12	10	03/27/08	0.00292 U		
B-12	20	03/27/08	**0.00299**		
B-12	30	03/27/08	**0.00848**		
B-13	10	03/27/08	**0.0311**		
B-13	20	03/27/08	**0.0314**		
B-13	30	03/27/08	**0.0231**		
B-14	10	03/24/08	**0.0118**		
B-14	20	03/24/08	**0.0296**		
B-14	30	03/24/08	**0.594**		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
B-15	10	03/24/08	**0.00532**		
B-15	20	03/24/08	**0.0188**		
B-15	30	03/24/08	**0.00785**		
B-16	10	03/25/08	0.00324 U		
B-16	20	03/25/08	0.00324 U		
B-16	24	03/25/08	0.000139 U		
B-17	10	03/26/08	0.00269 U		
B-17	20	03/26/08	0.00251 U		
B-17	30	03/26/08	0.00244 U		
SB-01	10	04/19/11	0.01 U		
SB-01	20	04/19/11	0.01 U		
SB-01	30	04/19/11	0.01 U		
SB-02	10	04/19/11	0.01 U		
SB-02	20	04/19/11	0.01 U		
SB-02	30	04/19/11	0.01 U		
SB-03	10	04/19/11	0.01 U		
SB-03	20	04/19/11	0.01 U		
SB-03	30	04/19/11	0.01 U		
SB-04	5	03/01/12	0.01 U		
SB-04	10	03/01/12	0.01 U		
SB-04	20	03/01/12	0.01 U		
SB-04	30	03/01/12	0.01 U		
SB-04	34	03/01/12	0.01 U		
SB-05	10	02/29/12	0.01 U		
SB-05	20	02/29/12	0.01 U		
SB-05	30	02/29/12	0.01 U		
SB-06	5	02/29/12	0.01 U		
SB-06	10	02/29/12	**0.028**		
SB-06	20	02/29/12	0.01 U		
SB-06	30	02/29/12	0.01 U		
SB-06	38	02/29/12	0.01 U		
SB-07	5	03/01/12	0.01 U		
SB-07	20	03/01/12	0.01 U		
SB-07	30	03/01/12	0.01 U		
SB-07	38	03/01/12	0.01 U		
SB-07	43	03/01/12	0.01 U		
SB-08	10	02/29/12	0.01 U		
SB-08	20	02/29/12	0.01 U		
SB-08	30	02/29/12	0.01 U		
SB-09	2	04/28/12	ND U		
SB-09	8	04/28/12	**0.013**		
SB-09	12	04/28/12	ND U		
SB-09	20	04/28/12	ND U		
AS-2	5	09/29/14	0.0011 U	Acetone = 0.082	
AS-3	10	10/01/14	**0.0010**		
AS-4	5	09/30/14	**0.0011**		

Table D4

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Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-5	15	09/30/14	**0.0040**		
AS-6	5	09/26/14	**0.0042**	Acetone = 0.063	
AS-7	5	09/24/14	0.0012 U	Acetone = 0.29	
AS-8	3.5	09/30/14	**0.0075**		
AS-8	25	10/17/14	**0.029**	n-butylbenzene = 0.0036, sec-butylbenzene = 0.002 p-isopropyltoluene = 0.0016 Napthalene = 0.0041 1,2,4-Trimethlybenzene = 0.047 1,2,3-Trimethlybenzene = 0.014 1,3,5-Trimethlybenzene = 0.013 Total xylenes = 0.011	
AS-9	3	09/30/14	**0.0039**		
AS-9	25	10/16/14	**0.012**	n-butylbenzene = 0.0034, sec-butylbenzene = 0.0014 p-isopropyltoluene = 0.0012 Napthalene = 0.0088 n-propylbenzene = 0.0029 1,2,4-Trimethlybenzene = 0.042 1,2,3-Trimethlybenzene = 0.016 1,3,5-Trimethlybenzene = 0.010 Total xylenes = 0.0078	
AS-10	3	10/01/14	0.0011 U	Acetone = 0.069	
AS-10	8	10/14/14	**0.007**		
AS-11	3	10/01/14	**0.0011**		
AS-11	10	10/13/14	**0.0021**		
AS-12	3	10/01/14	**0.0017**	Acetone = 0.100 n-butylbenzene = 0.0013, n-propylbenzene = 0.0019 1,2,4-Trimethlybenzene = 0.020 1,2,3-Trimethlybenzene = 0.0053 1,3,5-Trimethlybenzene = 0.006 Total xylenes = 0.0084	
AS-12	8	10/10/14	**0.017**		
AS-13	3	10/01/14	**0.0028**		
AS-13	8	10/01/14	**0.0022**		
AS-14	3	09/29/14	**0.0038**		
AS-14	8	10/08/14	**0.0021**		
AS-15	3	09/29/14	**0.014**	Acetone = 0.11	
AS-15	8	10/06/14	**0.0031**		
AS-16	3	09/29/14	**0.018**		
AS-16	15	10/07/14	**0.0032**		
AS-17	3	09/29/14	**0.044**	Acetone = 0.33, MEK = 0.011	
AS-17	8	10/03/14	**0.0071**	1,2,4-Trimethlybenzene = 0.0028 1,2,3-Trimethlybenzene = 0.001	
AS-17	30	10/03/14	**0.0022**		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-18	3	09/29/14	**0.0049**		
AS-18	8	10/02/14	**0.0014**		
AS-19	3	09/29/14	**0.0091**		
AS-19	8	10/02/14	**0.094**	n-butylbenzene = 1.4 sec-butylbenzene = 0.67 2-Chlorotoluene = 0.48 4-Chlorotoluene = 0.52 Ethylbenzene = 0.94 Cumene = 0.41 p-isopropyltoluene = 0.41 Napthalene = 1.5 n-propylbenzene = 1.8 Styrene = 0.089 1,1,2,2-Tetrachloroethane = 0.45 Toluene = 0.13 1,2,3-Trichlorotoluene = 0.036 1,1,2-Trichloroethane = 0.34 1,2,4-Trimethlybenzene = 18 1,2,3-Trimethlybenzene = 4.6 1,3,5-Trimethlybenzene = 5.0 Total xylenes = 7.7	
AS-20	3	09/29/14	**0.012**		
AS-20	10	10/06/14	**0.0033**	1,2,4-Trimethlybenzene = 0.0029	
AS-21	3	10/01/14	**0.0034**		
AS-21	8	10/07/14	**0.0038**		
AS-22	3	10/01/14	**0.0066**	Acetone = 0.062	
AS-22	8	10/01/14	**0.0052**		
AS-22	10	10/08/14	**0.0027**	Acetone = 0.073 n-butylbenzene = 0.0097 sec-butylbenzene = 0.0059 Ethylbenzene = 0.0072 Cumene = 0.0041 p-isopropyltoluene = 0.0036 Napthalene = 0.022 n-propylbenzene = 0.019 1,2,4-Trimethlybenzene = 0.18 1,2,3-Trimethlybenzene = 0.052 1,3,5-Trimethlybenzene = 0.047 Total xylenes = 0.076	
AS-23	3	09/30/14	**0.0012**		
AS-23	8	09/30/14	**0.0022**		
AS-23	10	10/10/14	**0.0038**		
AS-24	3	09/30/14	**0.0074**	Acetone = 0.066	
AS-24	8	09/30/14	**0.0013**		
AS-24	10	10/14/14	**0.0022**		

Table D4

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Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
AS-25	3	10/01/14	**0.0017**		
AS-25	10	10/15/14	**0.0020**		
AS-26	3	09/30/14	**0.0093**	Acetone = 0.057	
AS-26	8	09/30/14	**0.0089**	Acetone = 0.057	
AS-26	10	10/16/14	**0.0067**		
AS-27	3	09/30/14	**0.0051**		
AS-27	8	10/17/14	**0.015**		
AS-28	10	09/22/14	**0.0082**		
AS-29	5	09/23/14	**0.0034**	Acetone = 0.21, MEK = 0.018	
AS-30	5	09/25/14	**0.0015**		
AS-31	5	09/25/14	0.0011 U	Acetone = 0.076	
SVE-14	3.5	09/30/14	0.0011 U		
SVE-14	8.5	10/13/14	**0.0012**	1,2,4-Trimethlybenzene = 0.0044 1,2,3-Trimethlybenzene = 0.0019 1,3,5-Trimethlybenzene = 0.0015	
SVE-15	3	11/01/14	**0.0018**		
SVE-15	8	10/15/14	**0.0024**		
SVE-16	3	09/30/14	**0.0037**		
SVE-16	10	10/15/14	**0.008**	n-butylbenzene = 0.0048 sec-butylbenzene = 0.0028 Ethylbenzene = 0.0013 Cumene = 0.0013 p-isopropyltoluene = 0.0023 Napthalene = 0.0075 n-propylbenzene = 0.0057 Styrene = 0.089 1,1,2,2-Tetrachloroethane = 0.45 1,2,4-Trimethlybenzene = 0.074 1,2,3-Trimethlybenzene = 0.023 1,3,5-Trimethlybenzene = 0.021 Total xylenes = 0.020	
SVE-17	5	09/24/14	**0.026**		
SVE-18	5	09/23/14	**0.0024**		
SVE-19	5	09/29/14	0.0011 U		
SB-10	6	04/16/18	**0.193**		
SB-10	10	04/16/18	0.0359 U		
SB-11	8	04/16/18	0.0347 U		
SB-11	15	04/16/18	0.0353 U		
SB-12	1	04/16/18	0.0348 U		
SB-12	5	04/16/18	**0.138**		
SB-12	10	04/16/18	0.0325 U		

Table D4

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Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments
SB-13	5	04/16/18	0.0350 U		
SB-13	10	04/16/18	**0.128**		
SB-13	20	04/16/18	**6.03**		
SB-13	29	04/16/18	**0.110**		
SB-13b	36	04/25/18	**0.0829**		
SB-13b	40	04/25/18	**0.128**		
SB-14	5	04/16/18	0.0317 U		
SB-14	10	04/16/18	0.0298 U		
SB-14	20	04/16/18	0.0253 U		
SB-14	30	04/16/18	**0.109**		
SB-14a	40	04/25/18	**0.105**		
SB-15	10	04/17/18	0.0334 U		
SB-15	20	04/17/18	**0.0781**		
SB-15	30	04/17/18	**0.0645**		
SB-15	40	04/17/18	**0.132**		
SB-16	20	04/17/18	0.0366 U		
SB-16	30	04/17/18	**0.0505**		
SB-16	40	04/17/18	**0.0575**		
SB-17	20	04/18/18	**0.0435**		
SB-17	30	04/18/18	0.0281 U		
SB-17	40	04/18/18	**0.0286**		
SB-18	30	04/18/18	**0.0429**		
SB-18	40	04/18/18	**0.0284**		
SB-26	2	04/24/18	**0.0960**		
SB-26	4	04/24/18	0.0292 U		
SB-26	10	04/24/18	0.0433 U		
SB-26	20	04/24/18	**0.0763**		
SB-26	30	04/24/18	**0.0647**		
SB-26	40	04/24/18	0.0340 U		
SB-27	2	04/24/18	**0.0800**		
SB-27	4	04/24/18	0.0426 U		
SB-27	10	04/24/18	0.0339 U		
SB-27	20	04/24/18	**0.0942**		
SB-27	30	04/24/18	**0.118**		
SB-27	40	04/24/18	**0.169**		
SB-28	20	04/24/18	0.0323 U		
SB-28	30	04/24/18	**0.0784**		
SB-28	40	04/24/18	0.0325 U		
SB-30	30	04/25/18	0.0395 U		
SB-30	35	04/25/18	**0.142**		
SB-30	40	04/25/18	**0.0665**		

Table D4

Historical Summary of Soil Analytical Results (1998 - 2018)
Manhattan Village Shopping Center and Harris Properties
Normandy Park, Washington

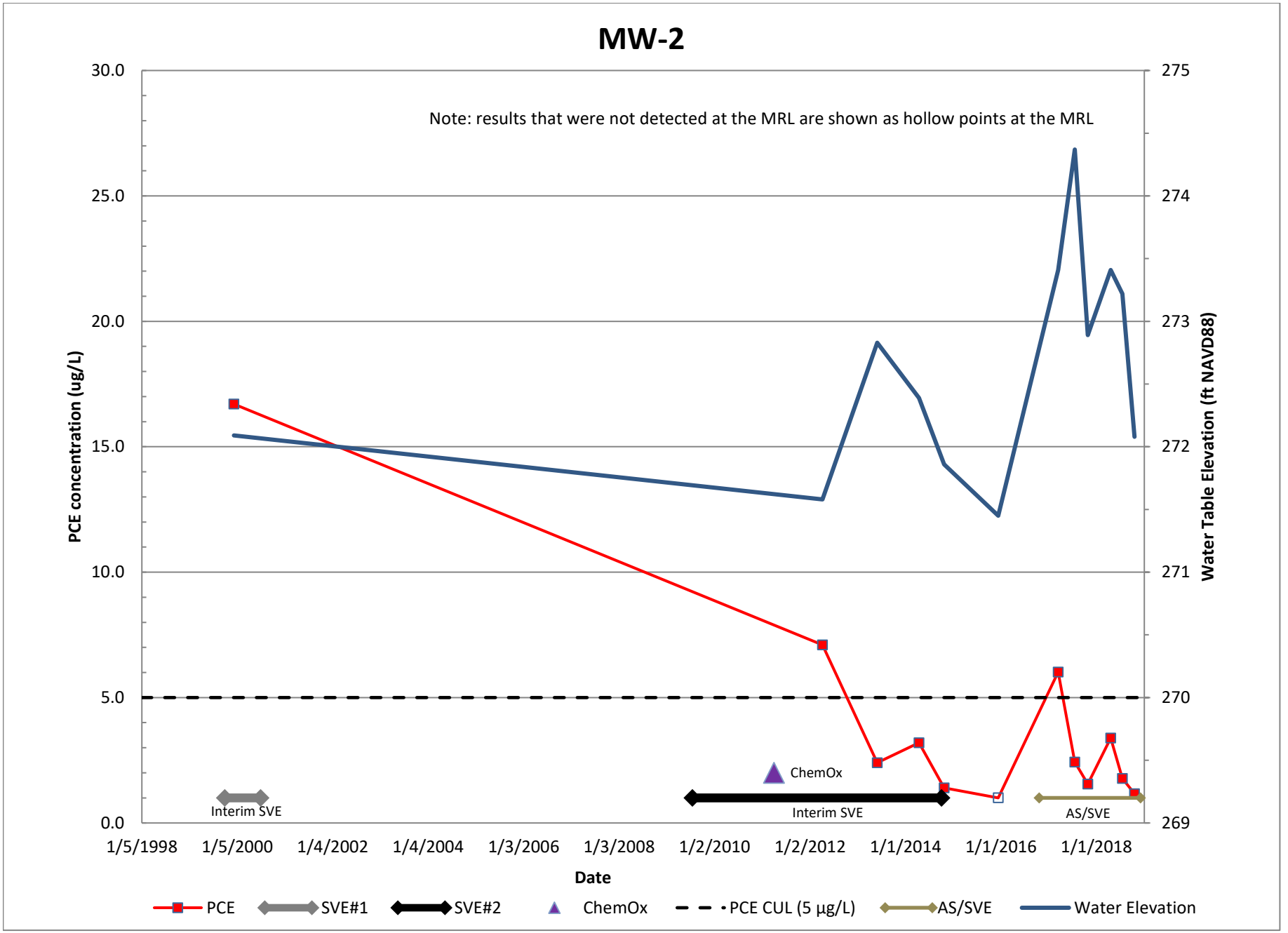
Sample ID	Depth (ft bgs)	Date	PCE (mg/kg)	Other VOCs detected (mg/kg)	Comments

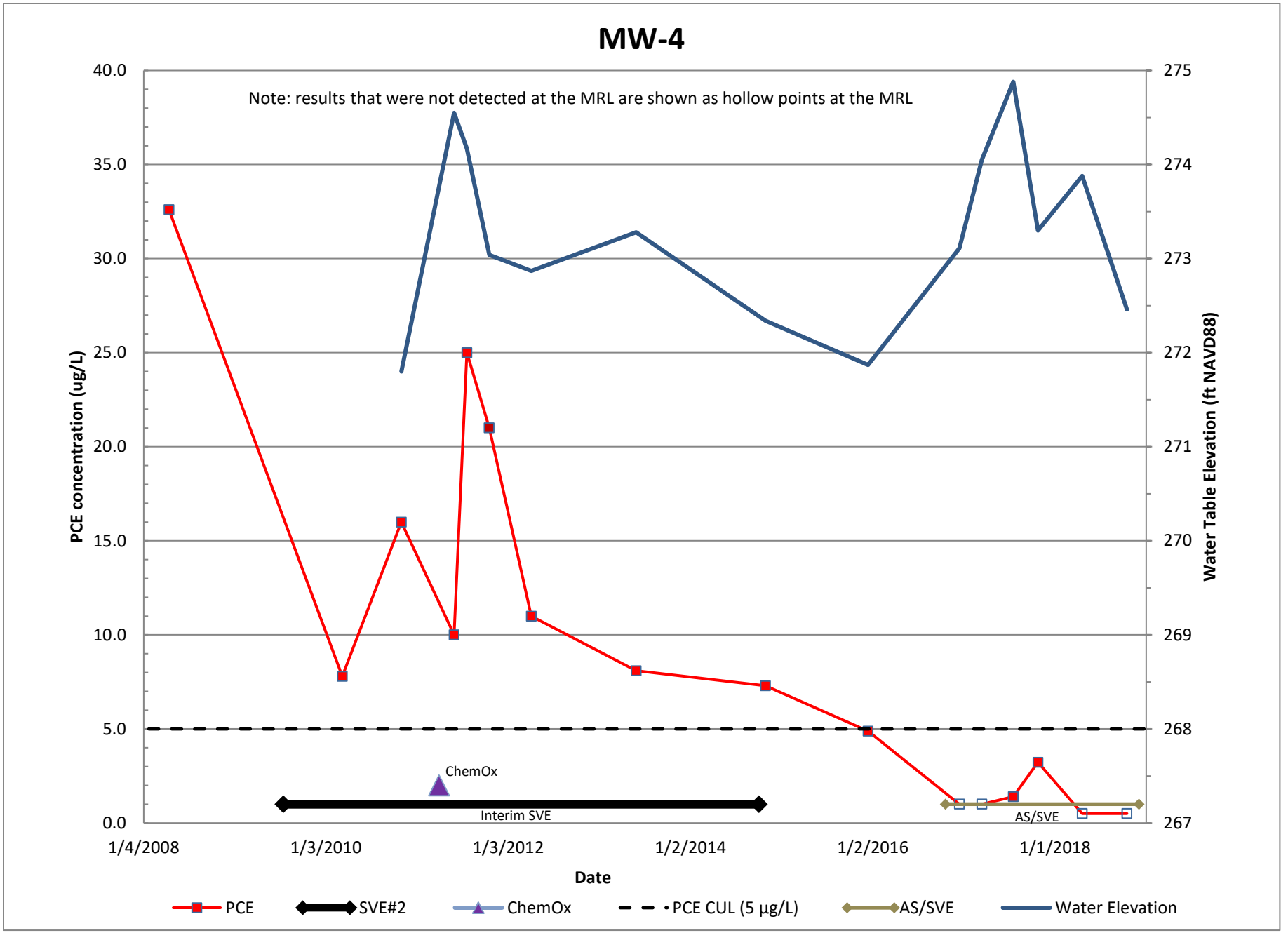
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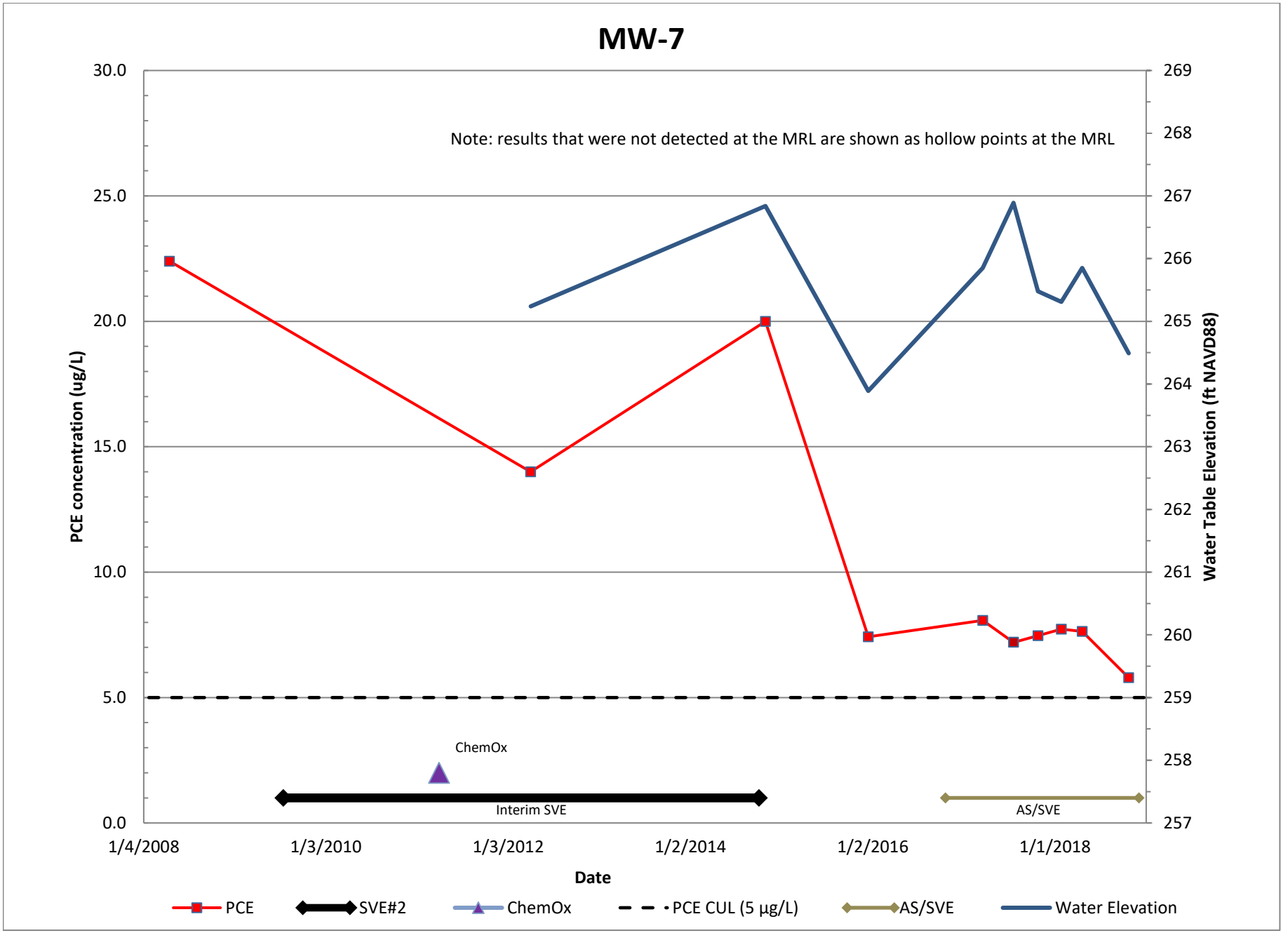
1. Tetrachloroethene (PCE) concentrations in milligrams per kilogram (mg/kg).
2. Soil samples analyzed using USEPA Methods 8260B and 8021B (1998 through 2000 only).
3. ND and U = concentration not detected at or above the laboratory practical quantitation limit (PQL).
4. Detected concentrations are shown in **bold.**
5. Concentrations exceeding the PCE MTCA Method A cleanup level of 0.050 mg/kg are **bold and shaded**.
6. Other detected VOCs - only those which are above their respective cleanup level are listed.

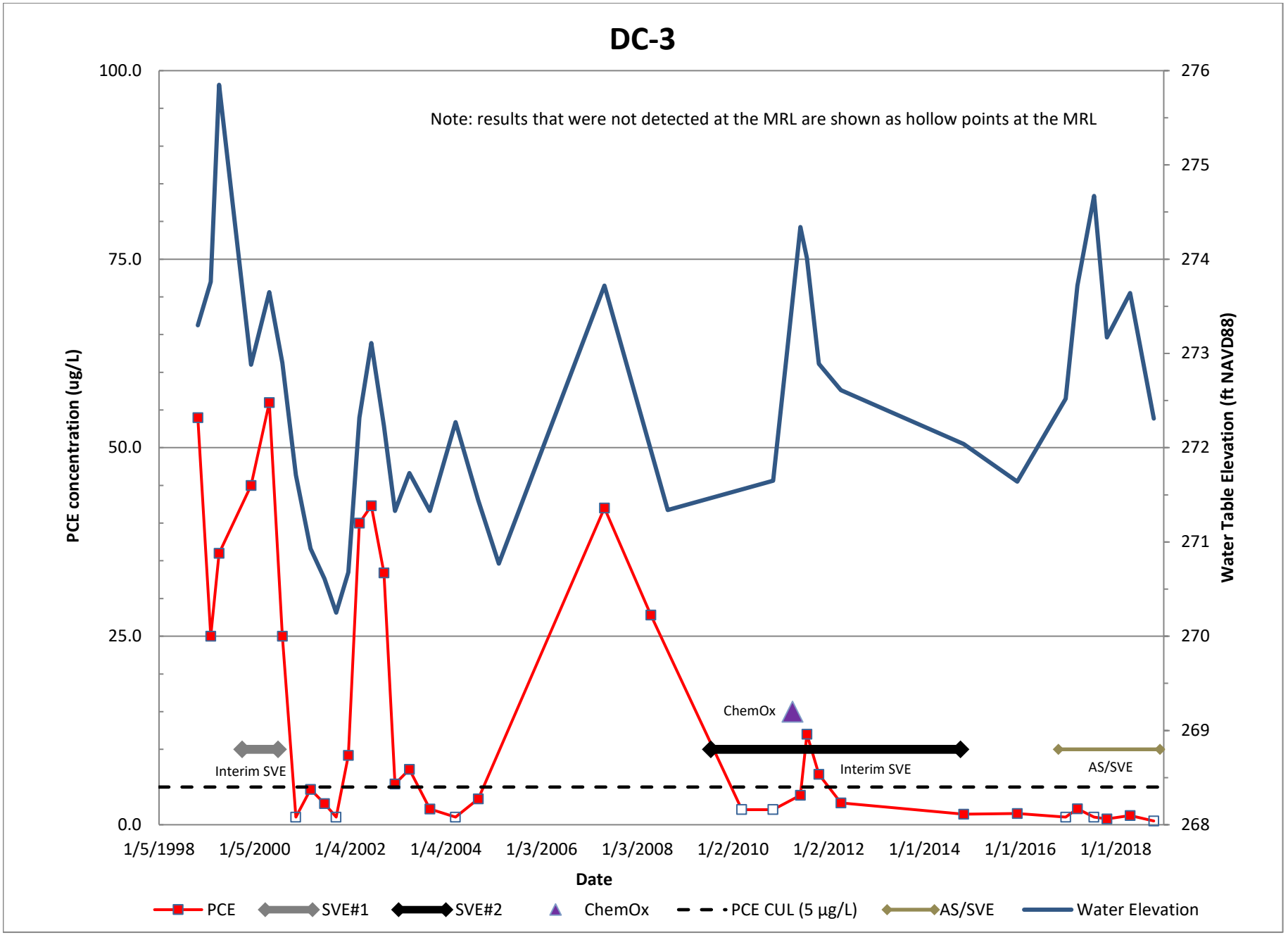
ATTACHMENT E
TIME TREND PLOTS

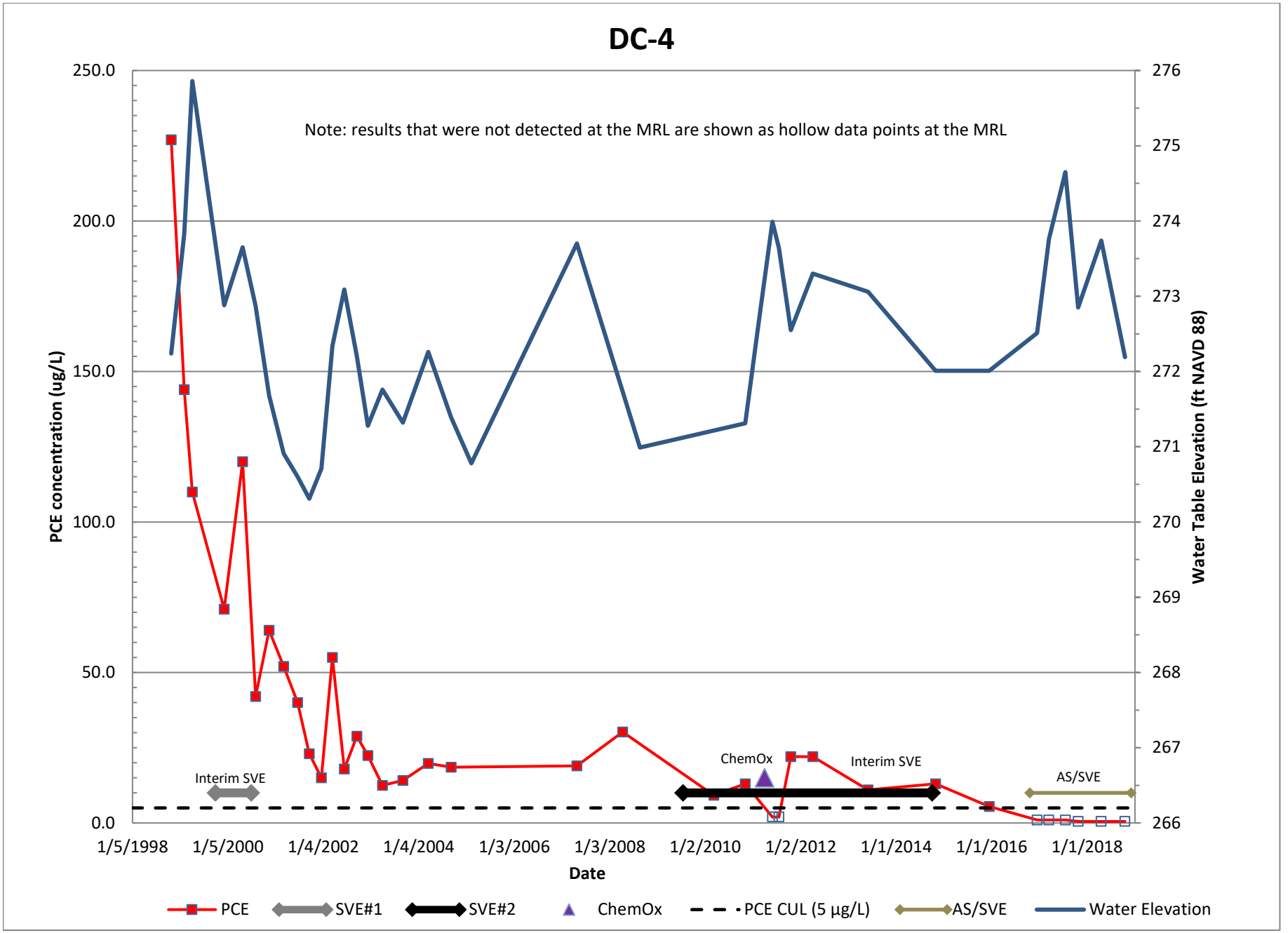
- MW-2, MW-4, MW-7
- DC-3, DC-4, DC-7 DC-8, DC-13, DC-14, DC-15, DC-17
- KM-3, KMW-8, KMW-9

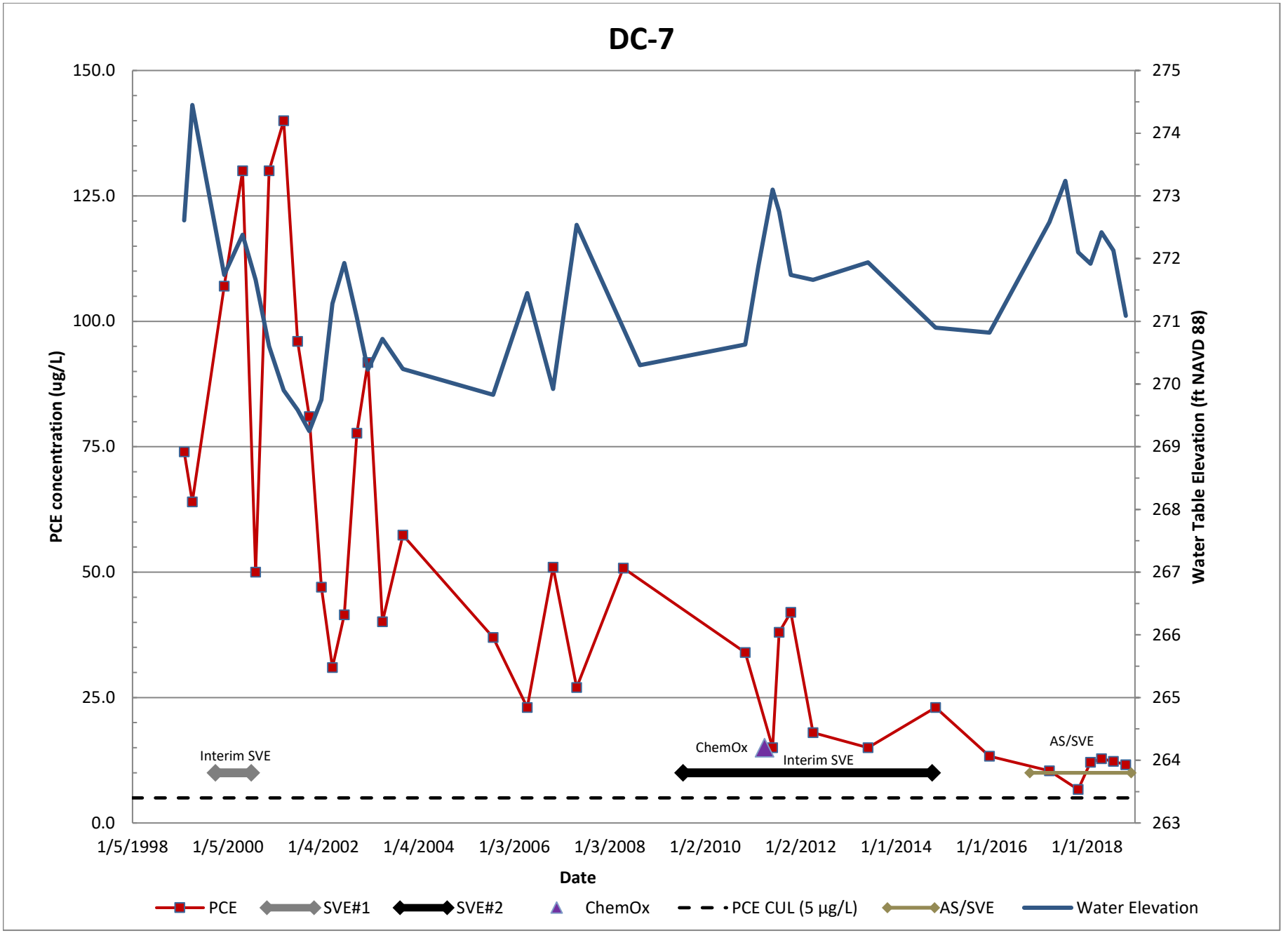

MW-2
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
1/5/1998
1/5/2000
1/4/2002
1/4/2004
1/3/2006
1/3/2008
1/2/2010
1/2/2012
1/1/2014
1/1/2016
1/1/2018
Date
Interim SVE
ChemOx
Interim SVE
AS/SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

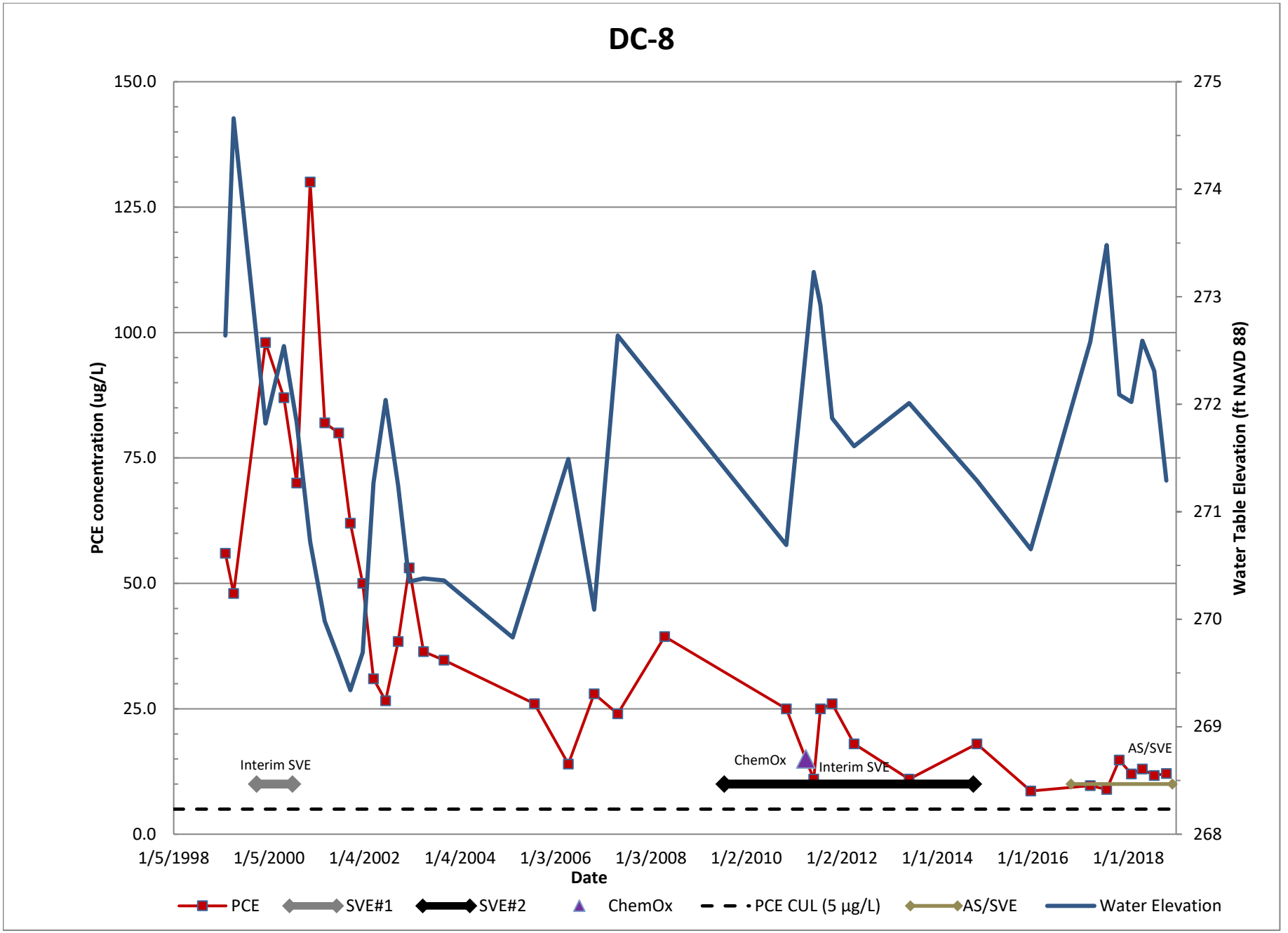

MW-4
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
268
267
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

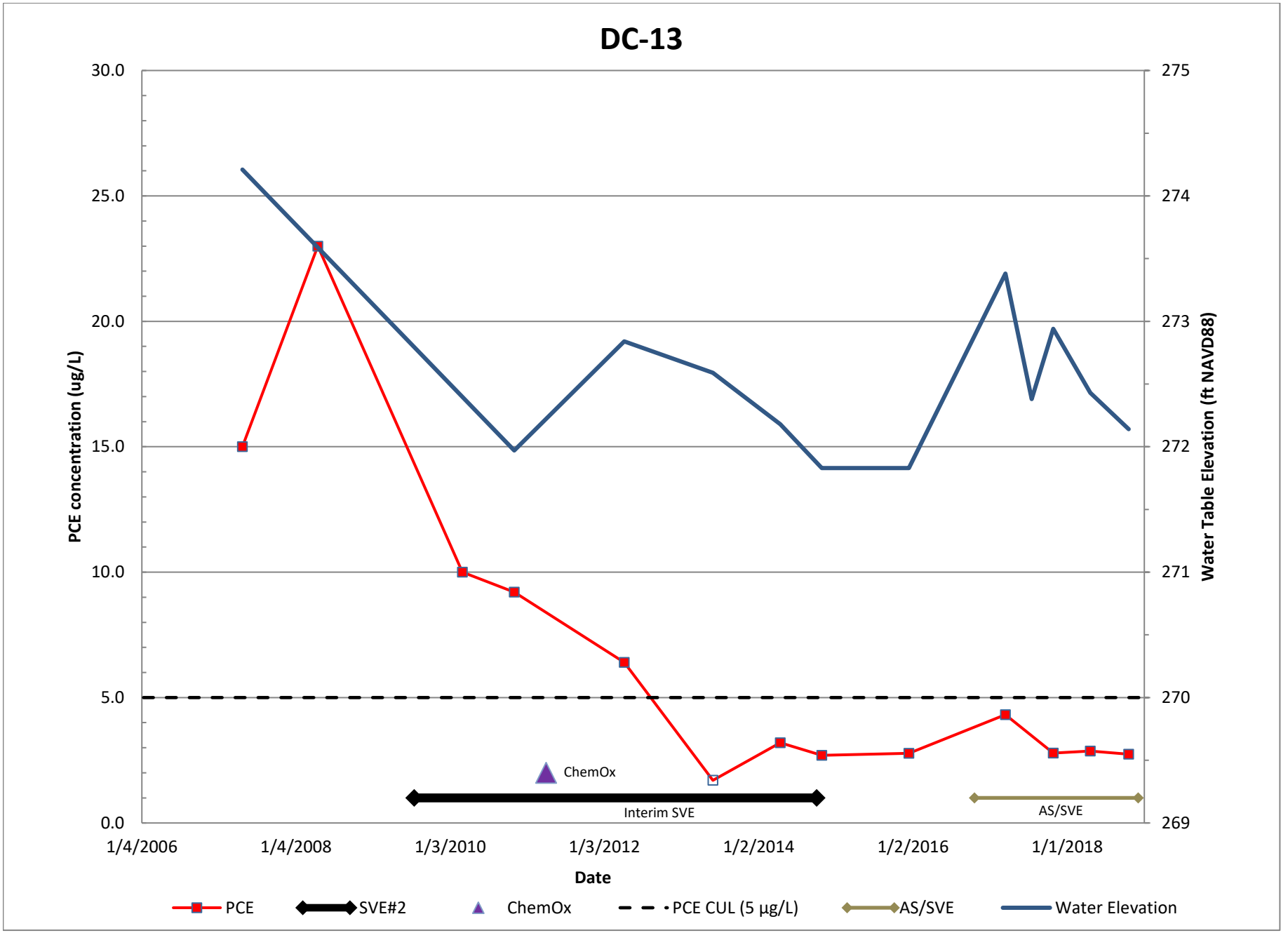

MW-7
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
269
268
267
266
265
264
263
262
261
260
259
258
257
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

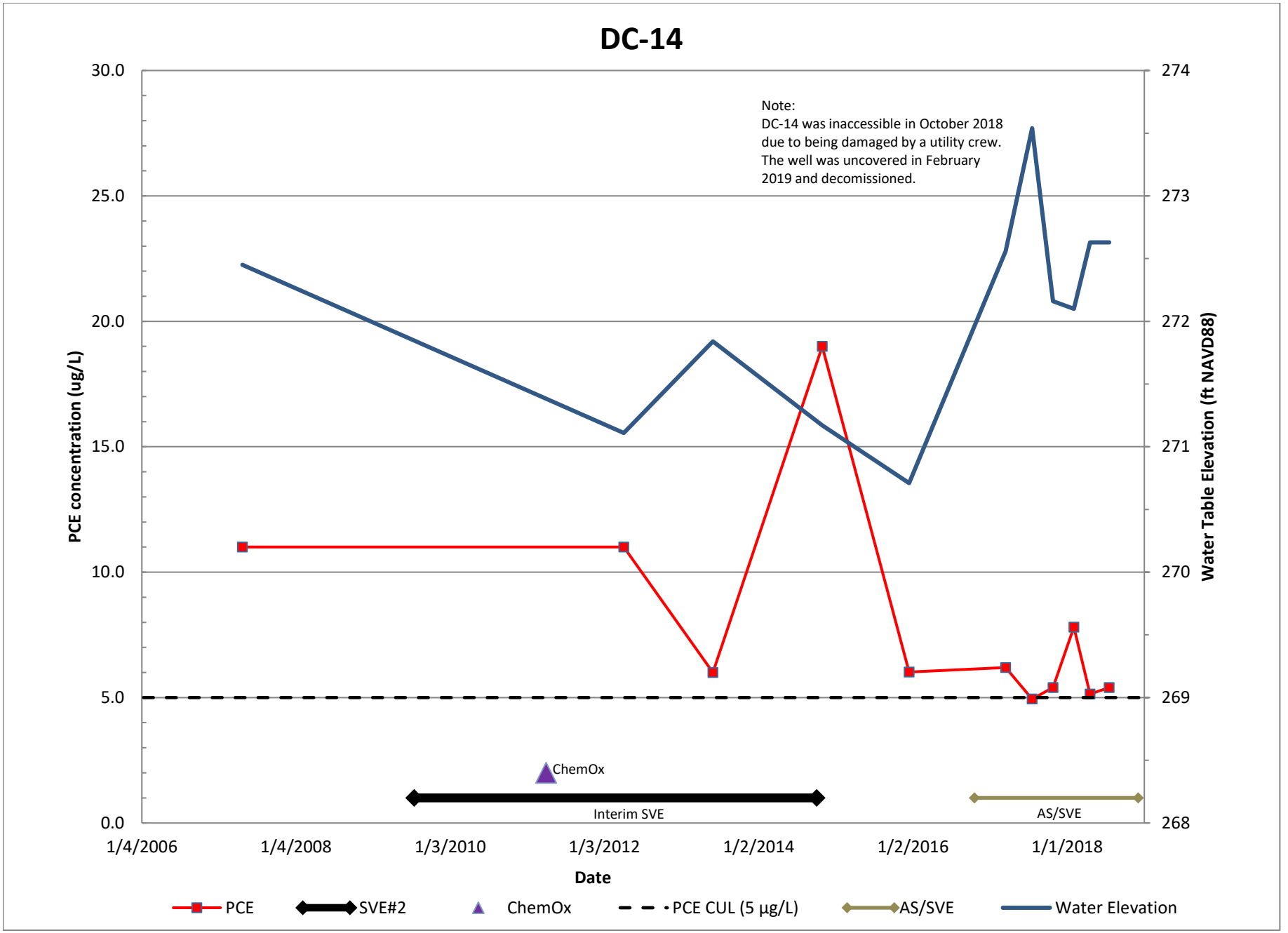

DC-3
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
100.0
75.0
50.0
25.0
0.0
276
275
274
273
272
271
270
269
268
1/5/1998
1/5/2000
1/4/2002
1/4/2004
1/3/2006
1/3/2008
1/2/2010
1/2/2012
1/1/2014
1/1/2016
1/1/2018
Date
Interim SVE
ChemOx
Interim SVE
AS/SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

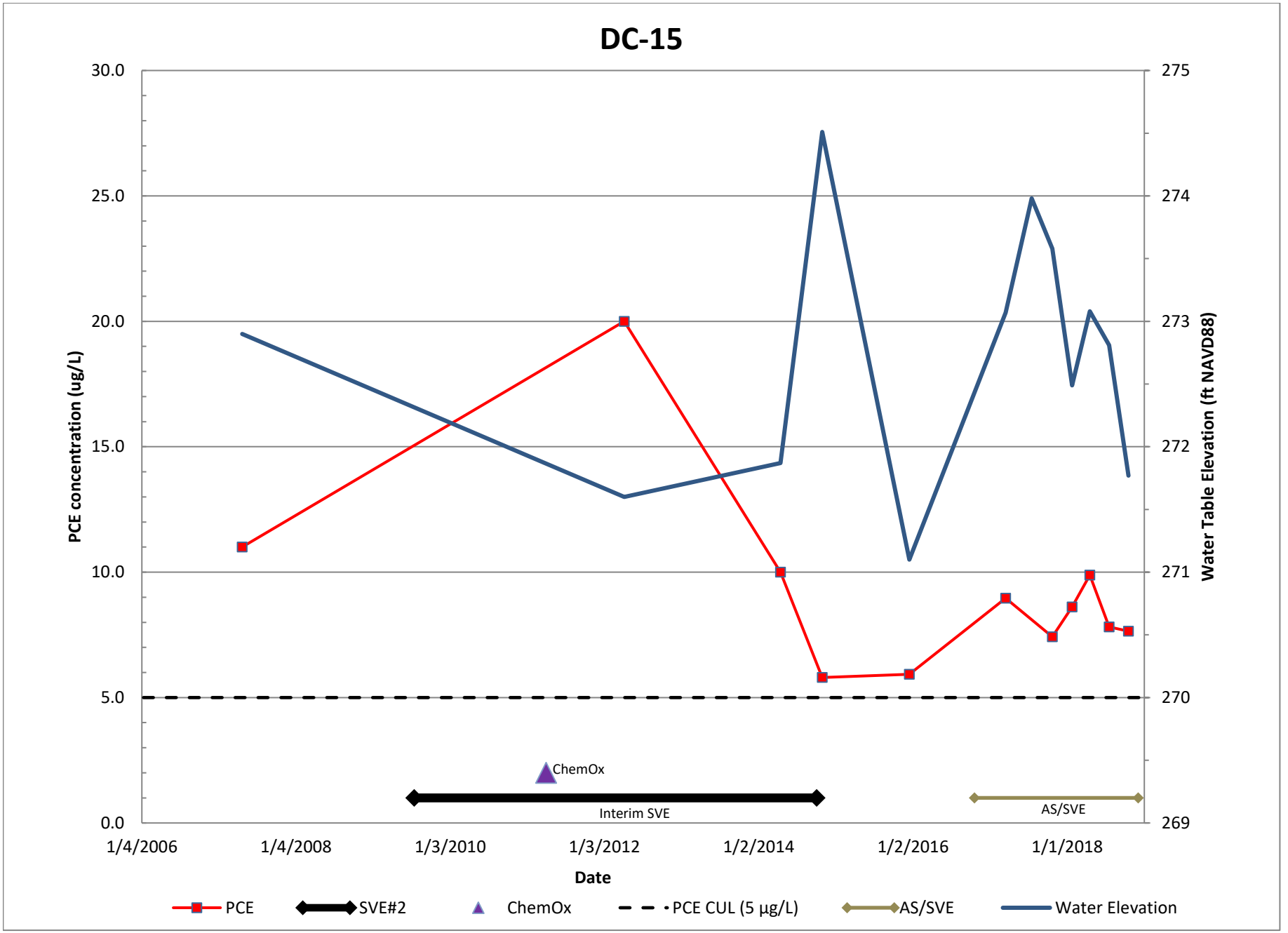

DC-4
Note: results that were not detected at the MRL are shown as hollow data points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
250.0
200.0
150.0
100.0
50.0
0.0
276
275
274
273
272
271
270
269
268
267
266
1/5/1998
1/5/2000
1/4/2002
1/4/2004
1/3/2006
1/3/2008
1/2/2010
1/2/2012
1/1/2014
1/1/2016
1/1/2018
Date
Interim SVE
ChemOx
Interim SVE
AS/SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

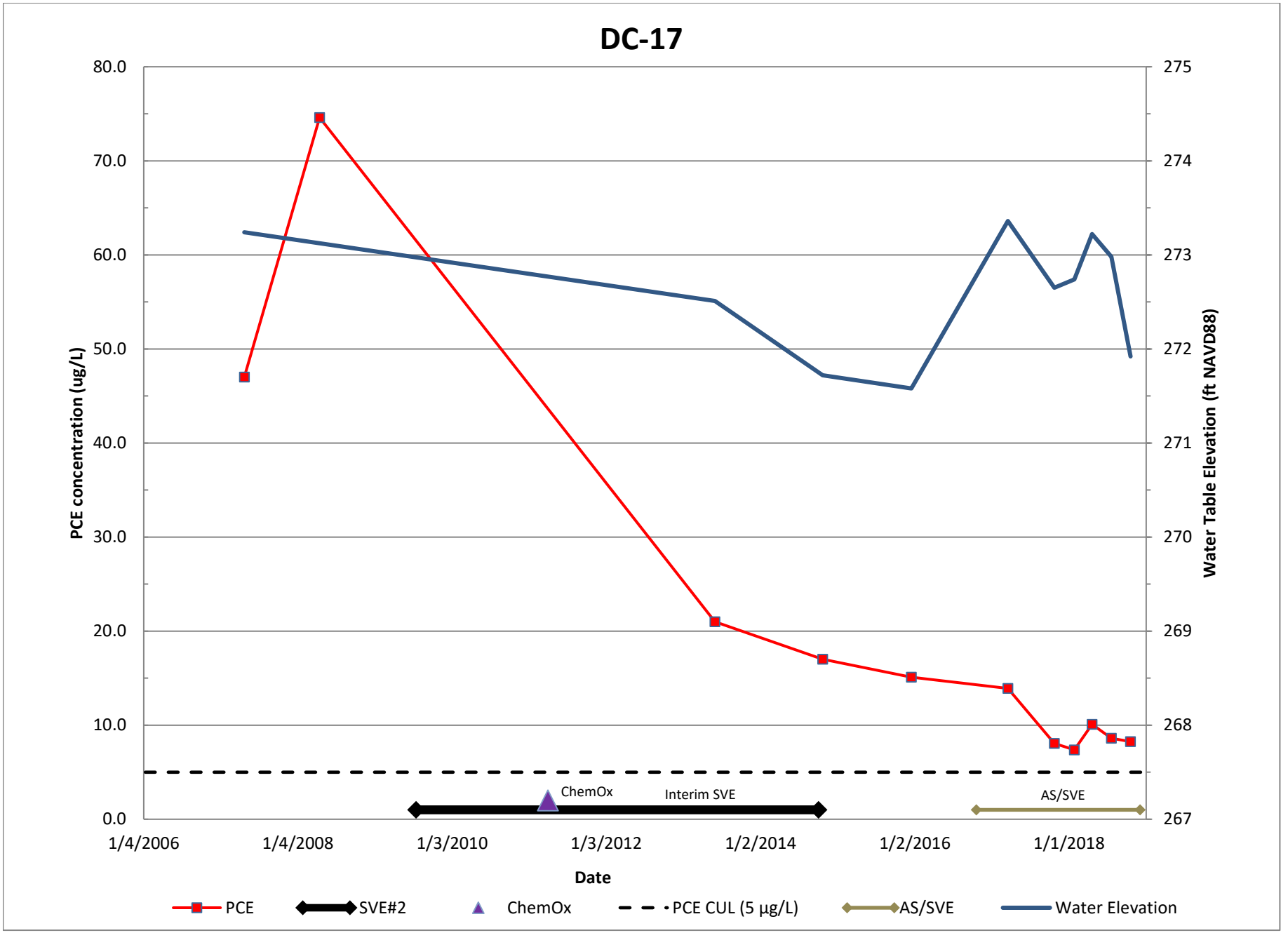

DC-7
PCE concentration (ug/L)
Water Table Elevation (ft NAVD 88)
Date
150.0
125.0
100.0
75.0
50.0
25.0
0.0
275
274
273
272
271
270
269
268
267
266
265
264
263
1/5/1998
1/5/2000
1/4/2002
1/4/2004
1/3/2006
1/3/2008
1/2/2010
1/2/2012
1/1/2014
1/1/2016
1/1/2018
Interim SVE
ChemOx
Interim SVE
AS/SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

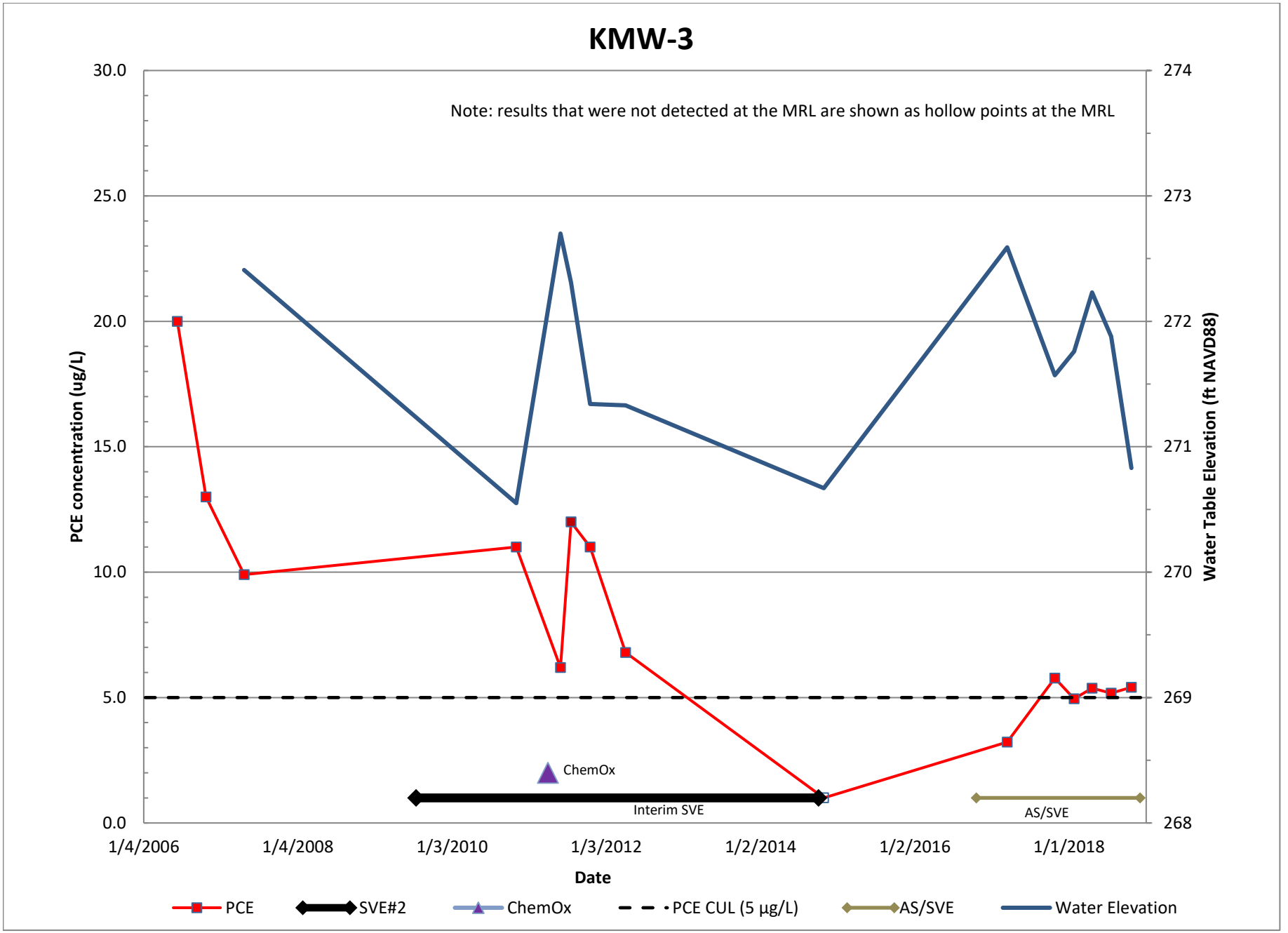

DC-8
150.0
125.0
100.0
75.0
50.0
25.0
0.0
PCE concentration (ug/L)
275
274
273
272
271
270
269
268
Water Table Elevation (ft NAVD 88)
1/5/1998
1/5/2000
1/4/2002
1/4/2004
1/3/2006
1/3/2008
1/2/2010
1/2/2012
1/1/2014
1/1/2016
1/1/2018
Date
Interim SVE
ChemOx
Interim SVE
AS/SVE
PCE
SVE#1
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

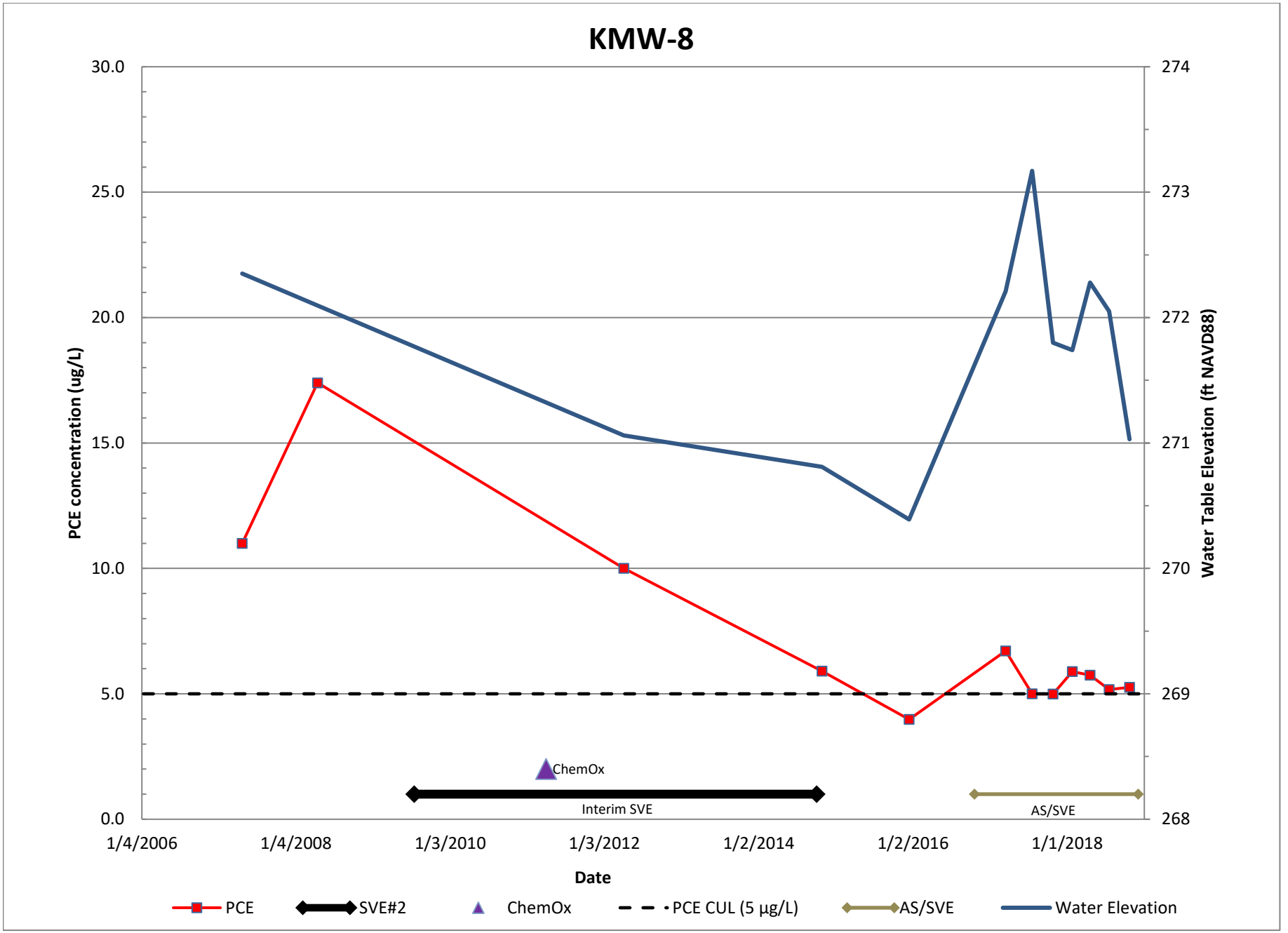

DC-13
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

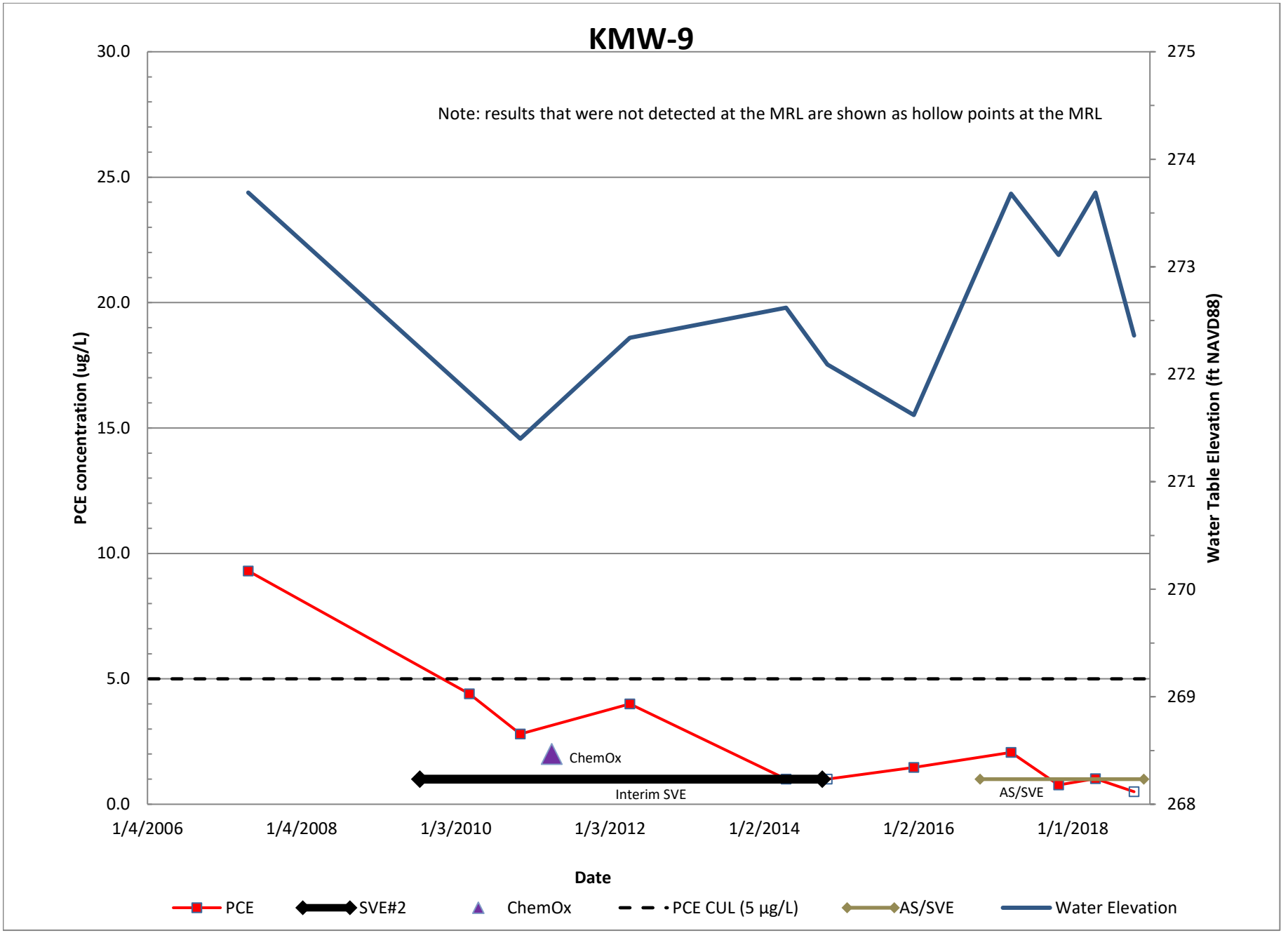

DC-14
Note:
DC-14 was inaccessible in October 2018 due to being damaged by a utility crew. The well was uncovered in February 2019 and decomissioned.
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
274
273
272
271
270
269
268
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation


DC-15
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation


DC-17
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
PCE concentration (ug/L)
275
274
273
272
271
270
269
268
267
Water Table Elevation (ft NAVD88)
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation


KMW-3
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
274
273
272
271
270
269
268
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation


KMW-8
30.0
25.0
20.0
15.0
10.0
5.0
0.0
PCE concentration (ug/L)
274
273
272
271
270
269
268
Water Table Elevation (ft NAVD88)
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation


KMW-9
Note: results that were not detected at the MRL are shown as hollow points at the MRL
PCE concentration (ug/L)
Water Table Elevation (ft NAVD88)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
275
274
273
272
271
270
269
268
1/4/2006
1/4/2008
1/3/2010
1/3/2012
1/2/2014
1/2/2016
1/1/2018
Date
ChemOx
Interim SVE
AS/SVE
PCE
SVE#2
ChemOx
PCE CUL (5 µg/L)
AS/SVE
Water Elevation

ATTACHMENT F
BORING LOGS

- SB-10 through SB-30 including SB-13A, SB-13B, and SB-14A

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-10

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Asphalt (4 inches)
	3.0						BROWN SILTY SAND (SM), moist, fine to medium, little fine to coarse subrounded gravel up to 2-inch diameter, little fines, (FILL, soil hand cleared to 3 feet)
	3.0						at 1.5 feet: asphalt layer
	4.9				2		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines, few fine subrounded gravel, occasional orange staining, (soil hand cleared to 3 feet)
	3.6		24		4		BROWN SAND WITH SILT (SP), dry to moist, fine to medium, few coarse gravel up to 1-inch diameter, few fines
	3.1						at 5 feet: red-brown, fine sand
Bentonite	3.0	SB-10-6*			6		at 6 feet: yellow-brown, coarsens downward
	3.4						
	3.5		36		8		
	4.8	SB-10-10*	12		10		
					12		Bottom of boring at 11 feet bgs.
							Boring backfilled with hydrated bentonite and capped with concrete.
							* sample submitted for laboratory analysis.
					14		
					16		
					18		
					20		
					22		
					24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 11 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-11

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Asphalt (4 inches)
	0.0						BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine to coarse subrounded gravel, little fines, (soil hand cleared to 3 feet)
	0.0				2		
	4.3		24				BROWN SANDY SILT (ML), moist, some fine to medium sand, low plasticity, roots, (soil hand cleared to 3 feet)
	4.8				4		RED-BROWN SAND WITH SILT (SP), moist, fine to medium, few fines
	7.6				6		at 6 feet: yellow-brown, fine sand
Bentonite	10.4	SB-11-8*	36		8		GRAY SAND (SP), moist, fine, few fines, trace fine subrounded gravel, coarsens downward
	9.1				10		
	8.3		60		12		
	7.4	SB-11-15*			14		
					16		Bottom of boring at 15 feet bgs. Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					18		
					20		
					22		
					24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 15 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-12

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Asphalt (2 inches)
	4.6	SB-12-1*					BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine subrounded gravel, little fines, (soil hand cleared to 3 feet)
	4.8				2		at 2.5 feet: red-brown
	25.4		24		4		YELLOW-BROWN SAND (SP), dry, fine, few fines, roots, pine odor
	26.4	SB-12-5*					
Bentonite	7.3				6		at 6 feet: grades to light brown, trace fine gravel, no roots or odor
	8.4		36		8		
	6.2	SB-12-10*	12		10		
					12		Bottom of boring at 11 feet bgs. Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					14		
					16		
					18		
					20		
					22		
					24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 11 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-13

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Asphalt (5 inches)
	3.4						BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine to coarse gravel up to 2-inch diameter, little fines
	2.1				2		at 2 feet: gray at 2.5 feet: brown
	4.8		18		4		at 4.5 feet: tree root
	6.0	SB-13-5*					LIGHT BROWN SAND (SP), moist, fine, few fines, frequent orange staining, increasing moisture content with depth
	6.0				6		
	7.5						GRAY-BROWN SAND WITH SILT (SP), moist, fine to medium, few fines
			25		8		
		SB-13-10*			10		at 10 feet: occasional horizons of orange staining up to 1/4-inch thick, grain size variation in horizons up to 2 inches thick
	3.9						
	5.0				12		
	5.2		37				
					14		
Bentonite							
	8.2				16		
	7.8		48				
					18		
	7.8						
		SB-13-20*			20		at 20 feet: fining upward sequences up to 1 foot thick
	14.5						
	10.9				22		
			53				
	11.6						
	13.3				24		GRAY-BROWN SAND WITH GRAVEL (SP), moist, fine to medium, some fine to coarse subrounded to rounded gravel up to 2-inch diameter, few fines, orange staining

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 29 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	18.4				26		BROWN SAND (SP), moist, fine to medium, few fines
	14.9		48				
	8.6				28		
	24.1	SB-13-29*					at 28.5 feet: little fine to coarse gravel
							Bottom of boring at 29 feet bgs. (Refusal)
					30		Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					32		
					34		
					36		
					38		
					40		
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 29 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-13A

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.0				0		Asphalt (5 inches)
	0.0				2		LIGHT BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine to coarse subrounded gravel up to 1-inch diameter, little fines, (soil hand cleared to 3 feet)
	0.3		12		4		
	0.9				6		LIGHT-BROWN SAND (SP), moist, fine, few fines
	0.5		45		8		
	0.7						LIGHT BROWN SILTY SAND (SM), moist, fine, little fines
					10		BROWN SAND WITH SILT (SP), moist, fine few fines, bedding visible
	0.5				12		BROWN SAND (SP), moist, fine to medium, few fines
	0.4		39		14		
	0.3				16		
Bentonite			53		18		
	0.3				20		at 20 feet: occasional horizons of finer sand up to 1/2-inch thick
	0.2						
	0.4		48		22		
	0.7				24		at 23.4 feet: interval 4 inches thick with some fine to coarse subangular gravel up to 1-inch diameter
							BROWN SAND (SP), moist, fine to medium, few fines

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 33 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	1.1				26		
	1.2		60		28		
	0.8				30		BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine subangular gravel, few fines
	0.5		36		32		
	0.3						Bottom of boring at 33 feet bgs. (Refusal) Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					34		
					36		
					38		
					40		
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 33 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-13B

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine subangular gravel, little fines, (soil hand cleared to 3 feet)
	2.2				2		LIGHT BROWN SILT WITH SAND (ML), moist, some fine to medium sand, trace fine subrounded gravel, low plasticity, abundant orange staining, (soil hand cleared to 3 feet)
	7.7		28		4		
	8.1				6		BROWN SILTY SAND (SM), wet, fine, some fines, frequent orange staining
	8.5		46		8		BROWN SAND WITH SILT (SP), moist, fine, few fines, occasional orange staining
	9.4						
	9.2				10		at 10 feet: occasional horizons of silty sand 2 inches thick, bedding visible, occasional orange staining
	7.0		43		12		
	7.6				14		
	8.4						
	4.7				16		
	7.6		48		18		
	8.6						
Bentonite	13.4				20		at 20 feet: no staining
	13.1				22		
	11.5		50				at 22.5 feet: 4-inch thick interval with some coarse subrounded gravel up to 1.5-inch diameter
	10.4				24		at 24.5 feet: little coarse subrounded gravel up to 1-inch diamter

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		
	13.5						BROWN SAND (SP), moist, medium, few fines, trace fine subangular gravel, coarsens downward
	14.4						
	12.8		60		28		
	14.6						
	13.2				30		
	12.9						BROWN SILTY SAND (SM), moist, fine, little fines, few coarse subangular gravel
	13.2				32		BROWN SAND (SP), moist, medium to coarse, few fine to coarse subangular to subrounded gravel up to 2-inch diameter, some gravel in upper 6 inches of unit, few fines
	9.8		60				
	13.5				34		BROWN SAND WITH SILT (SP), moist, fine, few fines
	12.4	SB-13b-36*			36		
	11.1						BROWN SAND (SP), moist to wet, medium, little fine subangular to subrounded gravel, few fines at 38 feet: wet
			60		38		
	6.1						
	5.3	SB-13b-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-14

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					0		Asphalt (5 inches)
Concrete	1.1						DARK BROWN SILTY SAND (SM), moist to wet, fine to medium, some fines, (soil hand cleared to 3 feet)
	5.1						
	4.3				2		
	7.6		24				
	8.1	SB-14-5*			4		at 5 feet: dark red-brown, black staining
	18.3						LIGHT BROWN SAND WITH SILT (SP), moist to wet, very loose, fine, few fines
	17.6				6		
	16.9		36				
					8		
							GRAY-BROWN SAND (SP), moist, fine to medium, few fines, grain size variation in horizons up to 2.5 inches thick, occasional horizons of orange staining up to 1/8-inch thick
	18.0	SB-14-10*			10		
	8.3						
	9.1		36		12		
					14		
	5.5						
Bentonite	11.9				16		
			48				
	18.1				18		at 18 feet: finer sand
	17.3						
	22.3	SB-14-20*			20		
	4.4				22		
	20.6		60				at 23.3 feet: layer of silty sand with gravel 4 inches thick
	16.0				24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 31.5 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-14

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	10.8				26		
	14.1						
	14.6		60		28		
							at 29 feet: little fine to coarse gravel
	20.9	SB-14-30			30		
	18.8		18				
					32		Bottom of boring at 31.5 feet bgs. (Refusal) Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					34		
					36		
					38		
					40		
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 31.5 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/16/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-14A

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Asphalt (5 inches)
	0.0						BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, (soil hand cleared to 3 feet)
	0.0				2		
	0.4		24		4		
	0.3				6		LIGHT BROWN SAND WITH SILT (SP), moist, fine, few fines
	0.6		40		8		
					10		LIGHT BROWN SAND (SP), moist, fine to medium, few fines, occasional horizons of orange staining up to 1/2-inch thick
	0.4						
	0.3		33		12		
					14		LIGHT BROWN SAND (SP), moist, fine, few fines
	0.1				16		
	0.3		46		18		
	0.4						
Bentonite					20		
	0.3						
	0.1		60		22		at 22.5 feet: interval 3 inches thick of some fine to coarse subangular gravel up to 1-inch diameter, crushed rock
	0.4						
	0.2				24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	0.1				26		
	0.3						
	0.4		60		28		
	0.2						at 28.6 feet: few fine subrounded gravel
	0.2				30		BROWN SAND WITH SILT AND GRAVEL (SP), moist, medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines, crushed rock, rare orange staining, some gravel at top of unit
	0.1		60		32		
	0.0				34		
	0.1						
	0.1				36		
			60		38		
	0.1						at 39.5 feet: wet
		SB-14a-40			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite and capped with concrete. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/25/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-15

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine subangular gravel, little fines, (soil hand cleared to 3 feet)
	4.3				2		LIGHT BROWN SILT WITH SAND (ML), moist, some fine to medium sand, trace fine subrounded gravel, low plasticity, abundant orange staining, (soil hand cleared to 3 feet)
	9.4		24		4		
	10.2				6		BROWN SILTY SAND (SM), wet, fine, some fines, frequent orange staining
	10.2		42		8		BROWN SAND WITH SILT (SP), moist, fine, few fines, occasional orange staining
	11.5						
	10.9	SB-15-10*			10		at 10 feet: occasional horizons of silty sand 2 inches thick, bedding visible
	9.1		42		12		
	9.3				14		
	10.5						at 15 feet: rare faint orange staining
	6.8				16		
	9.7		48		18		
	10.3						
Bentonite	15.5	SB-15-20*			20		at 20 feet: finer sand
	14.8		54		22		at 22 feet: 4-inch thick interval with some coarse subrounded gravel up to 1.5-inch diameter
	13.8				24		
	12.1						at 24.5 feet: little coarse subrounded gravel up to 1-inch diamter

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/17/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	15.6				26		
	16.1						at 26.7 feet: crushed rock
	14.9		60		28		BROWN SAND (SP), moist, medium, few fines, trace fine subangular gravel, coarsens downward
	16.3						
	15.6	SB-15-30*			30		
	14.6						BROWN SILTY SAND (SM), moist, fine, little fines, few coarse subangular gravel
	15.3		60		32		BROWN SAND (SP), moist, medium to coarse, few fine to coarse subangular to subrounded gravel up to 2-inch diameter, some gravel in upper 6 inches of unit, few fines
	11.5				34		
	15.6						
	14.1				36		BROWN SAND WITH SILT (SP), moist, fine, few fines
	13.2		60		38		BROWN SAND (SP), moist to wet, medium, little fine subangular to subrounded gravel, few fines at 38 feet: wet
	10.1						
	10.1	SB-15-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/17/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-16

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.0				0		GRAVEL WITH SILT AND SAND (GP), wet, coarse subangular gravel up to 1-inch diameter, little fine to coarse sand, few fines, (FILL, soil hand cleared to 3 feet)
	8.0				2		BROWN SILTY SAND WITH GRAVEL (SM), moist to wet, fine to coarse, little fine to coarse subangular gravel up to 1.5-inch diameter, little fines, (soil hand cleared to 3 feet)
	10.9		18		4		
							BROWN SILTY SAND (SM), wet, fine to medium, little fines, few fine subrounded gravel
	14.6				6		BROWN SILT WITH SAND (ML), moist, little fine sand, low plasticity
	11.3		34		8		LIGHT BROWN SILTY SAND (SM), moist to wet, fine, some fines, few fine subrounded gravel, rare orange staining
	12.4				10		
	10.3						GRAY SAND WITH SILT (SP), moist, fine, few fines, bedding visible
	8.6		37		12		
	16.6				14		
	14.7		26		16		
					18		
							BROWN SILTY SAND (SM), moist to wet, fine, some fines, trace fine subrounded gravel
Bentonite	12.1	SB-16-20*			20		at 20 feet: moist to wet, trace fine gravel
	13.2		60		22		at 22.8 feet: crushed rock, denser at 23.5 feet: little fine to coarse subrounded gravel
	11.0						
	10.8				24		BROWN SAND (SP), moist, medium, few coarse subangular gravel up to 2-inch diameter, few fines

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/17/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		BROWN SILTY SAND (SM), moist, fine, some fines
	13.2						BROWN SAND WITH GRAVEL (SP), moist, fine to coarse, some fine subangular gravel, few fines
	4.6		60		28		BROWN SAND (SP), moist, fine to coarse, few fine subangular gravel, few fines
	10.3						
	10.5						
		SB-16-30*			30		
	13.6						BROWN SILTY SAND (SM), moist to wet, fine to medium, little fines, few fine to coarse subangular gravel up to 1-inch diameter
	10.1				32		at 32 feet: some fines
	14.3		60				BROWN SAND (SP), wet, medium, few fine to coarse subangular gravel up to 2-inch diameter, few fines, frequent horizons with some gravel
	15.1				34		
	18.9						
					36		BROWN SILTY SAND (SM), wet, fine, little fines
	10.6						
			60		38		BROWN SAND (SP), wet, medium, few fine to coarse subangular gravel up to 2-inch diameter, few fines
	13.3						
	14.0	SB-16-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/17/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-17

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	10.6				0		DARK BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to coarse, little fine to coarse subangular to subrounded gravel, little fines, rare cobbles, abundant roots, (soil hand cleared to 3 feet)
	4.1						YELLOW-BROWN SANDY SILT (ML), moist, some fine to medium sand, low plasticity, (soil hand cleared to 3 feet)
	10.3				2		YELLOW-BROWN SILTY SAND (SM), wet, fine, some fines, occasional cobbles, orange stainging, (soil hand cleared to 3 feet)
	12.9		24		4		
	13.7						at 5 feet: brown, finer sand than above, little fines, horizon of orange staining 2 inches thick
	17.2				6		
	16.4						
			44		8		
	15.3						
					10		BROWN SAND WITH SILT (SP), moist to wet, fine to medium, few fines
	11.1						
	12.5				12		
			48				
	10.6						
					14		
							at 15 feet: bedding visible
	16.3				16		
	9.6						at 17 feet: horizon of silt 2 inches thick
			34		18		
							BROWN SAND WITH GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up to 1-inch diameter, few fines
		SB-17-20*			20		
Bentonite	10.3						
	12.1				22		
			42				BROWN SILTY SAND (SM), moist, fine, little fines
	10.3				24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/18/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		BROWN SAND WITH GRAVEL (SP), moist, fine to medium, little fine to coarse subangular to subrounded gravel up to 2-inch diameter, few fines, crushed rock
	5.0						
	3.3		28		28		
					30		BROWN SAND WITH SILT AND GRAVEL (SP), moist, medium to coarse, little fine to coarse subangular to subrounded gravel up to 2-inch diameter, few fines
		SB-17-30*					
	3.0						
	2.6		60		32		
	2.9				34		BROWN SAND (SP), moist, fine to medium, few fines
	3.1				36		
	5.1						
			60		38		BROWN SAND WITH GRAVEL (SP), moist, fine to medium, some fine subangular to subrounded gravel, few fines
	2.9						
	2.3	SB-17-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/18/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
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LOG OF BORING: SB-18

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Depth (Feet)	Lithologic Description
Concrete	13.6			0	DARK BROWN SILTY SAND (SM), moist, fine to medium, little fines, abundant roots, (soil hand cleared to 3 feet)
	28.1			2	YELLOW-BROWN SANDY SILT (ML), moist to wet, some fine to medium sand, trace fine subangular gravel, rare cobbles, abundant roots, (soil hand cleared to 3 feet)
	39.2		24	4	YELLOW-BROWN SILTY SAND (SM), wet, fine, some fines, (soil hand cleared to 3 feet)
	38.6			6	at 6 feet: grades to little fines
	44.9		48	8	LIGHT BROWN SAND WITH SILT (SP), moist, fine to medium, few fines, occasional horizons of orange staining up to 1/4-inch thick
	27.3			10	
	13.9				
	24.8			12	
	28.1		36		
				14	
	28.4			16	at 16.4 feet: interval 4 inches thick with some fine subangular gravel and 2 inches of silt
	30.1		52	18	
	27.6				
Bentonite				20	GRAY-BROWN SAND (SP), moist, fine to medium, few fine subrounded gravel, few fines
	22.4				
	22.6		60	22	
	29.1			24	
	23.4				

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/18/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	21.8				26		
	25.1		60		28		
	24.1						
	22.1	SB-18-30*			30		at 30 feet: occasional horizons with some fine subrounded to subangular gravel up to 4 inches thick
	18.3						
	23.7		60		32		
					34		
	19.5						
					36		
	10.3						
	10.8		60		38		
	19.1						
		SB-18-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/18/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-19

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	14.3		24		0–4		DARK BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to medium, little fine to coarse subrounded gravel up to 1.5-inch diameter, little fines, abundant roots, organic odor, (soil hand cleared to 3 feet) at 1 foot: light brown
	15.6						
	16.3		37		4–8		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines, abundant horizons of orange staining up to 1/4-inch thick
	10.3						
	14.2						
	10.8		40		8–12		GRAY-BROWN SAND WITH SILT (SP), moist, fine, few fines, bedding visible
	11.3						
	14.6		46		12–18		
	13.3						
	15.2				18–22		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines
Bentonite	13.3		60				
	12.7				22–24		GRAY-BROWN SAND (SP), moist, fine to medium, few fines, coarsens downward
	10.4						
	11.6						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-19

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	14.6				26		
	13.3		60		28		GRAY-BROWN SAND WITH GRAVEL (SP), moist, fine to medium, , little fines to coarse subangular gravel up to 1-inch diameter, few fines, crushed rock
	11.9				30		at 29 feet: medium sand, little fine subangular gravel, denser than above, fines percentage varies between SAND and SAND WITH SILT in 1-foot intervals
	13.4						
	15.0		60		32		
	14.3				34		LIGHT BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up to 1-inch diameter, few fines
	14.6						
	20.1				36		
	11.8		60		38		at 37.2 feet: wet
	16.3				40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-20

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		DARK BROWN SILTY SAND (SM), moist, fine to medium, little fines, abundant roots, (soil hand cleared to 3 feet)
	1.9				2		BROWN SILTY SAND (SM), moist, fine, little fines, frequent orange staining, abundant roots, (soil hand cleared to 3 feet)
	2.6		24		4		LIGHT BROWN SANDY SILT (ML), moist to wet, fine to medium, little fines, trace fine subangular gravel, abundant roots, abundant orange staining, (soil hand cleared to 3 feet)
	4.1				6		GRAY SAND WITH SILT (SP), wet, fine, few fines, occasional horizons of orange staining up to 1/4-inch thick
	1.7		44		8		
	0.3				10		GRAY SAND (SP), moist, fine, few fines
	1.0				12		
	0.4		39				
	1.8				14		
	5.4				16		
	4.3		52		18		
	2.6				20		at 20 feet: finer sand
Bentonite	3.1						
	1.1		60		22		at 22.1 feet: horizon of silt 4 inches thick
	0.8				24		
	1.1						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	1.3				26		
	4.1		60		28		GRAY-BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to coarse, little fine to coarse subangular to subrounded gravel up to 1-inch diameter, few fines, crushed rock, denser than above
	2.7						
	0.1				30		
	2.1						
	2.7		60		32		
	2.7				34		GRAY-BROWN SAND WITH SILT (SP), moist, medium, few fine subangular to subrounded gravel, few fines at 35 feet: fine to coarse gravel
	4.1				36		at 36 feet: wet
	10.0		60		38		
	7.1				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-20-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-21

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	3.1				0		DARK BROWN SILTY SAND (SM), moist, fine to medium, some fines, abundant organics and roots, (soil hand cleared to 3 feet)
	0.1				2		LIGHT BROWN SANDY SILT (ML), moist, some fine sand, low plasticity, occasional orange staining, (soil hand cleared to 3 feet)
	0.0		24		4		LIGHT BROWN SILTY SAND (SM), moist to wet, fine, little fines, bedding visible, occasional horizons of orange staining up to 1/4-inch thick, (soil hand cleared to 3 feet)
	0.0						
	0.0				6		
	0.1						
	0.2		36		8		
							GRAY BROWN SAND WITH SILT (SP), moist, fine, few fines, bedding visible
	0.2				10		
	0.3				12		
	0.1		36				
					14		
	4.6				16		
	10.3		43				
	5.7				18		
Bentonite					20		
	4.3						
	3.1				22		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines, occasional horizons of silt up to 1/8-inch thick
	2.7		60				GRAY BROWN SAND WITH SILT (SP), moist, fine, few fines, bedding visible
	3.0				24		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-21

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		LIGHT BROWN SILT WITH SAND (ML), moist, little fine sand, fine sand inclusions
	5.2						GRAY-BROWN SAND (SP), moist, fine, few fines
	4.1		60		28		BROWN SILTY SAND (SM), moist, fine, little fines, few fine subangular gravel, 2-inch interval of sandy silt at base of unit
	5.0						GRAY SAND (SP), moist, fine to medium, few fine subangular gravel, few fines
					30		GRAY GRAVEL WITH SAND (GP), moist, fine to coarse subangular gravel, little fine to medium sand, few fines
	3.4						GRAY-BROWN SAND WITH SILT (SP), moist, fine to medium, little fine subangular gravel, few fines
	2.1		60		32		
	4.1				34		
	3.3				36		
	3.2		60		38		
	4.0				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-21-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/19/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-22

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.6				0		DARK BROWN SILTY SAND (SM), moist, fine to medium little fines, abundant roots, (soil hand cleared to 3 feet)
	0.1				2		BROWN SILTY SAND (SM), moist, fine, little fines, trace fine subrounded gravel, (soil hand cleared to 3 feet)
	0.3		24		4		YELLOW-BROWN SANDY SILT (ML), moist to wet, some fine to medium sand, low to medium plasticity, (soil hand cleared to 3 feet)
	0.5						
	0.1				6		LIGHT BROWN SILTY SAND (SM), wet, fine, some fines
	0.3		36		8		at 7 feet: little fines, rare horizons of orange staining up to 1/4-inch thick
	1.0				10		
	1.4		38		12		GRAY-BROWN SAND WITH SILT (SP), moist, fine, few fines, bedding visible
	1.2				14		
	0.6		42		16		at 16.7 feet: horizon of silty sand 2 inches thick
	0.8				18		
Bentonite	1.0				20		at 20 feet: occasional horizons of fine to medium sand up to 4 inches thick, rare horizons of silt up to 1/8-inch thick, rare carbonized organics
	0.8		48		22		
	0.5				24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/20/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		at 25 feet: fine sand
	1.1						
	0.8		60		28		
	1.0						at 28.4 feet: grades to hoirzon of silty sand 4 inches thick
							GRAY-BROWN SAND WITH GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel, few fines
					30		GRAY-BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel, few fines
	0.9				32		
	0.7		60				
	1.0				34		
					36		BROWN SAND WITH GRAVEL (SP), moist, fine to coarse, some fine to coarse subangular gravel up to 1-inch diameter, few fines
	0.3						at 37 feet: wet
	0.1		60		38		
	0.4						
					40		Bottom of boring at 40 feet bgs.
							Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-22-GW
					42		Boring backfilled with hydrated bentonite.
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/20/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-23

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	1.0				0		DARK BROWN SILTY SAND (SM), moist, fine to coarse, little fines
	0.7				2		YELLOW-BROWN SANDY SILT (ML), moist, some fine to medium sand, abundant orange staining, (soil hand cleared to 3 feet)
	0.3		24		4		
	0.1				6		YELLOW-BROWN SILTY SAND (SM), wet, fine to medium, some fines
	0.3		48		8		GRAY-BROWN SAND WITH SILT (SP), moist, fine, few fines, rare orange staining
	0.5				10		
	1.0				12		
	0.6		36		14		
							at 15 feet: interbedded silty sand and sandy silt in 2-inch intervals
	0.8				16		at 16.5 feet: no silty sand interbeds
	0.8		42		18		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines
	1.1				20		
Bentonite	0.7						
	1.0		60		22		GRAY-BROWN SAND (SP), moist, fine to medium, few fines, grain size varies over 6-inch intervals
	0.6				24		at 24 feet: denser, few coarse subangular gravel
	0.5						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/20/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-23

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	1.1				26		
	0.3		60		28		LIGHT BROWN SAND WITH SILT AND GRAVEL (SP), moist, very dense, fine to coarse, some fine subangular to subrounded gravel, few fines
	0.5				30		
	1.0						at 31.4 feet: few gravel
	1.0		60		32		LIGHT BROWN SAND WITH SILT (SP), moist, very dense, fine to coarse, few fine subangular to subrounded gravel, few fines
	0.9				34		at 32 feet: horizon of bright orange staining 1.5 inches thick
	0.4				36		
	0.3		60		38		at 38 feet: wet
	0.3				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-23-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/20/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-24

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.2				0		DARK BROWN SILTY SAND (SM), moist, fine to medium, little fines, few fine subrounded gravel, (soil hand cleared to 3 feet)
	0.3				2		BROWN SILTY SAND (SM), moist, fine, some fines, (soil hand cleared to 3 feet)
			24		4		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines, abundant orange staining
	0.4						
	0.5				6		LIGHT BROWN SANDY SILT (ML), moist, some fine to medium sand, low plasticiity, abundant orange staining
	0.5		48		8		LIGHT BROWN SILTY SAND (SM), wet, some fines, abundant orange staining
	0.3						LIGHT BROWN SAND WITH SILT (SP), moist, fine, few fines, rare horizons of orange staining up to 1/4-inch thick
	0.7				10		at 11 feet: fine to medium, frequent horizons of orange staining, occasional horizons of silty sand/sandy silt up to 1/2-inch thick
	0.8		37		12		LIGHT BROWN SAND (SP), moist, fine, few fines, rare horizons of orange staining up to 1/4-inch thick
					14		
	0.4				16		
	0.6		36		18		
Bentonite					20		
	0.4						
	0.2		46		22		LIGHT BROWN SAND WITH SILT (SP), wet, fine, few fines, interbedded with LIGHT BROWN SANDY SILT (ML), moist, some fine sand, non-plastic, in 4- to 6-inch intervals
	0.9				24		GRAY-BROWN SAND (SP), moist, fine to medium, few fines

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	1.0				26		at 25 feet: coarser than above
	1.1		44				at 27.2 feet: interval of GRAVEL WITH SAND 4 inches thick
	0.9				28		BROWN SAND (SP), moist, medium, few fine to coarse subangular gravel up to 1-inch diameter, few fines
	1.3				30		
	1.6		60		32		
	2.0						BROWN SAND WITH SILT AND GRAVEL (SP), moist, medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines, crushed rock, rare orange staining
	2.1				34		
	2.4				36		
			60				BROWN SAND (SP), wet, medium, few fine subangular gravel, few fines
	1.6				38		
	1.9				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-24-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-25

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		DARK BROWN SILTY SAND (SM), moist, fine to coarse, some fines, few fine subrounded gravel, (soil hand cleared to 3 feet)
	2.1						
					2		LIGHT BROWN SANDY SILT (ML), moist, some fine to medium sand, few fine to coarse subangular gravel up to 1.5-inch diameter, occasional orange staining, occasional roots, (soil hand cleared to 3 feet)
	0.1						
	0.3		24		4		
	0.1						
							LIGHT BROWN SILTY SAND (SM), wet, fine, little fines
	0.9				6		BROWN SAND WITH SILT (SP), moist, fine, few fines, frequent horizons of orange staining up to 1/4-inch thick
	0.5		39		8		
							BROWN SAND (SP), moist, fine, few fines, frequent horizons of orange staining up to 1/4-inch thick
					10		
	1.3						
	1.0				12		
			45				
	1.1						BROWN SILTY SAND (SM), moist, fine, little fines
					14		BROWN SAND (SP), moist, fine, few fines, frequent horizons of orange staining up to 1/4-inch thick
	0.7						
					16		BROWN SAND WITH GRAVEL (SP), moist, fine, some fine to coarse subangular gravel up to 1.5-inch diameter, few fines
	2.3						
	1.9		41		18		BROWN SAND (SP), moist, fine, few fines, frequent horizons of orange staining up to 1/4-inch thick
					20		at 20 feet: trace fine gravel
Bentonite	3.2						
	3.1				22		
			60				BROWN SAND WITH SILT (SP), moist, medium, few fine to coarse subangular gravel up to 1.5-inch diameter, few fines
	3.0						
					24		
	2.7						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-25

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
							at 25 feet:
	1.4				26		BROWN SAND WITH SILT AND GRAVEL (SP), moist, medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines
	1.6		60		28		BROWN SAND (SP), moist, medium, few fine subangular gravel, few fines
	2.1				30		at 30 feet: occasional intervals of medium to coarse sand
	1.5						
	2.5		60		32		
	2.1				34		at 34.5 feet: fine to medium
	2.3						
	1.9				36		
							at 37 feet: wet
	1.8		60		38		
	1.7				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-25-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-26

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		Concrete (8 inches)
	0.4						DARK BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to coarse, little fine to coarse subrounded gravel, little fines, (soil hand cleared to 3 feet)
		SB-26-2*			2		
	0.2						
	0.3	SB-26-4*	12		4		
							YELLOW-BROWN SAND WITH SILT (SP), moist, fine, few fines, trace fine subangular gravel, frequent orange staining
	2.4				6		
	1.9						
			25		8		
							GRAY-BROWN SAND (SP), moist, fine, few fines, occasional horizons of orange staining up to 1/4-inch thick
	1.9	SB-26-10*			10		
	1.4				12		
	1.7		36				
					14		
							at 15 feet: few fine subangular gravel
	2.1				16		
	2.3						
	2.0		36		18		at 17.4 feet: horizon of sand with silt 4 inches thick
		SB-26-20*			20		at 20 feet: brown
Bentonite	4.7						
	4.6				22		
			60				
	3.1				24		
	2.4						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	4.1				26		BROWN SAND WITH SILT (SP), moist, medium, few fine to coarse subangular gravel, few fines
	4.5		60		28		
	3.5						
		SB-26-30*			30		
	3.0						
	2.1				32		at 32 feet: no coarse gravel
			60				
	3.3				34		
	1.5						
	2.1				36		BROWN SAND (SP), moist, medium, few fine subangular gravel, few fines
	1.3		60		38		
	1.0						
		SB-26-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-27

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete					0		BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to coarse, little fine to coarse subangular gravel up to 3-inch diameter, little fines, cobbles, (soil hand cleared to 3 feet)
	3.5						
	2.0	SB-27-2*			2		
	2.1	SB-27-4*	24		4		YELLOW-BROWN SAND WITH SILT (SP), moist, fine, few fines
	6.3				6		at 6 feet: gray
	6.6						LIGHT BROWN SILTY SAND (SM), mosit, fine, little fines, abundant horizons of orange staining up to 1/8-inch thick
	7.2	SB-27-8	36		8		
		SB-27-10*			10		
	3.3						
	4.2				12		
	1.7		40				GRAY-BROWN SAND WITH GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up tot 1-inch diameter, few fines, frequent horizons of orange staining up to 1/8-inch thick, frequent horizons of silty sand/sandy silt up to 1/8-inch thick
					14		GRAY-BROWN SAND WITH SILT (SP), moist, fine to medium, few fine to coarse subangular gravel up to 1-inch diameter, few fines
	2.5				16		
	2.5		60		18		
	2.8						
		SB-27-20*			20		
Bentonite	2.0						
	2.1				22		GRAY-BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines, grain size varies over 4-inch intervals, rare orange staining
	3.2		60				
					24		
	3.7						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-27

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
							at 25 feet: no grain size varation or staining
	2.8				26		
	2.2		60		28		
	2.2						
	2.3	SB-27-30*			30		
	2.2						
	2.6		60		32		
	2.4						
					34		BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to coarse, some fine to coarse subangular gravel up to 1-inch diameter, little fines
	2.1						GRAY-BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines, intervals of SAND up to 4 inches thick
	3.6				36		
	3.2		60		38		
							at 39.5 feet: wet
	3.8	SB-27-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/23/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-28

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.4				0		GRAY GRAVEL (GP), moist, coarse subangular gravel up to 1.5-inch diameter, trace fine to coarse sand, trace fines, (roadway paving, soil hand cleared to 3 feet)
	1.7				2		BROWN SILTY SAND WITH GRAVEL (SM), moist, fine to coarse, little fine to coarse subangular gravel, little fines, cobbles, (soil hand cleared to 3 feet)
	2.3		24		4		YELLOW-BROWN SANDY SILT (ML), moist, some fine to medium sand, non-plastic, abundant orange staining
	3.1						at 5 feet: interbeds of silty sand in 6-inch intervals
	4.1				6		
	3.6		50		8		
	3.7						BROWN SILTY SAND (SM), wet, fine, little fines
	1.3				10		
	1.9		50		12		
	20.0				14		GRAY-BROWN SAND WITH SILT (SP), moist, fine, few fines
	20.0				16		
	2.8		44				
	1.4				18		at 18.3 feet: coarsening upward sequence with 4 inches of silt below
Bentonite	4.1	SB-28-20*			20		BROWN SAND WITH SILT AND GRAVEL (SP), moist, fine to medium, little fine to coarse subangular gravel up to 1-inch diameter, few fines, rare orange staining
	4.3		60		22		
	3.7				24		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-28

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	4.1				26		at 26 feet: gravel content varies up to some gravel over 4- to 6-inch intervals
	3.0		60		28		
	2.8	SB-28-30*			30		at 29 feet: moist to wet at 30 feet: medium sand, little gravel, rare orange staining
	1.1						
	1.1		50		32		
	2.4				34		
	1.0				36		BROWN SAND (SP), moist, medium, few fines
	1.0		60		38		
	1.0						BROWN SAND WITH SILT AND GRAVEL (SP), wet, medium to coarse, fine to coarse subangular gravel up to 1-inch diameter, few fines
		SB-28-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-29

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	0.3				0		DARK BROWN SILTY SAND (SM), moist, fine to medium, little fines, few fine subrounded gravel, (soil hand cleared to 3 feet)
	0.4				2		BROWN SILTY SAND (SM), moist, fine, some fines, (soil hand cleared to 3 feet)
			30		4		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines
	0.5						
	0.6				6		LIGHT BROWN SANDY SILT (ML), moist, some fine to medium sand, low plasticiity, abundant orange staining
	0.6		48				LIGHT BROWN SILTY SAND (SM), wet, some fines, abundant orange staining
	0.4				8		LIGHT BROWN SAND WITH SILT (SP), moist, fine, few fines, rare horizons of orange staining up to 1/4-inch thick
	0.7				10		at 11 feet: fine to medium, frequent horizons of orange staining, occasional horizons of silty sand/sandy silt up to 1/2-inch thick
	0.9		40		12		LIGHT BROWN SAND (SP), moist, fine, few fines, rare horizons of orange staining up to 1/4-inch thick
					14		
	0.5				16		
	0.7		36		18		
Bentonite					20		
	0.5						
	0.3		46		22		LIGHT BROWN SAND WITH SILT (SP), wet, fine, few fines
	1.0				24		GRAY-BROWN SAND (SP), moist, fine to medium, few fines

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
	1.1				26		at 25 feet: coarser than above
	1.2		60				
	1.0				28		BROWN SAND (SP), moist, medium, few fine to coarse subangular gravel up to 1-inch diameter, few fines
					30		
	1.4						
	1.7		60		32		
	2.0						BROWN SAND WITH SILT AND GRAVEL (SP), moist, medium, little fine to coarse subangular gravel up to 1.5-inch diameter, few fines, crushed rock, rare orange staining
	2.0				34		
	2.3				36		
	1.7		60		38		
	2.0				40		Bottom of boring at 40 feet bgs. Temporary well screen installed from 36 to 40 feet bgs. Water Sample: SB-29-GW Boring backfilled with hydrated bentonite.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

PES Environmental, Inc.
Engineering & Environmental Services

LOG OF BORING: SB-30

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
Concrete	1.0				0		DARK BROWN SILTY SAND (SM), moist, fine to medium, little fines, few fine subrounded gravel, abundant roots, (soil hand cleared to 3 feet)
	0.1						BROWN SILTY SAND (SM), moist, fine to medium, some fines, rare large roots, (soil hand cleared to 3 feet)
	0.3				2		
			33		4		GRAY-BROWN SAND WITH SILT (SP), moist, fine, few fines, frequent faint orange staining
	0.4				6		
	0.2		37				at 7.5 feet: bedding visible
					8		
					10		
	0.3						
	1.0		43		12		LIGHT BROWN SILTY SAND (SM), moist, fine, little fines
	0.5						GRAY-BROWN SANDY SILT (ML), moist, some fine sand, non-plastic, dark red staining, medium sand inclusions
					14		
							GRAY-BROWN SAND (SP), moist, fine, few fines, bedding visible
	0.8				16		
	0.3						
			43				
	0.4				18		at 18 feet: grades finer
					20		at 20 feet: grain size varies from fine to fine to medium over 1-foot intervals, bedding visible
Bentonite	0.3						
	0.2				22		
			60				
	0.3						
					24		
	0.1						

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

Boring Completion	PID (PPM)	Sample ID	Sample Recovery	Sample Interval	Depth (Feet)	Graphic Log	Lithologic Description
					26		
	0.1		60		28		BROWN SILTY SAND (SM), moist to wet, fine, little fines, few fine subangular gravel
	0.0						BROWN SILT (ML), moist to wet, little fine sand, low-plasticity
	0.1	SB-30-30*			30		BROWN SAND WITH SILT AND GRAVEL (SP), wet, fine to medium, little fine to coarse subangular gravel up to 1-inch diameter, few fines
	1.0				32		
	0.5		60				
	0.9				34		BROWN SAND WITH SILT (SP), wet, fine to medium, few fine to coarse subangular gravel up to 1-inch diameter, few fines
		SB-30-25*					
	1.0				36		
			60				
	0.8				38		
	1.0	SB-30-40*			40		Bottom of boring at 40 feet bgs. Boring backfilled with hydrated bentonite. * sample submitted for laboratory analysis.
					42		
					44		
					46		
					48		
					50		

Project: MVSC
Project Number: 1358.001.01.009
Site Location: Normandy Park, WA
Logged By: CJD
Ecology Well Tag: N/A

Total Drilled Depth: 40 Feet
Diameter of Boring: 2.25 inches
Drill Date: 4/24/18
Drilled By: Holt Services, LLC
Drill Method: Track-Mounted Geprobe

ATTACHMENT G
WASTE DISPOSAL INFORMATION

This Shipping Order

must be legibly filled in, in Ink indelible Pencil, or in Carbon, and retained by the agent

Shipper No. 07644

Carrier No. _____

Page 1 of 4

MARINE VACUUM SERVICE INC.

(Name of carrier) (SCAC)

Date 12-28-17

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 17821 1ST AVE S
City BURIEN State WA Zip Code

24 hr. Emergency Contact Tel. No. CHEMTEL 1-800-255-3924 CONTRACT MIS3627926

Route

Vehicle Number 126

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	1200	gallons		
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 ☐ $

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 PES ENVIROMENTAL
PER Karsten Springsteen

CARRIER Marine Vacuum Service
PER Khan Mounkhoune
DATE 12-28-17

2

Permanent post-office address of shipper.

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
WAH000028116	1	(800) 483-8718	011770066 FLE

GENERATOR

5. Generator's Name and Mailing Address
Harris Family LTD
1215 Fourth Avenue Suite 1390
Seattle, WA 98161 98101
Generator's Phone:

Generator's Site Address (if different than mailing address)
17917 1st Avenue South
Normandy Park, WA 98148

6. Transporter 1 Company Name: Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number: MAD039822250

7. Transporter 2 Company Name: Steve Forbes Trucking
U.S. EPA ID Number: EPE0202056 25

8. Designated Facility Name and Site Address
Clean Harbors Grassy Mountain LLC
3 Miles East 7 Miles North of Knolls
Grantsville, UT 84029
Facility's Phone: (435) 884-6900
U.S. EPA ID Number: UTD991301748

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. NA3077, HAZARDOUS WASTE, SOLID, N.O.S., (TETRACHLOROETHYLENE), 9, PG III	602	DM	1600	P	F002		
X	2. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TETRACHLOROETHYLENE), 9, PG III CC					F002		
X	3. NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., (TETRACHLOROETHYLENE), 9, PG III CC					F002		
	4.							

14. Special Handling Instructions and Additional Information
1. CH1569342 ERG#171 1855
2. CH1569365 ERG#172 1855
3. CH1569365 ERG#171 1855

Confirmed estimated by generator unless agency authority to initial transporter to add or substitute additional transporters as necessary to ship?

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	Signature	Month	Day	Year
HANNAH MCKENNA		7	19	18

INT'L

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	Signature	Month	Day	Year
Charles Cuno		07	19	18
Transporter 2 Printed/Typed Name	**Signature**	**Month**	**Day**	**Year**
Justin Frank		07	23	18

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
98101
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	H132	H132	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a 20180071104

Printed/Typed Name	Signature	Month	Day	Year
Don Pomikala		8	1	18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.
Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO GENERATOR

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)	21. Generator ID Number	22. Page	23. Manifest Tracking Number
	WAH000028116	2	011770066FLE

24. Generator's Name: HARRIS FAMILY LTD — SAME

25. Transporter 3 Company Name: 98101 Clean Harbors Environmental Services, INC. — U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name — U.S. EPA ID Number:

GENERATOR

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
	TPO							

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Lynnsey Skinner		07	25	18

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

TRK 165101 TRL 453109 0252260

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) DI 1802783628 SC PPW 7/12/2018 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
WAH000028116	1	(800) 483-3718	011770274 FLE

GENERATOR

5. Generator's Name and Mailing Address
Harris Family LTD
1215 Fourth Avenue Suite 1350
Seattle, WA 98161
Generator's Phone:

Generator's Site Address (if different than mailing address)
17617 1st Avenue South
Normandy Park, WA 98148

6. Transporter 1 Company Name
Clean Harbors Environmental Services, Inc.
U.S. EPA ID Number
MAD039322250

7. Transporter 2 Company Name
TSMT
U.S. EPA ID Number
MODO95038998

8. Designated Facility Name and Site Address
Clean Harbors Grassy Mountain LLC
3 Miles East 7 Miles North of Knolls
Grantsville, UT 84029
Facility's Phone: (435) 884-8900
U.S. EPA ID Number
UTD991301748

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., (TETRACHLOROETHYLENE), 9, PG III	003	DM	220	P	F002
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.CR1669366 ERG#171 3X55

Contract retained by generator confers agency authority on initial transporter to add or substitute additional transporters on generator's behalf.

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: Kirsten Sinclair PES — Signature — Month 8 Day 17 Year 18

INT'L

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: Yeang Kee — Signature — Month 8 Day 17 Year 18

Transporter 2 Printed/Typed Name: ROBERT OMIRI — Signature — Month 8 Day 24 Year 18

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: [illegible] — Signature — Month 8 Day 25 Year 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Clean Harbors has the appropriate permits for and will accept the waste the generator is shipping.

DESIGNATED FACILITY TO GENERATOR

Please print or type. Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: WAH000029116

22. Page: 2

23. Manifest Tracking Number: 011776247 FLE

24. Generator's Name: Harris Foundry LTD

SAME

25. Transporter 3 Company Name: Clean Harbors Environmental Services

U.S. EPA ID Number: MAD039322250

26. Transporter _____ Company Name

U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
	TPO					

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: Marvin Jo Green | Signature | Month: 8 | Day: 27 | Year: 18

34. Transporter _____ Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR