PES Environmental, Inc.
Engineering & Environmental Services

October 28, 2016

**1246.038.03**

Gerrity Retail Fund 2, Inc.
c/o: Gerrity Group, LLC
973 Lomas Santa Fe Drive
Solana Beach, California 92075

Attention: Mr. John Waters

**SUMMARY OF GROUNDWATER SAMPLING RESULTS – OCTOBER 2016**
**LAKE STEVENS MARKETPLACE SHOPPING CENTER**
**LAKE STEVENS, WASHINGTON**

Dear Mr. Waters:

PES Environmental, Inc. (PES) has prepared this letter report to summarize the results of the October 2016 groundwater sampling conducted at 303 91st Avenue NE, Lake Stevens, Washington (Site; Plate 1). Gerrity Retail Fund 2, Inc. (Gerrity) retained PES to conduct this groundwater sampling event to evaluate groundwater conditions associated with a former dry cleaner business that operated in Suite C-302, in the Lake Stevens Marketplace Shopping Center at the Site. The dry cleaner began operating in 1993 using dry cleaning solvents containing tetrachloroethene (PCE). The dry cleaner ceased operations in late 2014 or early 2015, and the tenant suite is currently unoccupied.

The purpose of the groundwater sampling event was to continue to understand and define the extent of the PCE-contaminated shallow groundwater plume.

## BACKGROUND

Groundwater monitoring has been performed quarterly since January 2015. Groundwater levels indicate a predominately northwest groundwater flow direction with occasional flow to the northeast. Groundwater samples collected from MW-2, north of the dry cleaner suite, have consistently contained concentrations of PCE above the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A groundwater cleanup level (CUL).

In July 2016, PES installed one deep monitoring well (MW-5) and two shallow monitoring wells (MW-6 and MW-7). The well completion details are summarized in Table 1. On July 26, 2016, PES monitored the new wells concurrent with four existing wells and collected groundwater samples from wells MW-1 through MW-7. The purpose of the well installation and sampling was to evaluate water downgradient of MW-2, to evaluate the effectiveness of till at the Site as an aquitard, and to evaluate shallow groundwater immediately behind the former dry cleaner

suite[1]. Based on the results of the well installation and groundwater sampling, PES recommended conducting an additional groundwater sampling event in October 2016.

## GROUNDWATER SAMPLING FIELD PROCEDURES

The depth to water in monitoring wells MW-1through MW-7 was measured on October 18, 2016. PES used an electronic water level probe to measure the depth to water from the top of the polyvinyl chloride (PVC) well casing. Groundwater depths were measured in several rounds at approximately 30-minute intervals until depth measurements stabilized within 0.02 feet. The probe was decontaminated with a distilled water rinse between wells.

PES collected groundwater samples from monitoring wells MW-1 through MW-7 on October 18, 2016. The samples were collected using low-flow sampling methods. A peristaltic pump was used to purge and sample groundwater from each well. New disposable polyethylene tubing (silicon tubing at the pump head) was used, with the sample intake at the midpoint of each well screen. PES monitored pumping rates and field parameters [pH, temperature, specific conductance, dissolved oxygen (DO), and oxidation reduction potential (ORP)] during well purging. Each well was purged at approximately 50 to 80 milliliters per minute (ml/min) until the field parameters were stable.

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

## GROUNDWATER SAMPLING RESULTS

The depth to water and groundwater elevations (relative to North American Vertical Datum [NAVD 88]) are presented in Table 2. The stabilized depth to water measured in the deep well (MW-5) was approximately 20 feet below the top of casing (TOC). The stabilized depth to water measured in the shallow wells ranged from approximately 2.3 to 9.2 feet below the TOC (surface elevation varies across the Site). Plate 2 presents a groundwater contour map of the October 18, 2016 groundwater elevations in the shallow monitoring wells (all wells but deeper well MW-5). As seen on Plate 2, the highest groundwater elevation (355.31 feet) was at MW-4 and the lowest groundwater elevation was at MW-7 (352.13 feet). Groundwater flow appears to be northwest.

[1] PES Environmental, Inc. 2016. *Summary of Phase II Investigation Results. Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington.* August 16.

PCE was not detected at or above the practical quantitation limit (PQL) in the samples collected from MW-1, MW-3, MW-4, MW-5, and MW-6. Concentrations of PCE were measured at 214 and 10.6 micrograms per liter (µg/L) in water samples collected from MW-2 and MW-7, respectively. These concentrations are above the MTCA Method A CUL for groundwater of 5 µg/L. The PCE concentration in MW-2 is within the range of concentrations detected during the quarterly sampling conducted in 2015 and 2016. The PCE concentration in MW-7 is significantly lower than the July 26, 2016 result of 43.5 µg/L (the initial sample from this well). Other VOCs detected include low levels of dichlorodifluoromethane (CFC-12) in MW-3 and methylene chloride in the sample collected from MW-5.

Table 3 summarizes groundwater sample field parameters. Table 4 summarizes the groundwater analytical results, and PCE concentrations in groundwater from the last two rounds of sampling are presented on Plate 2.

## Data Validation Review

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

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

The laboratory report and data validation memorandum are included in Attachment B.

## CONCLUSIONS

Based on the sampling conducted around the former dry cleaner suite in July and October 2016, the following conclusions can be made:

- PCE was again not detected at concentrations above the PQL in the groundwater sample collected from the deep well (MW-5) adjacent to MW-2. It appears that the “till” layer effectively limits downward migration of contaminants.
- PCE was detected at concentrations above the MTCA Method A CUL for groundwater in samples collected from MW-2 and MW-7. PCE concentrations in the groundwater sample collected from MW-2 were within the range of previously measured concentrations. PCE concentrations in MW-7 may be showing a decreasing trend due to the subsurface disturbance of the MW-7 well installation activities causing a temporary increase in groundwater concentrations.

PES recommends continued quarterly sampling in order to obtain a larger data set and evaluate the PCE concentration trends and extent of groundwater contamination. If you have any questions, please feel free to contact either of the undersigned.

Sincerely,
**PES ENVIRONMENTAL, INC.**

Brian O'Neal, P.E.
Associate Engineer

Robert Creps
Principal Engineer

Attachments: Table 1 – Monitoring Well and Temporary Well Completion Details
Table 2 – Groundwater Elevations
Table 3 – Groundwater Sample Field Parameters
Table 4 – PCE Groundwater Analytical Results
Plate 1 – Site Location Map
Plate 2 – PCE Concentrations and Groundwater Elevations and Contours
Attachment A – Field Sampling Forms
Attachment B – Laboratory Report and Data Validation Memorandum

# Monitoring Well Completion Details
# Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington

| Well | Ecology Well Tag Number | Date Installed | Northing | Easting | Monitoring Point Elevation | Surface Casing Rim Elevation | Ground Surface Elevation | Boring Depth | Screen Depth | Filter Pack Depth | Bentonite Seal Depth | Surface Concrete Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Shallow Monitoring Wells** | | | | | | | | | | | | |
| MW-1 | BID972 | 1/21/15 | 1,328,610.23 | 367,217.30 | 361.70 | 361.61 | 361.34 | 15 | 5 - 15 | 4 - 15 | 2 - 4 | 0 -2 |
| MW-2 | BID973 | 1/21/15 | 1,328,670.40 | 367,243.65 | 360.30 | 360.23 | 359.92 | 15 | 5 - 15 | 4 - 15 | 2 - 4 | 0 -2 |
| MW-3 | BID975 | 1/27/15 | 1,328,767.24 | 367,203.55 | 357.30 | 357.28 | 356.98 | 13 | 3 - 13 | 2 - 13 | 1 - 2 | 0 - 1 |
| MW-4 | BID974 | 1/27/15 | 1,328,773.93 | 367,126.15 | 358.00 | 357.84 | 357.65 | 13 | 3 - 13 | 2 - 13 | 1 - 2 | 0 - 1 |
| MW-6 | BJY108 | 7/21/16 | 1,328,642.41 | 367,271.85 | 361.20 | 361.21 | 360.77 | 15.5 | 5 - 15 | 4 - 15.5 | 2 - 4 | 0 - 2 |
| MW-7 | BJY109 | 7/21/16 | 1,328,690.20 | 367,269.54 | 359.30 | 359.34 | 358.94 | 15.5 | 5 - 15 | 4 - 15.5 | 2 - 4 | 0 - 2 |
| **Deep Monitoring Well** | | | | | | | | | | | | |
| MW-5 | BJY107 | 7/20/16 | 1,328,677.95 | 367,242.22 | 360.00 | 360.03 | 359.67 | 40.5 | 30 - 40 | 29 - 40.5 | 4 - 29 | 0 - 4 |

**Notes:**

1. Northing/Easting in feet relative to the WA State Plane System North Zone (NAD 83)
2. Elevations in feet relative to the North American Vertical Datum (NAVD 88)
3. All depths shown in feet below ground surface
4. Monitoring point = top of the PVC well casing; all wells completed flush with grade
5. Surveyed locations = north side of completion or the ground surface to the north of completion

# Table 2

## Groundwater Elevations
## Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington

| Location | Date | Time | Depth to Water | Monitoring Point Elevation | Water Elevation |
|---|---|---|---|---|---|
| **Shallow Monitoring Wells** | | | | | |
| MW-1 | 1/31/15 | - | 7.45 | 361.34 | 353.89 |
| | 4/29/15 | - | 7.73 | 361.34 | 353.61 |
| | 7/21/15 | - | 9.81 | 361.34 | 351.53 |
| | 10/6/15 | - | 10.26 | 361.34 | 351.08 |
| | 1/21/16 | - | 6.58 | 361.34 | 354.76 |
| | 4/8/16 | - | 7.90 | 361.34 | 353.44 |
| | 7/1/16 | 823 | 8.90 | 361.34 | 352.44 |
| | 7/26/16 | 642 | 9.35 | 361.34 | 351.99 |
| | 10/18/16 | 816 | 9.15 | 361.34 | 352.19 |
| MW-2 | 1/31/15 | - | 6.14 | 359.92 | 353.78 |
| | 4/29/15 | - | 6.48 | 359.92 | 353.44 |
| | 7/21/15 | - | 8.70 | 359.92 | 351.22 |
| | 10/6/15 | - | 9.04 | 359.92 | 350.88 |
| | 1/21/16 | - | 5.91 | 359.92 | 354.01 |
| | 4/8/16 | - | 7.01 | 359.92 | 352.91 |
| | 7/1/16 | 824 | 8.15 | 359.92 | 351.77 |
| | 7/26/16 | 645 | 8.44 | 359.92 | 351.48 |
| | 10/18/16 | 826 | 7.44 | 359.92 | 352.48 |
| MW-3 | 1/31/15 | - | 2.25 | 356.98 | 354.73 |
| | 4/29/15 | - | 2.51 | 356.98 | 354.47 |
| | 7/21/15 | - | 5.71 | 356.98 | 351.27 |
| | 10/6/15 | - | 4.99 | 356.98 | 351.99 |
| | 1/21/16 | - | 2.62 | 356.98 | 354.36 |
| | 4/8/16 | - | 3.15 | 356.98 | 353.83 |
| | 7/1/16 | 826 | 4.21 | 356.98 | 352.77 |
| | 7/26/16 | 900 | 4.81 | 356.98 | 352.17 |
| | 10/18/16 | 820 | 3.09 | 356.98 | 353.89 |
| MW-4 | 1/31/15 | - | 2.10 | 357.65 | 355.55 |
| | 4/29/15 | - | 2.46 | 357.65 | 355.19 |
| | 7/21/15 | - | 5.64 | 357.65 | 352.01 |
| | 10/6/15 | - | 4.83 | 357.65 | 352.82 |
| | 1/21/16 | - | 3.10 | 357.65 | 354.55 |
| | 4/8/16 | - | 3.16 | 357.65 | 354.49 |
| | 7/1/16 | 1001 | 3.55 | 357.65 | 354.10 |
| | 7/26/16 | 650 | 4.54 | 357.65 | 353.11 |
| | 10/18/16 | 931 | 2.34 | 357.65 | 355.31 |
| MW-6 | 7/26/16 | 643 | 9.31 | 360.77 | 351.46 |
| | 10/18/16 | 824 | 8.63 | 360.77 | 352.14 |
| MW-7 | 7/26/16 | 647 | 7.58 | 358.94 | 351.36 |
| | 10/18/16 | 828 | 6.81 | 358.94 | 352.13 |

# Table 2

## Groundwater Elevations
## Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington

| Location | Date | Time | Depth to Water | Monitoring Point Elevation | Water Elevation |
|---|---|---|---|---|---|
| **Deep monitoring Well** | | | | | |
| MW-5 | 7/26/16 | 646 | 20.68 | 360.00 | 339.32 |
| | 10/18/16 | 926 | 20.67 | 360.00 | 339.33 |

**Notes:**

1. Data collected prior to 7/1/16 provided by Galloway Environmental, Inc.
   System North Zone (NAD 83)
2. Elevations in feet relative to the North American Vertical Datum (NAVD 88)
3. All depths shown in feet below monitoring point
4. Monitoring point elevation = top of the north side of the PVC casing (wells)

# Table 3

## Groundwater Sample Field Parameters
## Lake Stevens MarketplaceShopping Center, Lake Stevens, Washington

| Sample | Date Collected | Approximate Sample Depth | pH | Specific Conductance (µS/cm) | Temperature (°C) | Dissolved Oxygen (mg/L) | ORP (mv) |
|---|---|---|---|---|---|---|---|
| **Shallow Monitoring Wells** | | | | | | | |
| MW-1 | 7/26/16 | 12 | 6.14 | 508.3 | 17.9 | 2.33 | 144.5 |
| | 10/18/16 | 10 | 6.02 | 213 | 14.7 | 1.09 | 64.3 |
| MW-2 | 7/26/16 | 12 | 6.45 | 378.2 | 19.6 | 1.74 | 156.7 |
| | 10/18/16 | 10 | 5.96 | 379.8 | 14.7 | 2.96 | 106.2 |
| MW-3 | 7/26/16 | 10 | 6.90 | 211.5 | 21.0 | 3.20 | 129.6 |
| | 10/18/16 | 10 | 6.30 | 190.6 | 14.4 | 3.81 | 110.4 |
| MW-4 | 7/26/16 | 10 | 6.57 | 203.4 | 19.7 | 3.05 | 157.6 |
| | 10/18/16 | 10 | 6.27 | 136.4 | 14.8 | 1.03 | 113.2 |
| MW-6 | 7/26/16 | 12 | 6.88 | 676.0 | 17.4 | 6.16 | 143.0 |
| | 10/18/16 | 10 | 6.11 | 649.0 | 14.0 | 2.56 | 71.7 |
| MW-7 | 7/26/16 | 12 | 7.36 | 373.8 | 18.1 | 5.69 | 135.2 |
| | 10/18/16 | 10 | 6.00 | 250.9 | 13.8 | 1.96 | 85.7 |
| **Deeper Monitoring Well** | | | | | | | |
| MW-5 | 7/26/16 | 35 | 9.68 | 485.1 | 19.1 | 1.05 | 162.7 |
| | 10/18/16 | 35 | 6.82 | 203.3 | 14.2 | 1.07 | 96.6 |

**Notes:**

1. Sample depths relative to ground surface
2. µS/cm = micro-Siemens per centimeter
3. ºC = degrees Celsius
4. mg/L = milligrams per liter
5. mv = millivolts
6. ORP = oxidation-reduction potential

# Table 4

## Groundwater Analytical Results
## Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington

| Well ID | Date Sampled | Tetrachloroethene (micrograms per liter) | |
|---|---|---|---|
| **Shallow Monitoring Wells** | | | |
| MW-1 | 1/31/2015 | 0.20 | U |
| | 4/29/2015 | 0.20 | U |
| | 7/21/2015 | 0.20 | U |
| | 10/6/2015 | 0.20 | U |
| | 1/21/2016 | 0.20 | U |
| | 4/8/2016 | 0.20 | U |
| | 7/26/2016 | 1.00 | U |
| | 10/18/2016 | 1.00 | U |
| MW-2 | 1/31/2015 | **450** | |
| | 4/29/2015 | **110** | |
| | 7/21/2015 | **320** | |
| | 10/6/2015 | **370** | |
| | 1/21/2016 | **100** | |
| | 4/8/2016 | **71** | |
| | 7/26/2016 | **128** | |
| | 10/18/2016 | **214** | |
| MW-3 | 1/31/2015 | 0.20 | U |
| | 4/29/2015 | 0.20 | U |
| | 7/21/2015 | 0.20 | U |
| | 10/6/2015 | 0.20 | U |
| | 1/21/2016 | 0.20 | U |
| | 4/8/2016 | 0.20 | U |
| | 7/26/2016 | 1.00 | U |
| | 10/18/2016 | 1.00 | U |
| MW-4 | 1/31/2015 | 0.20 | U |
| | 4/29/2015 | 0.20 | U |
| | 7/21/2015 | 0.20 | U |
| | 10/6/2015 | 0.20 | U |
| | 1/21/2016 | 0.20 | U |
| | 4/8/2016 | 0.20 | U |
| | 7/26/2016 | 1.00 | U |
| | 10/18/2016 | 1.00 | U |
| MW-6 | 7/26/2016 | **1.68** | |
| | 10/18/2016 | 1.00 | U |
| MW-7 | 7/26/2016 | **43.5** | |
| | 10/18/2016 | **10.6** | |

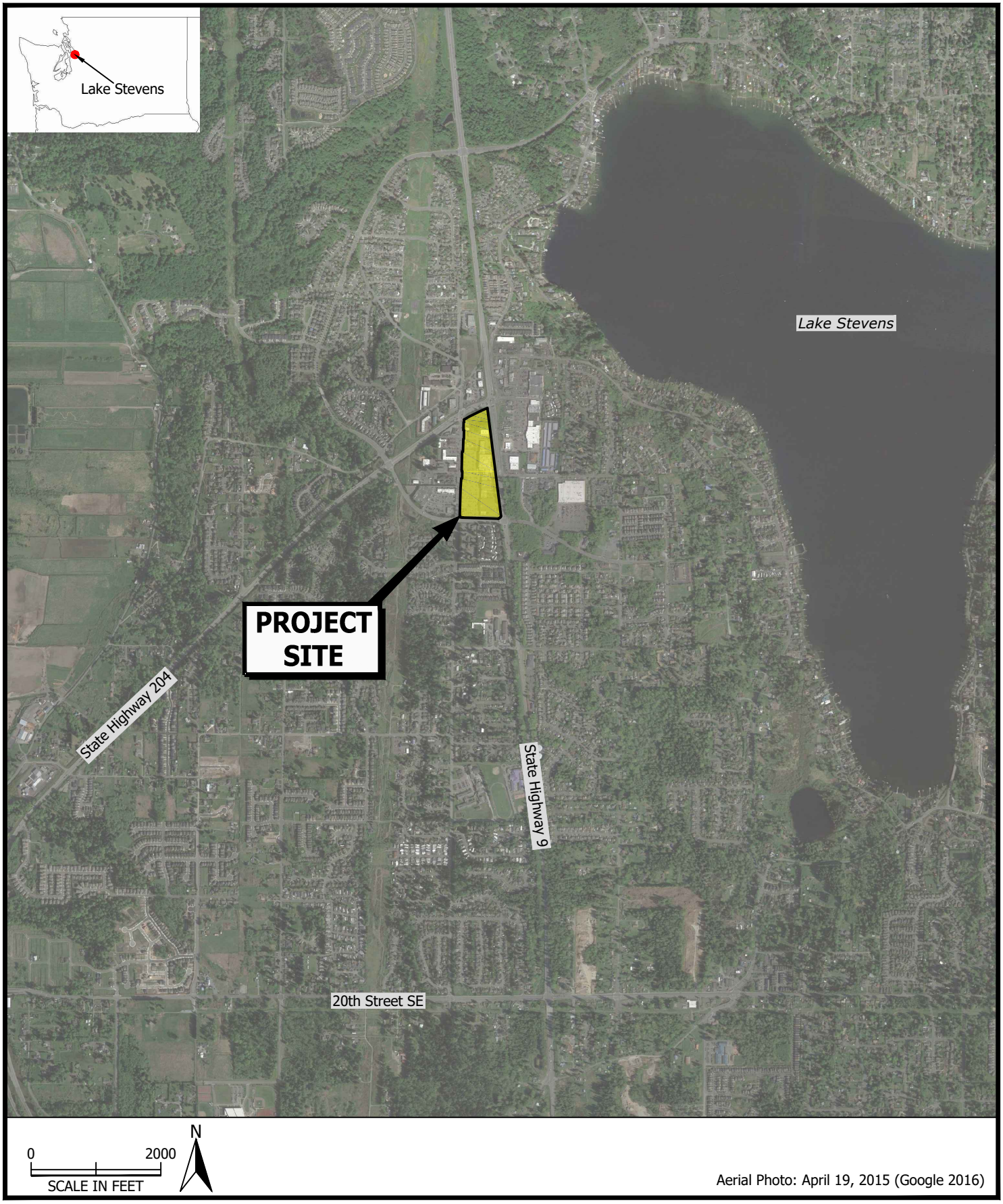
# Table 4

## Groundwater Analytical Results
## Lake Stevens Marketplace Shopping Center, Lake Stevens, Washington

| Well ID | Date Sampled | Tetrachloroethene (micrograms per liter) | |
|---|---|---|---|
| **Deeper Monitoring Well** | | | |
| MW-5 | 7/26/2016 | 1.00 | U |
| | 10/18/2016 | 1.00 | U |
| MTCA Method A | | 5.0 | |
| MTCA Method B | | 20.8 | |

**Notes:**

1. U = result is less than the practical quantitation limit (PQL)
2. PCE = tetrachloroethene
3. MTCA Method A groundwater cleanup levels obtained from Ecology's CLARC database 2016
4. MTCA Method B groundwater cleanup levels obtained from Ecology's CLARC database 2016
5. Bold indicates compound detected above the PQL
6. Shading indicates the concentration exceeds the MTCA Method A cleanup level
7. Selected VOCs are summarized in this table; see laboratory analytical reports for entire VOC analytical results



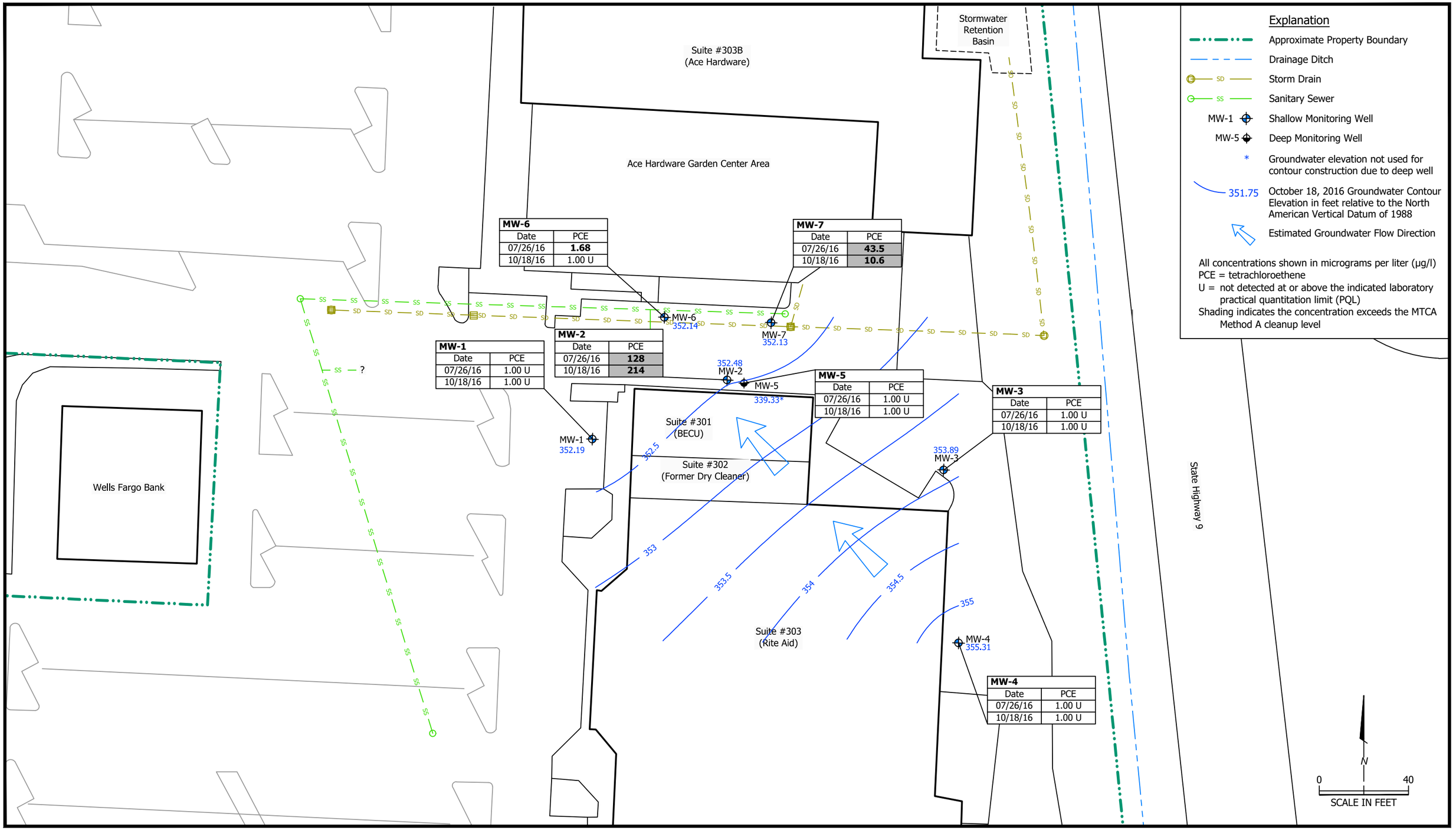

Aerial Photo: April 19, 2015 (Google 2016)

**PES Environmental, Inc.**
Engineering & Environmental Services

**Site Location**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE
1

| 1246.038.02.002 | 124603803002_GW_1 | *KLR* | 10/16 |
|---|---|---|---|
| JOB NUMBER | DRAWING NUMBER | REVIEWED BY | DATE |

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Engineering & Environmental Services

**PCE Concentrations and Groundwater Contour Map**
Lake Stevens Marketplace Shopping Center
Lake Stevens, Washington

PLATE 2

| 1246.038.01.002 | 124603803002_GW_2 | KLR | 10/16 |
|---|---|---|---|
| JOB NUMBER | DRAWING NUMBER | REVIEWED BY | DATE |

**PES Environmental, Inc.**
**Engineering & Environmental Services**

| | |
|---|---|
| PAGE | 1 OF 1 |
| DATE: | 10/18/16 |
| PROJECT: | Lake Stevens |
| JOB No: | 1246.038.03 |
| PROJECT MANAGER: | B. O'Neal |
| RECORDED BY: | C. DeBoer |

# DAILY FIELD REPORT

| TIME | DESCRIPTION, COMMENTS, NOTES, ETC. |
|---|---|
| | QUARTERLY GROUNDWATER SAMPLING |
| 630 | mobe at office. |
| 645 | Travel to site |
| 710 | onsite. |
| | Begin measuring wells. |
| 730 | offsite for ice |
| 740 | onsite, begin 1st round of water levels. |
| 815 | 2nd Round of water levels |
| 855 | 3rd Round of water levels |
| 900 | Calibrate YSI. Begin Groundwater sampling |
| | Collect MW-6-101816 @ 950 |
| | MW-7-101816 @ 1040 |
| | MW-2-101816 @ 1120 |
| | MW-5-101816 @ 1210 |
| | MW-3-101816 @ 1255 |
| | MW-4-101816 @ 1438 (DUP) 1340 |
| | MW-8I-101816 @ 1430 (GW) |
| 1500 | offsite. Travel (traffic). Due to traffic + late time, samples held on ice under COC protocol overnight. |
| 10/19/16 | |
| 918 | Samples submitted to Fremont Analytical. |
| | • Purge + decon water was added to onsite drum. |
| | • Solid waste was added to nearby dumpster (municipal / landfill) |

ATTACHMENTS: ☐ NO ☒ YES GW Sampling forms, WL form, COC

DESCRIPTION:

Chris DeBoer
SIGNATURE

**PES Environmental, Inc.**
**Engineering & Environmental Services**

PAGE 1 OF 1
DATE: 10/28/16

# WATER LEVEL DATA FORM

PROJECT: Lake Stevens
JOB No: 1246.038.03
FIELD PERSONNEL: C. DeBoer
RECORDED BY: C. DeBoer
DATUM: ☐ MEAN SEA LEVEL ☐ OTHER - DESCRIBE

MEASURING INSTRUMENT:
☒ STEEL TAPE ☐ OTHER-TYPE
☒ ELECTRONIC SOUNDER SERIAL No. #37861

| WELL I.D. | Time Well Opened | Depth to Water (FT) I | Time I | Depth to Water (FT) II | Time II | Depth to Water (FT) | COMMENTS (well condition, odor, presence of product, etc.) |
|---|---|---|---|---|---|---|---|
| MW-1 | 710 | 9.16 | 740 | 9.15 | 816 | | |
| MW-2 | 723 | 7.45 | 751 | 7.44 | 826 | | |
| MW-3 | 728 | 3.14 | 744 | 3.09 | 820 | | |
| MW-4 | 730 | 3.00 | 742 | 2.66 | 818 | | |
| MW-5 | 725 | 20.90 | 746 | 20.78 | 822 | | |
| MW-6 | 713 | 8.65 | 747 | 8.63 | 824 | | |
| MW-7 | 718 | 6.80 | 749 | 6.81 | 828 | | |
| | | III | VII | IV | IX | | |
| MW-4 cont. | | 2.50 | 855 | 2.34 | 931 | | |
| MW-3 cont. | | 3.08 | 856 | – | – | | |
| MW-5 cont. | | 20.71 | 859 | ~~9.26~~ 20.67 (a) | ~~20.67~~ 926 | | |
| MW-6 cont. | | 8.63 | 900 | – | – | | |
| | | X | XI | XII | XIII | | |
| MW-4 cont. | | 2.30 | 1013 | 2.30 | 1305 | | |
| MW-5 cont. | | 20.52 | 1130 | | | | |

-Note: pairs of time & measurement are indicated by roman numeral

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility:** Lake Stevens Marketplace | **Location I.D. :** MW-6 |
| **Project No.:** 1246.038.03. | **Date:** 10-18-16 |

**Location Description** ☐ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 55-60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~1.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 9:00 | | 910 | | | 956 | 1102 |
| Depth to Water | 8.63 | | | | | 8.87 | 8.80 |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri

Casing Volume: [____(TD) - ____(WL)]•[___(Well ID)]²•[____(Conversion Factor)] = ____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒°C ☐°F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~.25 | 8.73 | 9:17 | 6.61 | 751 | 14.5 | 2.81 | 60.7 | NM |
| ~.5 | 8.75 | 9:22 | 6.29 | 731 | 14.3 | 2.61 | 65.1 | |
| ~.75 | 8.77 | 9:27 | 6.11 | 712 | 14.0 | 2.76 | 67.8 | |
| ~1.0 | NM | 9:32 | 6.12 | 694 | 13.9 | 2.70 | 70.0 | |
| ~1.25 | 8.82 | 9:37 | 6.11 | 681 | 13.8 | 2.72 | 70.6 | |
| ~1.5 | 8.85 | 9:42 | 6.14 | 667 | 13.9 | 2.53 | 70.3 | |
| ~1.75 | 8.87 | 9:47 | 6.11 | 649 | 14.0 | 2.56 | 71.7 | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50-80 | Color/Tint/Odor clear, colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: 10' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-6-101816 | PO | 10/18/16 | 950 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility:** Lake Stevens Marketplace | **Location I.D. :** MW-7 |
| **Project No.:** 1246.038.03 | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 55-60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 19861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 9:59 | | 1000 | | | 1045 | 1102 |
| Depth to Water | 6.89 | | | | | 7.10 | 7.05 |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri

Casing Volume: [_____(TD) - _____(WL)]•[____(Well ID)]²•[_____(Conversion Factor)] = _____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒ °C ☐ °F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~1.25 | 6.94 | 10:06 | 6.48 | 266.3 | 13.4 | 2.80 | 73.8 | NM |
| ~1.5 | 6.96 | 10 11 | 6.26 | 256.4 | 13.3 | 2.14 | 78.5 | |
| ~1.75 | 7.00 | 10 16 | 6.14 | 256.5 | 13.6 | 1.92 | 81.0 | |
| ~1.0 | 7.04 | 10 21 | 6.09 | 253.4 | 13.6 | 1.86 | 82.5 | |
| ~1.25 | 7.07 | 1026 | 6.05 | 251.3 | 13.9 | 1.89 | 83.8 | |
| ~1.5 | 7.10 | 1031 | 6.02 | 250.8 | 14.1 | 1.84 | 84.9 | |
| ~1.75 | 7.12 | 1036 | 6.00 | 250.9 | 13.8 | 1.96 | 85.7 | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50-80 | Color/Tint/Odor clear, colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: 10' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-7-101816 | PO | 10/18/16 | 1040 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility:** Lake Stevens Marketplace | **Location I.D. :** MW-2 |
| **Project No.:** | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 55-60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 10:48 | | 1048 | | | 1127 | |
| Depth to Water | 7.43 | | | | (w) | ~~1120~~ 7.74 | |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri

Casing Volume: [____(TD) - ____(WL)]•[____(Well ID)]²•[____(Conversion Factor)] = ____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒°C ☐°F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~.25 | 7.55 | 10:57 | 5.94 | 375.6 | 13.7 | 3.92 (w) ~~5.94~~ | 107.9 | NM |
| ~.5 | 7.61 | 11 02 | 5.95 | 378.0 | 14.1 | 3.33 | 106.6 | |
| ~.75 | 7.64 | 11 07 | 5.95 | 379.2 | 14.4 | 3.07 | 106.0 | |
| ~1.0 | 7.70 | 11 12 | 5.94 | 378.7 | 14.8 | 3.03 | 106.2 | |
| ~1.25 | 7.76 | 11 17 | 5.96 | 379.8 | 14.7 | 2.96 | 106.2 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50 - 80 | Color/Tint/Odor clear, colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: ~10' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-2-101816 | PO | 10/18/16 | 1120 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility:** Lake Stevens Marketplace | **Location I.D. :** MW-5 |
| **Project No.:** 1246.038.03 | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 55-60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~2.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 11:30 | | 1131 | | | 1213 | |
| Depth to Water | 20.52 | | | | | 20.38 | |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Perl

Casing Volume: [_____(TD) - _____(WL)]•[____(Well ID)]²•[_____(Conversion Factor)] = _____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒°C ☐°F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~.25 | 20.80 | 11:39 | 6.36 | 111.2 | 12.7 | 2.83 | 161.0 | NM |
| ~.5 | 20.95 | 11 45 | 6.53 | 204.0 | 13.8 | 1.71 | 101.6 | |
| ~.75 | 21.08 | 1150 | 6.64 | 203.2 | 13.8 | 1.38 | 100.7 | |
| ~1.0 | 21.14 | 1155 | 6.73 | 203.2 | 13.8 | 1.04 | 99.2 | |
| ~1.25 | 21.23 | 1200 | 6.79 | 203.4 | 13.8 | 1.04 | 97.6 | |
| ~1.5 | 21.30 | 1205 | 6.82 | 203.3 | 14.2 | 10.7 | 96.6 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50 - 80 | Color/Tint/Odor Clear colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: ~35' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-5-101816 | PO | 10/18/16 | 1210 | 3 | Y ⊘ | VOA | ⊘ N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility:** Lake Stevens Marketplace | **Location I.D.:** MW-3 |
| **Project No.:** 1246-038.03 | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 55-60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: new well cap |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 12:24 | | 1224 | | | 1257 | |
| Depth to Water | 3.04 | | | | | 3.29 | |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri

Casing Volume: [____(TD) - ____(WL)]•[____(Well ID)]²•[____(Conversion Factor)] = ____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒ °C ☐ °F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~0.25 | 3.13* | 12:27 | 6.77 | 188.9 | 15.0 | 4.73 | 101.9 | n.m. |
| ~0.5 | 3.21 | 1232 | 6.53 | 190.2 | 14.6 | 3.84 | 106.6 | |
| ~0.75 | 3.24 | 1237 | 6.42 | 191.3 | 14.5 | 3.80 | 107.9 | |
| ~1.0 | 3.25 | 1242 | 6.37 | 191.2 | 14.3 | 3.83 | 108.6 | |
| ~1.25 | 3.28 | 1247 | 6.33 | 191.0 | 14.3 | 3.96 | 109.8 | |
| ~1.5 | 3.30 | 1252 | 6.30 | 190.6 | 14.4 | 3.81 | 110.1 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50-80 | Color/Tint/Odor Clear, colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-3-101816 | PO | 10/18/16 | 1255 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature

* pump sped up; pump rate adjusted lower.

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility/Site:** Lake Stevens Marketplace | **Location I.D. :** MW-4 |
| **Project No.:** 1246.038.03 | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, # 37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 13:05 | | 1305 | | | | |
| Depth to Water | 2.30 | | | | | | |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri.

Casing Volume: [_____(TD) - _____(WL)]•[_____(Well ID)]²•[_____(Conversion Factor)] = _____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒°C ☐°F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~.25 | 2.36 | 13:15 | 6.87 | 160.3 | 14.0 | 2.09 | 83.6 | NM |
| ~.5 | 2.40 | 1320 | 6.46 | 150.6 | 14.5 | 1.24 | 100.1 | |
| ~.75 | 2.43 | 1325 | 6.33 | 142.4 | 14.7 | 1.11 | 108.4 | |
| ~1.0 | 2.46 | 1330 | 6.29 | 140.3 | 14.7 | 1.06 | 110.8 | |
| ~1.25 | 2.49 | 1335 | 6.27 | 136.4 | 14.8 | 1.03 | 113.2 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50-80 | Color/Tint/Odor clear, colorless |
| Meter Used YSI Pro Plus | |

**Sample Data** Sample Depth: 10' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-4-101816 | PO | 10/18/16 | 1340 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# PES GROUNDWATER SAMPLING PROTOCOLS

| | |
|---|---|
| **Facility/Site:** Lake Stevens Marketplace | **Location I.D.:** MW-8 (2) |
| **Project No.:** 1241.038.03 | **Date:** 10-18-16 |

**Location Description** ☒ Monitoring Well ☐ Extraction Well ☐ Borehole ☐ Spring/Creek ☐ Pond/Lagoon ☐ Outfall ☐ Other:

| | |
|---|---|
| Air Temp: 60 ☐ °C ☒ °F | Weather: overcast |
| Well Locked? ☐ yes ☒ no | Damaged/Repairs Needed: none |
| ☒ TOC ☐ MP Description of MP (e.g., well monument at grade surface): | |
| TOC/MP Stickup: ~.3 ☒ ft ☐ m above/below ground | Well Inside Diameter (ID): ☒ 2-inch ☐ 4-inch Other: |

**Water Level Data** Measurement Units: ☒ ft ☐ m

| ☒ E-Tape, #37861 ☐ Steel Tape ☐ Other | Pre-Purge[1] Initial | Pre-Purge[2] Confirmation | Purging Start | During Purging | Purging End | After Sampling | Remarks |
|---|---|---|---|---|---|---|---|
| Time (hh:mm; 24-hr clock) | 13:49 | | 1349 | | | | |
| Depth to Water | 9.15 | | @ 9.15 | | | | |
| Depth to Bottom | | | | | | | |
| Water Level (WL) | | | | | | | |
| Product Thickness | | | | | | | |
| Product Recovery ☐ gallons ☐ liters | | | | | | | |

[1]First round of water levels; [2]Water level prior to purging

**Field Water Quality Data** Purge Depth: ☐ Top ☒ Mid ☐ Bottom ☐ Grab ☐ Bailer ☒ Pump Description: Peri

Casing Volume: [_____(TD) - _____(WL)]•[____(Well ID)]²•[_____(Conversion Factor)] = _____ ☐ gal ☐ liters
Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Dry While Purging ☐

| Cumulative Vol. Purged (Liters) | Depth to Water | Time (hh:mm) | pH (Temp. Corrected? ☐) | Conductivity ☒ SC ☐ EC (µS/cm) | Temp ☒ °C ☐ °F | D. O (mg/L) | ORP (mV) | Turbidity ☐ NTU |
|---|---|---|---|---|---|---|---|---|
| ~.25 | 9.20 | 13:58 | 6.37 | 317 | 14.8 | 2.04 | 49.1 | nm |
| ~.5 | 9.23 | 1403 (@) | 6.23 | 248 | 14.8 | 1.88 | 55.4 | |
| ~.75 | 9.26 | 1408 | 6.15 | 237 | 14.8 | 1.30 | 57.9 | |
| ~1.0 (@) | 9.29 | 1413 | 6.07 | 219 | 14.7 | 1.17 | 60.8 | |
| ~1.25 | 9.32 | 1418 | 6.04 | 215 | 14.8 | 1.13 | 62.3 | |
| ~1.5 | 9.35 | 1423 | 6.02 | 213 | 14.7 | 1.09 | 64.3 | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| | |
|---|---|
| Pump Rate (ml/min) 50-80 | Color/Tint/Odor clear, colorless |
| Meter Used YSI ProPlus | |

**Sample Data** Sample Depth: 10' ☐ Grab ☐ Bailer ☒ Pump Description: Peristaltic

| Field Sample ID (unique ID on bottles) | Result Code | Date (m/d/y) | Time (hh:mm) | # of Bottles (total to lab) | Metals Filtered | Bottles (type) | Preservative | Notes |
|---|---|---|---|---|---|---|---|---|
| MW-8-102816 (@)[1] | PO | 10/18/16 | 1430 | 3 | Y (N) | VOA | (Y) N | HCl |
| | | | | | Y N | | Y N | |
| | | | | | Y N | | Y N | |
| | | | | | | | | |

Sampler's Name (print) Chris DeBoer Signature Chris DeBoer

# Fremont Analytical

# Chain of Custody Record and Laboratory Services Agreement

3600 Fremont Ave N. Tel: 206-352-3790
Seattle, WA 98103 Fax: 206-352-7178

Date: 10/19/16 Laboratory Project No (internal): _____

Page: 1 of: 1

Client: PES Environmental, Inc. Project Name: Lake Stevens Marketplace

Address: 1215 4th Ave Suite 1350 Project No: 1246.033.03 Collected by: C DeBoer

City, State, Zip: Seattle, WA 98161 Location: Lake Stevens, WA

Telephone: (206) 624-3990 Fax: (206) 624-3985 Report To (PM): Brian O'Neal

PM Email: boneal@pesenv.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

| | 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 | MW-6-101816 | 10/18/16 | 950 | GW | X | | | | | | | | | | | | | | | | |
| 2 | MW-7-101816 | | 1040 | | X | | | | | | | | | | | | | | | | |
| 3 | MW-8-101816 | | 1120 | | X | | | | | | | | | | | | | | | | |
| 4 | MW-5-101816 | | 1210 | | X | | | | | | | | | | | | | | | | |
| 5 | MW-3-101816 | | 1255 | | X | | | | | | | | | | | | | | | | |
| 6 | MW-4-101816 | | 1340 | | X | | | | | | | | | | | | | | | | |
| 7 | MW-8-101816 | | 1430 | | X | | | | | | | | | | | | | | | | |
| 8 | TRIP BLANK | | - | | | | | | | | | | | | | | X | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

**I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.**

| Relinquished | Date/Time | Received | Date/Time |
|---|---|---|---|
| x Chris DeBoer | 10/19/16 918 | x [signature] | 10/19/16 09:19 |
| x | | x | |

TAT → SameDay^ NextDay^ 2 Day 3 Day ~~STD~~

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

www.fremontanalytical.com

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

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

**RE: Lake Stevens Marketplace**
**Work Order Number: 1610304**

October 25, 2016

**Attention Brian O'Neal:**

Fremont Analytical, Inc. received 8 sample(s) on 10/19/2016 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:** *10/25/2016*

**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace
**Work Order:** 1610304

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Date/Time Collected | Date/Time Received |
|---|---|---|---|
| 1610304-001 | MW-6-101816 | 10/18/2016 9:50 AM | 10/19/2016 9:19 AM |
| 1610304-002 | MW-7-101816 | 10/18/2016 10:40 AM | 10/19/2016 9:19 AM |
| 1610304-003 | MW-2-101816 | 10/18/2016 11:20 AM | 10/19/2016 9:19 AM |
| 1610304-004 | MW-5-101816 | 10/18/2016 12:10 PM | 10/19/2016 9:19 AM |
| 1610304-005 | MW-3-101816 | 10/18/2016 12:55 PM | 10/19/2016 9:19 AM |
| 1610304-006 | MW-4-101816 | 10/18/2016 1:40 PM | 10/19/2016 9:19 AM |
| 1610304-007 | MW-1-101816 | 10/18/2016 2:30 PM | 10/19/2016 9:19 AM |
| 1610304-008 | Trip Blank | | 10/19/2016 9:19 AM |

# Case Narrative

WO#: **1610304**

Date: **10/25/2016**

**CLIENT:** PES Environmental, Inc.

**Project:** Lake Stevens Marketplace

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:** 10/18/2016 9:50:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-001
**Matrix:** Groundwater
**Client Sample ID:** **MW-6-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Tetrachloroethene (PCE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 9:50:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-001
**Matrix:** Groundwater
**Client Sample ID:** **MW-6-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 4:37:23 PM |
| Surr: Dibromofluoromethane | 101 | 45.4-152 | | %Rec | 1 | 10/21/2016 4:37:23 PM |
| Surr: Toluene-d8 | 90.9 | 40.1-139 | | %Rec | 1 | 10/21/2016 4:37:23 PM |
| Surr: 1-Bromo-4-fluorobenzene | 98.9 | 64.2-128 | | %Rec | 1 | 10/21/2016 4:37:23 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 10:40:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-002
**Matrix:** Groundwater
**Client Sample ID:** **MW-7-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Tetrachloroethene (PCE) | 10.6 | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 10:40:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-002
**Matrix:** Groundwater
**Client Sample ID:** **MW-7-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 5:06:44 PM |
| Surr: Dibromofluoromethane | 101 | 45.4-152 | | %Rec | 1 | 10/21/2016 5:06:44 PM |
| Surr: Toluene-d8 | 101 | 40.1-139 | | %Rec | 1 | 10/21/2016 5:06:44 PM |
| Surr: 1-Bromo-4-fluorobenzene | 97.7 | 64.2-128 | | %Rec | 1 | 10/21/2016 5:06:44 PM |

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 11:20:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-003
**Matrix:** Groundwater
**Client Sample ID:** **MW-2-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Tetrachloroethene (PCE) | 214 | 10.0 | D | µg/L | 10 | 10/24/2016 7:32:11 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 11:20:00 AM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-003
**Matrix:** Groundwater
**Client Sample ID:** **MW-2-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 6:05:20 PM |
| Surr: Dibromofluoromethane | 100 | 45.4-152 | | %Rec | 1 | 10/21/2016 6:05:20 PM |
| Surr: Toluene-d8 | 98.4 | 40.1-139 | | %Rec | 1 | 10/21/2016 6:05:20 PM |
| Surr: 1-Bromo-4-fluorobenzene | 96.2 | 64.2-128 | | %Rec | 1 | 10/21/2016 6:05:20 PM |

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 12:10:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-004
**Matrix:** Groundwater
**Client Sample ID:** **MW-5-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Methylene chloride | 1.34 | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Tetrachloroethene (PCE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 12:10:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-004
**Matrix:** Groundwater
**Client Sample ID:** **MW-5-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 6:34:42 PM |
| Surr: Dibromofluoromethane | 100 | 45.4-152 | | %Rec | 1 | 10/21/2016 6:34:42 PM |
| Surr: Toluene-d8 | 90.4 | 40.1-139 | | %Rec | 1 | 10/21/2016 6:34:42 PM |
| Surr: 1-Bromo-4-fluorobenzene | 96.8 | 64.2-128 | | %Rec | 1 | 10/21/2016 6:34:42 PM |

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 12:55:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-005
**Matrix:** Groundwater
**Client Sample ID:** **MW-3-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | 16.6 | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Tetrachloroethene (PCE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 12:55:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-005
**Matrix:** Groundwater
**Client Sample ID:** **MW-3-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 7:03:58 PM |
| Surr: Dibromofluoromethane | 101 | 45.4-152 | | %Rec | 1 | 10/21/2016 7:03:58 PM |
| Surr: Toluene-d8 | 100 | 40.1-139 | | %Rec | 1 | 10/21/2016 7:03:58 PM |
| Surr: 1-Bromo-4-fluorobenzene | 97.0 | 64.2-128 | | %Rec | 1 | 10/21/2016 7:03:58 PM |

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 1:40:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-006
**Matrix:** Groundwater
**Client Sample ID:** **MW-4-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Tetrachloroethene (PCE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 1:40:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-006
**Matrix:** Groundwater
**Client Sample ID:** **MW-4-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 7:33:24 PM |
| Surr: Dibromofluoromethane | 100 | 45.4-152 | | %Rec | 1 | 10/21/2016 7:33:24 PM |
| Surr: Toluene-d8 | 98.0 | 40.1-139 | | %Rec | 1 | 10/21/2016 7:33:24 PM |
| Surr: 1-Bromo-4-fluorobenzene | 94.9 | 64.2-128 | | %Rec | 1 | 10/21/2016 7:33:24 PM |

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 2:30:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-007
**Matrix:** Groundwater
**Client Sample ID:** **MW-1-101816**

## Volatile Organic Compounds by EPA Method 8260C

Batch ID: 15210 Analyst: NG

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Chloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Vinyl chloride | ND | 0.200 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Bromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Chloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Methylene chloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| trans-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1-Dichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 2,2-Dichloropropane | ND | 2.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| cis-1,2-Dichloroethene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Chloroform | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Carbon tetrachloride | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Benzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Trichloroethene (TCE) | ND | 0.500 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Bromodichloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Dibromomethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| cis-1,3-Dichloropropene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Toluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| trans-1,3-Dichloropropylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1,2-Trichloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,3-Dichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Tetrachloroethene (PCE) | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Dibromochloromethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Chlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Ethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| m,p-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| o-Xylene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Styrene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Isopropylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Bromoform | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |

# Analytical Report

Work Order: **1610304**
Date Reported: **10/25/2016**

**Client:** PES Environmental, Inc.
**Collection Date:** 10/18/2016 2:30:00 PM
**Project:** Lake Stevens Marketplace
**Lab ID:** 1610304-007
**Matrix:** Groundwater
**Client Sample ID:** **MW-1-101816**

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **Volatile Organic Compounds by EPA Method 8260C** | | | | Batch ID: 15210 | | Analyst: NG |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| n-Propylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Bromobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 2-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 4-Chlorotoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| tert-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2,3-Trichloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| sec-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 4-Isopropyltoluene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,3-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,4-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| n-Butylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2-Dichlorobenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2-Dibromo-3-chloropropane | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2,4-Trimethylbenzene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Hexachloro-1,3-butadiene | ND | 4.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Naphthalene | ND | 1.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| 1,2,3-Trichlorobenzene | ND | 4.00 | | µg/L | 1 | 10/21/2016 8:02:35 PM |
| Surr: Dibromofluoromethane | 99.8 | 45.4-152 | | %Rec | 1 | 10/21/2016 8:02:35 PM |
| Surr: Toluene-d8 | 90.8 | 40.1-139 | | %Rec | 1 | 10/21/2016 8:02:35 PM |
| Surr: 1-Bromo-4-fluorobenzene | 95.3 | 64.2-128 | | %Rec | 1 | 10/21/2016 8:02:35 PM |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-15210** SampType: **LCS** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614927**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | 19.6 | 1.00 | 20.00 | 0 | 97.9 | 43 | 136 | | | | |
| Chloromethane | 18.3 | 1.00 | 20.00 | 0 | 91.6 | 43.9 | 139 | | | | |
| Vinyl chloride | 20.7 | 0.200 | 20.00 | 0 | 104 | 53.6 | 139 | | | | |
| Bromomethane | 29.0 | 1.00 | 20.00 | 0 | 145 | 42.5 | 152 | | | | |
| Trichlorofluoromethane (CFC-11) | 19.6 | 1.00 | 20.00 | 0 | 98.2 | 56.4 | 143 | | | | |
| Chloroethane | 20.4 | 1.00 | 20.00 | 0 | 102 | 53 | 141 | | | | |
| 1,1-Dichloroethene | 20.6 | 1.00 | 20.00 | 0 | 103 | 65.6 | 136 | | | | |
| Methylene chloride | 20.7 | 1.00 | 20.00 | 0 | 104 | 67.1 | 131 | | | | |
| trans-1,2-Dichloroethene | 21.1 | 1.00 | 20.00 | 0 | 105 | 71.7 | 129 | | | | |
| Methyl tert-butyl ether (MTBE) | 20.2 | 1.00 | 20.00 | 0 | 101 | 67.7 | 131 | | | | |
| 1,1-Dichloroethane | 22.6 | 1.00 | 20.00 | 0 | 113 | 67.9 | 134 | | | | |
| 2,2-Dichloropropane | 31.4 | 2.00 | 20.00 | 0 | 157 | 33.7 | 152 | | | | S |
| cis-1,2-Dichloroethene | 21.3 | 1.00 | 20.00 | 0 | 107 | 70.2 | 139 | | | | |
| Chloroform | 20.8 | 1.00 | 20.00 | 0 | 104 | 66.3 | 131 | | | | |
| 1,1,1-Trichloroethane (TCA) | 21.0 | 1.00 | 20.00 | 0 | 105 | 71 | 131 | | | | |
| 1,1-Dichloropropene | 21.0 | 1.00 | 20.00 | 0 | 105 | 69.9 | 124 | | | | |
| Carbon tetrachloride | 21.8 | 1.00 | 20.00 | 0 | 109 | 66.2 | 134 | | | | |
| 1,2-Dichloroethane (EDC) | 19.5 | 1.00 | 20.00 | 0 | 97.5 | 68.8 | 123 | | | | |
| Benzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 69.3 | 132 | | | | |
| Trichloroethene (TCE) | 20.9 | 0.500 | 20.00 | 0 | 104 | 65.2 | 136 | | | | |
| 1,2-Dichloropropane | 21.8 | 1.00 | 20.00 | 0 | 109 | 70.5 | 130 | | | | |
| Bromodichloromethane | 20.8 | 1.00 | 20.00 | 0 | 104 | 67.2 | 137 | | | | |
| Dibromomethane | 20.3 | 1.00 | 20.00 | 0 | 101 | 75.5 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.1 | 1.00 | 20.00 | 0 | 111 | 62.6 | 137 | | | | |
| Toluene | 20.3 | 1.00 | 20.00 | 0 | 101 | 61.3 | 145 | | | | |
| trans-1,3-Dichloropropylene | 22.2 | 1.00 | 20.00 | 0 | 111 | 58.5 | 142 | | | | |
| 1,1,2-Trichloroethane | 18.7 | 1.00 | 20.00 | 0 | 93.6 | 71.7 | 131 | | | | |
| 1,3-Dichloropropane | 18.5 | 1.00 | 20.00 | 0 | 92.7 | 73.5 | 127 | | | | |
| Tetrachloroethene (PCE) | 19.9 | 1.00 | 20.00 | 0 | 99.6 | 47.5 | 147 | | | | |
| Dibromochloromethane | 19.6 | 1.00 | 20.00 | 0 | 98.1 | 67.2 | 134 | | | | |
| 1,2-Dibromoethane (EDB) | 18.4 | 0.0600 | 20.00 | 0 | 91.9 | 73.6 | 125 | | | | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-15210** SampType: **LCS** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614927**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chlorobenzene | 21.5 | 1.00 | 20.00 | 0 | 107 | 73.9 | 126 | | | | |
| 1,1,1,2-Tetrachloroethane | 22.3 | 1.00 | 20.00 | 0 | 112 | 76.8 | 124 | | | | |
| Ethylbenzene | 21.0 | 1.00 | 20.00 | 0 | 105 | 72 | 130 | | | | |
| m,p-Xylene | 42.3 | 1.00 | 40.00 | 0 | 106 | 70.3 | 134 | | | | |
| o-Xylene | 20.9 | 1.00 | 20.00 | 0 | 104 | 72.1 | 131 | | | | |
| Styrene | 21.0 | 1.00 | 20.00 | 0 | 105 | 64.3 | 140 | | | | |
| Isopropylbenzene | 21.1 | 1.00 | 20.00 | 0 | 105 | 73.9 | 128 | | | | |
| Bromoform | 21.7 | 1.00 | 20.00 | 0 | 108 | 55.3 | 141 | | | | |
| 1,1,2,2-Tetrachloroethane | 18.6 | 1.00 | 20.00 | 0 | 93.0 | 62.9 | 132 | | | | |
| n-Propylbenzene | 21.4 | 1.00 | 20.00 | 0 | 107 | 74.5 | 127 | | | | |
| Bromobenzene | 21.3 | 1.00 | 20.00 | 0 | 106 | 71 | 131 | | | | |
| 1,3,5-Trimethylbenzene | 21.4 | 1.00 | 20.00 | 0 | 107 | 73.1 | 128 | | | | |
| 2-Chlorotoluene | 21.3 | 1.00 | 20.00 | 0 | 106 | 70.8 | 130 | | | | |
| 4-Chlorotoluene | 21.3 | 1.00 | 20.00 | 0 | 107 | 70.1 | 131 | | | | |
| tert-Butylbenzene | 21.2 | 1.00 | 20.00 | 0 | 106 | 68.2 | 131 | | | | |
| 1,2,3-Trichloropropane | 18.8 | 1.00 | 20.00 | 0 | 93.8 | 67.7 | 131 | | | | |
| 1,2,4-Trichlorobenzene | 21.1 | 2.00 | 20.00 | 0 | 106 | 51.8 | 152 | | | | |
| sec-Butylbenzene | 21.1 | 1.00 | 20.00 | 0 | 106 | 72 | 129 | | | | |
| 4-Isopropyltoluene | 21.3 | 1.00 | 20.00 | 0 | 106 | 69.2 | 130 | | | | |
| 1,3-Dichlorobenzene | 22.1 | 1.00 | 20.00 | 0 | 111 | 71 | 115 | | | | |
| 1,4-Dichlorobenzene | 21.3 | 1.00 | 20.00 | 0 | 106 | 66.8 | 119 | | | | |
| n-Butylbenzene | 22.8 | 1.00 | 20.00 | 0 | 114 | 73.8 | 127 | | | | |
| 1,2-Dichlorobenzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 69.7 | 119 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.3 | 1.00 | 20.00 | 0 | 107 | 63.1 | 136 | | | | |
| 1,2,4-Trimethylbenzene | 21.5 | 1.00 | 20.00 | 0 | 107 | 73.4 | 127 | | | | |
| Hexachloro-1,3-butadiene | 23.6 | 4.00 | 20.00 | 0 | 118 | 58.6 | 138 | | | | |
| Naphthalene | 19.1 | 1.00 | 20.00 | 0 | 95.4 | 41.8 | 165 | | | | |
| 1,2,3-Trichlorobenzene | 19.7 | 4.00 | 20.00 | 0 | 98.6 | 48.7 | 156 | | | | |
| Surr: Dibromofluoromethane | 25.2 | | 25.00 | | 101 | 45.4 | 152 | | | | |
| Surr: Toluene-d8 | 23.6 | | 25.00 | | 94.4 | 40.1 | 139 | | | | |
| Surr: 1-Bromo-4-fluorobenzene | 26.2 | | 25.00 | | 105 | 64.2 | 128 | | | | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-15210** SampType: **LCS** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614927**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**NOTES:**
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID **LCSD-15210** SampType: **LCSD** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW02** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614926**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | 18.9 | 1.00 | 20.00 | 0 | 94.4 | 43 | 136 | 19.57 | 3.58 | 20 | |
| Chloromethane | 18.2 | 1.00 | 20.00 | 0 | 90.8 | 43.9 | 139 | 18.33 | 0.955 | 20 | |
| Vinyl chloride | 21.4 | 0.200 | 20.00 | 0 | 107 | 53.6 | 139 | 20.72 | 3.06 | 20 | |
| Bromomethane | 28.1 | 1.00 | 20.00 | 0 | 140 | 42.5 | 152 | 29.04 | 3.45 | 20 | |
| Trichlorofluoromethane (CFC-11) | 19.9 | 1.00 | 20.00 | 0 | 99.3 | 56.4 | 143 | 19.64 | 1.13 | 20 | |
| Chloroethane | 21.0 | 1.00 | 20.00 | 0 | 105 | 53 | 141 | 20.35 | 3.21 | 20 | |
| 1,1-Dichloroethene | 21.0 | 1.00 | 20.00 | 0 | 105 | 65.6 | 136 | 20.61 | 1.80 | 20 | |
| Methylene chloride | 21.5 | 1.00 | 20.00 | 0 | 108 | 67.1 | 131 | 20.70 | 3.80 | 20 | |
| trans-1,2-Dichloroethene | 21.0 | 1.00 | 20.00 | 0 | 105 | 71.7 | 129 | 21.05 | 0.246 | 20 | |
| Methyl tert-butyl ether (MTBE) | 22.2 | 1.00 | 20.00 | 0 | 111 | 67.7 | 131 | 20.19 | 9.57 | 20 | |
| 1,1-Dichloroethane | 22.0 | 1.00 | 20.00 | 0 | 110 | 67.9 | 134 | 22.55 | 2.70 | 20 | |
| 2,2-Dichloropropane | 30.8 | 2.00 | 20.00 | 0 | 154 | 33.7 | 152 | 31.39 | 1.88 | 20 | S |
| cis-1,2-Dichloroethene | 21.5 | 1.00 | 20.00 | 0 | 108 | 70.2 | 139 | 21.33 | 0.953 | 20 | |
| Chloroform | 20.7 | 1.00 | 20.00 | 0 | 103 | 66.3 | 131 | 20.78 | 0.462 | 20 | |
| 1,1,1-Trichloroethane (TCA) | 21.4 | 1.00 | 20.00 | 0 | 107 | 71 | 131 | 20.97 | 1.83 | 20 | |
| 1,1-Dichloropropene | 22.0 | 1.00 | 20.00 | 0 | 110 | 69.9 | 124 | 20.98 | 4.59 | 20 | |
| Carbon tetrachloride | 21.8 | 1.00 | 20.00 | 0 | 109 | 66.2 | 134 | 21.75 | 0.371 | 20 | |
| 1,2-Dichloroethane (EDC) | 20.5 | 1.00 | 20.00 | 0 | 103 | 68.8 | 123 | 19.49 | 5.18 | 20 | |
| Benzene | 21.8 | 1.00 | 20.00 | 0 | 109 | 69.3 | 132 | 21.32 | 2.19 | 20 | |
| Trichloroethene (TCE) | 21.3 | 0.500 | 20.00 | 0 | 106 | 65.2 | 136 | 20.87 | 1.86 | 20 | |
| 1,2-Dichloropropane | 22.3 | 1.00 | 20.00 | 0 | 111 | 70.5 | 130 | 21.76 | 2.24 | 20 | |
| Bromodichloromethane | 21.3 | 1.00 | 20.00 | 0 | 107 | 74.6 | 127 | 20.83 | 2.24 | 20 | |
| Dibromomethane | 21.6 | 1.00 | 20.00 | 0 | 108 | 75.5 | 126 | 20.28 | 6.09 | 20 | |
| cis-1,3-Dichloropropene | 22.9 | 1.00 | 20.00 | 0 | 115 | 62.6 | 137 | 22.12 | 3.63 | 20 | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-15210** SampType: **LCSD** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW02** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614926**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Toluene | 20.6 | 1.00 | 20.00 | 0 | 103 | 61.3 | 145 | 20.30 | 1.37 | 20 | |
| trans-1,3-Dichloropropylene | 22.5 | 1.00 | 20.00 | 0 | 112 | 58.5 | 142 | 22.16 | 1.38 | 20 | |
| 1,1,2-Trichloroethane | 20.0 | 1.00 | 20.00 | 0 | 99.9 | 71.7 | 131 | 18.71 | 6.52 | 20 | |
| 1,3-Dichloropropane | 19.7 | 1.00 | 20.00 | 0 | 98.6 | 73.5 | 127 | 18.55 | 6.15 | 20 | |
| Tetrachloroethene (PCE) | 19.7 | 1.00 | 20.00 | 0 | 98.7 | 47.5 | 147 | 19.93 | 0.969 | 20 | |
| Dibromochloromethane | 20.8 | 1.00 | 20.00 | 0 | 104 | 67.2 | 134 | 19.61 | 5.65 | 20 | |
| 1,2-Dibromoethane (EDB) | 20.2 | 0.0600 | 20.00 | 0 | 101 | 73.6 | 125 | 18.38 | 9.64 | 20 | |
| Chlorobenzene | 21.6 | 1.00 | 20.00 | 0 | 108 | 73.9 | 126 | 21.49 | 0.595 | 20 | |
| 1,1,1,2-Tetrachloroethane | 22.7 | 1.00 | 20.00 | 0 | 113 | 76.8 | 124 | 22.33 | 1.64 | 20 | |
| Ethylbenzene | 21.2 | 1.00 | 20.00 | 0 | 106 | 72 | 130 | 21.00 | 0.979 | 20 | |
| m,p-Xylene | 42.8 | 1.00 | 40.00 | 0 | 107 | 70.3 | 134 | 42.27 | 1.25 | 20 | |
| o-Xylene | 21.0 | 1.00 | 20.00 | 0 | 105 | 72.1 | 131 | 20.86 | 0.848 | 20 | |
| Styrene | 21.3 | 1.00 | 20.00 | 0 | 107 | 64.3 | 140 | 21.01 | 1.61 | 20 | |
| Isopropylbenzene | 21.3 | 1.00 | 20.00 | 0 | 106 | 73.9 | 128 | 21.08 | 0.968 | 20 | |
| Bromoform | 23.3 | 1.00 | 20.00 | 0 | 117 | 55.3 | 141 | 21.66 | 7.46 | 20 | |
| 1,1,2,2-Tetrachloroethane | 20.9 | 1.00 | 20.00 | 0 | 104 | 62.9 | 132 | 18.60 | 11.6 | 20 | |
| n-Propylbenzene | 21.4 | 1.00 | 20.00 | 0 | 107 | 74.5 | 127 | 21.37 | 0.285 | 20 | |
| Bromobenzene | 22.0 | 1.00 | 20.00 | 0 | 110 | 71 | 131 | 21.27 | 3.24 | 20 | |
| 1,3,5-Trimethylbenzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 73.1 | 128 | 21.40 | 0.288 | 20 | |
| 2-Chlorotoluene | 21.7 | 1.00 | 20.00 | 0 | 108 | 70.8 | 130 | 21.28 | 1.77 | 20 | |
| 4-Chlorotoluene | 21.3 | 1.00 | 20.00 | 0 | 106 | 70.1 | 131 | 21.34 | 0.264 | 20 | |
| tert-Butylbenzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 68.2 | 131 | 21.21 | 0.552 | 20 | |
| 1,2,3-Trichloropropane | 21.7 | 1.00 | 20.00 | 0 | 108 | 67.7 | 131 | 18.75 | 14.5 | 20 | |
| 1,2,4-Trichlorobenzene | 21.8 | 2.00 | 20.00 | 0 | 109 | 51.8 | 152 | 21.13 | 3.26 | 20 | |
| sec-Butylbenzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 72 | 129 | 21.14 | 0.797 | 20 | |
| 4-Isopropyltoluene | 21.5 | 1.00 | 20.00 | 0 | 107 | 69.2 | 130 | 21.27 | 0.866 | 20 | |
| 1,3-Dichlorobenzene | 22.0 | 1.00 | 20.00 | 0 | 110 | 71 | 115 | 22.14 | 0.816 | 20 | |
| 1,4-Dichlorobenzene | 21.3 | 1.00 | 20.00 | 0 | 107 | 66.8 | 119 | 21.26 | 0.370 | 20 | |
| n-Butylbenzene | 22.6 | 1.00 | 20.00 | 0 | 113 | 73.8 | 127 | 22.80 | 0.874 | 20 | |
| 1,2-Dichlorobenzene | 21.9 | 1.00 | 20.00 | 0 | 110 | 69.7 | 119 | 21.32 | 2.87 | 20 | |
| 1,2-Dibromo-3-chloropropane | 25.0 | 1.00 | 20.00 | 0 | 125 | 63.1 | 136 | 21.32 | 16.0 | 20 | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCSD-15210** SampType: **LCSD** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **LCSW02** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614926**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 21.6 | 1.00 | 20.00 | 0 | 108 | 73.4 | 127 | 21.48 | 0.578 | 20 | |
| Hexachloro-1,3-butadiene | 23.4 | 4.00 | 20.00 | 0 | 117 | 58.6 | 138 | 23.56 | 0.492 | 20 | |
| Naphthalene | 21.7 | 1.00 | 20.00 | 0 | 108 | 41.8 | 165 | 19.08 | 12.7 | 20 | |
| 1,2,3-Trichlorobenzene | 20.9 | 4.00 | 20.00 | 0 | 105 | 48.7 | 156 | 19.73 | 6.00 | 20 | |
| Surr: Dibromofluoromethane | 25.7 | | 25.00 | | 103 | 45.4 | 152 | | 0 | | |
| Surr: Toluene-d8 | 23.4 | | 25.00 | | 93.6 | 40.1 | 139 | | 0 | | |
| Surr: 1-Bromo-4-fluorobenzene | 26.6 | | 25.00 | | 106 | 64.2 | 128 | | 0 | | |

**NOTES:**
S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID **MB-15210** SampType: **MBLK** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MBLKW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614928**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | | | | | | | | |
| Chloromethane | ND | 1.00 | | | | | | | | | |
| Vinyl chloride | ND | 0.200 | | | | | | | | | |
| Bromomethane | ND | 1.00 | | | | | | | | | |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | | | | | | | | |
| Chloroethane | ND | 1.00 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.00 | | | | | | | | | |
| Methylene chloride | ND | 1.00 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.00 | | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.00 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.00 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.00 | | | | | | | | | |
| Chloroform | ND | 1.00 | | | | | | | | | |
| 1,1,1-Trichloroethane (TCA) | ND | 1.00 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.00 | | | | | | | | | |
| Carbon tetrachloride | ND | 1.00 | | | | | | | | | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-15210** SampType: **MBLK** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MBLKW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614928**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.0600 | | | | | | | | | |
| Chlorobenzene | ND | 1.00 | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | | | | | | | | |
| Ethylbenzene | ND | 1.00 | | | | | | | | | |
| m,p-Xylene | ND | 1.00 | | | | | | | | | |
| o-Xylene | ND | 1.00 | | | | | | | | | |
| Styrene | ND | 1.00 | | | | | | | | | |
| Isopropylbenzene | ND | 1.00 | | | | | | | | | |
| Bromoform | ND | 1.00 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | | | | | | | | |
| n-Propylbenzene | ND | 1.00 | | | | | | | | | |
| Bromobenzene | ND | 1.00 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.00 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.00 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.00 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.00 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.00 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 2.00 | | | | | | | | | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **MB-15210** SampType: **MBLK** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MBLKW** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **614928**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 24.9 | | 25.00 | | 99.5 | 45.4 | 152 | | | | |
| Surr: Toluene-d8 | 23.1 | | 25.00 | | 92.5 | 40.1 | 139 | | | | |
| Surr: 1-Bromo-4-fluorobenzene | 24.5 | | 25.00 | | 97.9 | 64.2 | 128 | | | | |

Sample ID **1610304-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MW-7-101816** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **615128**

| Analyte | Result | RL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC-12) | ND | 1.00 | | | | | | 0 | | 30 | |
| Chloromethane | ND | 1.00 | | | | | | 0 | | 30 | |
| Vinyl chloride | ND | 0.200 | | | | | | 0 | | 30 | |
| Bromomethane | ND | 1.00 | | | | | | 0 | | 30 | |
| Trichlorofluoromethane (CFC-11) | ND | 1.00 | | | | | | 0 | | 30 | |
| Chloroethane | ND | 1.00 | | | | | | 0 | | 30 | |
| 1,1-Dichloroethene | ND | 1.00 | | | | | | 0 | | 30 | |
| Methylene chloride | ND | 1.00 | | | | | | 0 | | 30 | |
| trans-1,2-Dichloroethene | ND | 1.00 | | | | | | 0 | | 30 | |
| Methyl tert-butyl ether (MTBE) | ND | 1.00 | | | | | | 0 | | 30 | |
| 1,1-Dichloroethane | ND | 1.00 | | | | | | 0 | | 30 | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **1610304-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MW-7-101816** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **615128**

| 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) | 9.62 | 1.00 | | | | | | 10.56 | 9.26 | 30 | |
| Dibromochloromethane | ND | 1.00 | | | | | | 0 | | 30 | |
| 1,2-Dibromoethane (EDB) | ND | 0.0600 | | | | | | 0 | | 30 | |
| Chlorobenzene | ND | 1.00 | | | | | | 0 | | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 1.00 | | | | | | 0 | | 30 | |
| Ethylbenzene | ND | 1.00 | | | | | | 0 | | 30 | |
| m,p-Xylene | ND | 1.00 | | | | | | 0 | | 30 | |
| o-Xylene | ND | 1.00 | | | | | | 0 | | 30 | |
| Styrene | ND | 1.00 | | | | | | 0 | | 30 | |
| Isopropylbenzene | ND | 1.00 | | | | | | 0 | | 30 | |
| Bromoform | ND | 1.00 | | | | | | 0 | | 30 | |
| 1,1,2,2-Tetrachloroethane | ND | 1.00 | | | | | | 0 | | 30 | |
| n-Propylbenzene | ND | 1.00 | | | | | | 0 | | 30 | |
| Bromobenzene | ND | 1.00 | | | | | | 0 | | 30 | |

**Work Order:** 1610304
**CLIENT:** PES Environmental, Inc.
**Project:** Lake Stevens Marketplace

# QC SUMMARY REPORT

## Volatile Organic Compounds by EPA Method 8260C

Sample ID **1610304-002ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/21/2016** RunNo: **32486**
Client ID: **MW-7-101816** Batch ID: **15210** Analysis Date: **10/21/2016** SeqNo: **615128**

| 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 | 25.1 | | 25.00 | | 100 | 45.4 | 152 | | 0 | | |
| Surr: Toluene-d8 | 23.1 | | 25.00 | | 92.3 | 40.1 | 139 | | 0 | | |
| Surr: 1-Bromo-4-fluorobenzene | 24.1 | | 25.00 | | 96.3 | 64.2 | 128 | | 0 | | |

# Sample Log-In Check List

| | | | |
|---|---|---|---|
| Client Name: | **PES** | Work Order Number: | **1610304** |
| Logged by: | **Erica Silva** | Date Received: | **10/19/2016 9:19:00 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:

10/24 - Sample name change per client request. See revised COC.

**Item Information**

| Item # | Temp °C |
|---|---|
| Cooler | 1.4 |
| Sample | 0.9 |
| Temp Blank | 0.8 |

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

# Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N. Tel: 206-352-3790
Seattle, WA 98103 Fax: 206-352-7178

Date: 10/18/16 Laboratory Project No (internal): 1610304

Page: 1 of: 1



Client: PES Environmental, Inc.
Address: 1215 4th Ave Suite 1350
City, State, Zip: Seattle WA 98161
Telephone: (206) 529-3980 Fax: (206) 529-3985

Project Name: Lake Stevens Marketplace
Project No: 1246.038.03 Collected by: C. DeBoer
Location: Lake Stevens, WA
Report To (PM): Brian O'Neal
PM Email: boneal@pesenv.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

| | 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 | MW-6-101816 | 10/8/16 | 950 | GW | X | | | | | | | | | | | | | | |
| 2 | MW-7-101816 | | 1040 | | X | | | | | | | | | | | | | | |
| 3 | MW-2-101816 | | 1120 | | X | | | | | | | | | | | | | | |
| 4 | MW-5-101816 | | 1210 | | X | | | | | | | | | | | | | | |
| 5 | MW-3-101816 | | 1255 | | X | | | | | | | | | | | | | | |
| 6 | MW-4-101816 | | 1340 | | X | | | | | | | | | | | | | | |
| 7 | MW-8-101816 | | 1430 | | X | | | | | | | | | | | | | | |
| 8 | TRIP BLANK | - | - | W | | | | | | | | | | | | | X | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

**I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.**

| Relinquished | Date/Time | Received | Date/Time |
|---|---|---|---|
| x Chris DeBoer | 10/19/16 918 | x Wayne | 10/19/16 09:19 |
| x | | x | |

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

# Chain of Custody Record and Laboratory Services Agreement


**Fremont Analytical**

*3600 Fremont Ave N.* *Tel: 206-352-3790*
*Seattle, WA 98103* *Fax: 206-352-7178*


Date: 10/18/16 *Laboratory Project No (internal):* 1610304

Page: 1 of: 1

**Client:** PES Environmental, Inc.
**Address:** 1215 4th Ave Suite 1350
**City, State, Zip:** Seattle, WA 98161
**Telephone:** (206) 529-3980 **Fax:** (206) 529-3985

**Project Name:** Lake Stevens Marketplace
**Project No:** 1246.038.03 **Collected by:** C. DeBoer
**Location:** Lake Stevens, WA
**Report To (PM):** Brian O'Neal
**PM Email:** boneal@pesenv.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

| | 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 | MW-6-101816 | 10/8/16 | 950 | GW | X | | | | | | | | | | | | | |
| 2 | MW-7-101816 | " | 1040 | " | X | | | | | | | | | | | | | |
| 3 | MW-2-101816 | | 1120 | | X | | | | | | | | | | | | | |
| 4 | MW-5-101816 | | 1210 | | X | | | | | | | | | | | | | |
| 5 | MW-3-101816 | | 1255 | | X | | | | | | | | | | | | | |
| 6 | MW-4-101816 | | 1340 | | X | | | | | | | | | | | | | |
| 7 | MW-8-101816 | | 1430 | | X | | | | | | | | | | | | | Change name from MW-8-101816 to MW-1-101816 Chris DeBoer 10/24/16 |
| 8 | TRIP BLANK | - | - | W | | | | | | | | | | | X | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☒ Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

**I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.**

| Relinquished | Date/Time | Received | Date/Time |
|---|---|---|---|
| x Chris DeBoer | 10/19/16 918 | x Wayne J | 10/19/16 09:19 |
| Relinquished | Date/Time | Received | Date/Time |
| x | | x | |

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

# MEMORANDUM

**TO:** Project File **DATE:** October 27, 2016

**FROM:** Jessie Compeau

**SUBJECT:** Laboratory Data Validation Review

**PROJECT:** Lake Stevens Marketplace

**PROJECT #:** 1246.038.03.002

**TASK:** October 18, 2016 Groundwater Samples

**LAB:** Fremont Analytical Service Request No. 1610304

---

Seven groundwater samples and a trip blank were collected at the Lake Stevens Marketplace Site in Snohomish County on October 18, 2016. The samples were collected as part of a Limited Phase II Investigation at the Site. The samples were delivered to Fremont Analytical (Fremont) of Seattle, Washington for laboratory analysis. Samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260C. The results were reported in Fremont Lab Package 1610304.

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 Superfund Organic Methods Data Review (USEPA, 2016).

## DATA VALIDATION

### Sample Receipt, Preservation and Handling

The samples were delivered to the project laboratory in coolers under standard chain-of-custody protocols. Review of Fremont's Sample Log-In Check List Form indicates that all samples were received in good condition within the recommended preservation temperature of less than 6.0°C. The sample receipt log indicated that the samples in the coolers were received properly stored in a cooler, preserved, and cooled with ice/gel packs and in good condition at the time of laboratory receipt. No data qualifications were assigned due to temperature preservation issues.

Sample MW-8-101816 identification was corrected by Fremont to read MW-1-101816 per PES's request on October 24, 2016.

## Holding Times

All samples were analyzed for VOCs within the USEPA recommended holding time of fourteen days for preserved waters from the date of sample collection. All holding time criteria were met.

## Initial and Continuing Calibration

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

## Method Blank Results

A laboratory method blank was included with the analytical batch per method requirement. The target analytes were not detected in the method blank at or above the method reporting limits (MRLs). No qualifications of the data were made due to the results of the method blank analyses.

## Trip Blank Results

A trip blank was collected but not analyzed. No action was taken other than this.

## Laboratory Duplicate Analyses

Laboratory duplicate sample analyses were performed on client sample MW-7-101816. The primary/duplicate relative percent differences (RPDs) for VOCs were within the laboratory control limit of 30%. Duplicate data are acceptable.

## Field Duplicate Analyses

Field duplicate samples were not collected. Refer to laboratory duplicate data for precision data.

## Surrogate Recoveries

The surrogate recovery results for the samples, laboratory duplicates, laboratory control samples (LCS), and the method blank were within the laboratory surrogate control limits for all of the analyses.

## Matrix Spike/ Matrix Spike Duplicates

A matrix spike (MS) analysis was not performed. Refer to LCS/LCSD and laboratory duplicate data for accuracy and precision.

## Laboratory Control Samples

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was analyzed by USEPA Method 8260C. The LCS/LCSD %Rs and RPDs for the all target compounds were within the laboratory control criteria for water with the following exceptions:

- VOC compound 2,2-dichloropropane % R's were elevated and above acceptance criteria. No action was taken as these compounds were not detected at or above the MRL in the associated samples.

## Quantitation Limits

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

## Completeness

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

## Data Assessment

The laboratory data reported for this project were reviewed based on laboratory control limit acceptance criteria and criteria outlined in:

- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2016)

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